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Chemical
Reference Data**

Monograph No. 9

**NIST-JANAF Thermochemical Tables
Fourth Edition
Part I, Al-Co**

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Gaithersburg, Maryland 20899-0001*



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Foreword

The Journal of Physical and Chemical Reference Data is published jointly by the American Institute of Physics and the American Chemical Society for the National Institute of Standards and Technology. Its objective is to provide critically evaluated physical and chemical property data, fully documented as to the original sources and the criteria used for evaluation. One of the principal sources of material for the journal is the National Standard Reference Data System (NSRDS), a program coordinated by NIST for the purpose of promoting the compilation and critical evaluation of property data.

The regular issues of the Journal of Physical and Chemical Reference Data are published bimonthly and contain compilations and critical data reviews of moderate length. Longer works, volumes of collected tables, and other material unsuited to a periodical format have previously been published as Supplements to the Journal. In 1989 the generic title of these works was changed to Monograph, reflecting their character as independent publications.

This volume, the Fourth Edition of the NIST-JANAF Thermochemical Tables, is Monograph No. 9 in the current series. Its predecessor, the Third Edition, was referred to as a Supplement. Of the over 500 titles published in the last 25 years, the articles dealing with the JANAF Thermochemical Tables have been the most widely distributed and used.

The Journal of Physical and Chemical Reference Data is therefore pleased to be able to publish this Fourth Edition of the NIST-JANAF Thermochemical Tables. There are two important features of this edition. First, the acronym NIST has been added to the title of this activity. This is due to the fact that during the past 10 years, NIST has been the leading financial supporter for this effort. Additionally, this project is now housed within the Physical and Chemical Properties Division at NIST. Second, the Fourth Edition contains additional species not included in the Third Edition. A number of typographical errors have also been corrected.

Malcolm W. Chase, Jr., Editor
Journal of Physical and Chemical Reference Data

Preface to the First Edition

Beginning in the mid-1950s, when elements other than the conventional carbon, hydrogen, oxygen, nitrogen, chlorine, and fluorine came into consideration as rocket propellant ingredients, formidable difficulties were encountered in conducting rigorous theoretical performance calculations for these new propellants. The first major problem was the calculational technique. The second was the lack of accurate thermodynamic data.

By the end of 1959, the calculational technique problem had been substantially resolved by applying the method of minimization of free energy to large, high speed digital computers. At this point the calculations became as accurate as the thermodynamic data upon which they were based. However, serious gaps were present in the available data. For propellant ingredients, only the standard heat of formation is required to conduct a performance calculation. However, this must be known to a high degree of accuracy. For combustion products, the enthalpy and entropy must be known, as a function of temperature, in addition to the standard heat of formation.

In order to resolve the problem, a substantial experimental thermodynamic research program was initiated under the sponsorship and technical direction of Project PRINCIPIA of the Advanced Research Projects Agency. Simultaneously, a project was initiated to critically evaluate and compile consistent tables of thermodynamic properties of propellant combustion products for use by the aerospace industry. This project, known as the JANAF Thermochemical Tables, was undertaken by the Dow Chemical Company. Since the objective of the project was to have one single source of best available data prepared for use by the entire industry, the JANAF Thermochemical Panel undertook the task of furnishing a critical review of the Tables prior to their publication and distribution. This approach was designed to ensure that the Tables be of the highest possible quality.

Washington, DC
July 1964

C. V. Mock
Advance Research Projects Agency

Preface to the Second Edition

It is appropriate to call attention to some of the reasons for the phenomenal success of the JANAF Thermochemical Tables in achieving, first, the initial limited objective of providing the standard data for the chemical rocket propulsion industry, and later, upon publication, worldwide recognition as thermodynamic reference data of the highest quality and timeliness.

First, and most obvious, there was the selection and continued support of a highly competent evaluation team, themselves engaged in a broad spectrum of thermodynamic research. The personnel of the Thermal Research Laboratory of the Dow Chemical Company, under the direction of Dr. D. R. Stull and Dr. H. Prophet, have filled this role to a degree of excellence not likely to be exceeded anywhere. Moreover, the group has heroically remained productive in spite of many battles to retain continuing support, and the actual sharp reduction of funding over the past two years to a less-than-viable level.

A second important factor is the unusual approach to format, evaluation, and distribution of the Tables, as it has been followed since their inception. The primary distribution is infrequently issued loose-leaf supplements. Each previously issued table may thus be revised as often as necessary to take account of improved data. Each loose-leaf table is accompanied on its reverse side by a complete explanation of the selection of the key data, together with all references.

The third vital distinction of these tables has been the existence of a continuing cognizant working group composed of technological users of data, thermodynamicists, and government sponsors of both research and development. Independent prepublication review of the Tables has been an important contribution of some of the members of this group; but its annual technical meetings have resulted in even more far-reaching benefits. Together, the users and generators of data have been able to establish realistic priorities for the species to be included in the Tables; at the same time the course of experimental research has been guided by the demonstration of absence or inadequacy of needed data. Although the working group no longer enjoys official recognition, the members and participants have enthusiastically volunteered to continue meeting in this important work.

Special words of appreciation are due to Dr. Charles W. Beckett, who has lined up all the technical presentations at the last six annual meetings of the working group; and to Mr. Curtis C. Selph who has served with wisdom and insight as the Air Force project monitor for the JANAF Thermochemical Tables contracts.

Arlington, Virginia
October 1970

Joseph F. Masi
Air Force Office of Scientific Research

Preface to the Third Edition

The United States Air Force (USAF) for more than 20 years has supported, and continues to support, the preparation of the JANAF Thermochemical Tables. The Tables, funded through Air Force Office of Scientific Research (AFOSR), were intended originally for calculating performance of thermochemical reactors, such as rocket engines. The computation of such performance figures as thrust and exhaust temperature for a rocket require data such as those in these tables.

The Department of Energy (DOE) [and predecessor agencies Energy Research and Development Administration (ERDA), Office of Coal Research, and Bureau of Mines] became interested in the JANAF Thermochemical Tables because the tables had become the benchmark for thermochemical data for performance calculations. However, reactors and reagents of interest to DOE are different from those of the USAF.

The Department of Energy needs performance calculations for several types of reactors that are of interest in fossil fuel research. These reactors include air pollution control equipment, automotive internal combustion engines, coal gasifiers and furnaces, fuel cells, liquefaction reactors and their catalyst structures, and magnetohydrodynamic generators. For example, researchers might wish to calculate the first-law efficiency of an electrical power plant, or the exhaust concentration of a pollutant such as sulfur dioxide or mercury.

The calculations needed for DOE interests have as their basis the same mathematics and physical chemistry as required for the performance calculations of USAF interest, but DOE needs tables for more and different chemicals. For example, a rocket fuel probably would not be formulated to include silicon or sulfur, but all known coals contain both these elements. Silicon and sulfur are two distinguishing elements accounting for many peculiarities of coal utilization chemistry (which include the chemistries of all the polysulfides, thiosulfates, alums, etc., and of the many glasses and mixed silicates).

For more than six years (1975-1982), Dow Chemical has worked on separate but complementary contracts to satisfy the thermochemical tables' needs of USAF and DOE. This Third Edition of the JANAF Thermochemical Tables presents the results of these efforts, along with reformatted versions of previous tables, to provide an extensive set of tables of wide utility that are consistent with each other and with the requirements of thermodynamic theory.

There remain open questions about calculation methods for equilibrium problems. I mention this because the foreword for the First Edition endorses free-energy-minimization as if it solved all problems of numerical instability. I would remove this apparent endorsement as confusing, inappropriate, and uninformative for users of these tables. For example, the paper of White, Johnson, and Dantzig [J. Phys. Chem. 28, 751 (1958)] does not address numeric stability in any way. Removing this endorsement would not diminish Dow's JANAF work.

I want to thank several people. All the Dow personnel did outstanding work, and several fellow federal employees helped with orchestrating the various contracts to nourish this finished product. In AFOSR, Joseph Masi, Robert Sperlein, and Leonard Caveny were always encouraging. Within the Bureau of Mines, then in ERDA, and finally in DOE, I was helped and encouraged by Daniel Bienstock, Irving Wender, Jim Hendrie, Alex Mills, Kermit Woodcock, and Mike Hogan.

Pittsburgh, Pennsylvania
April 1984

Francis E. Spencer, Jr.
Pittsburgh Energy Technology Center
Department of Energy

Preface to the Fourth Edition

As the Standard Reference Data Program at the National Institute of Standards and Technology approaches its thirtieth year, the release of the fourth edition of the NIST-JANAF Thermochemical Tables provides not only a major update to this important reference work, but also a symbol of the long-term dedication of NIST and its scientists to improving the quality and accessibility of scientific data.

First, let us address the importance of the NIST-JANAF Thermochemical Tables. This fourth edition continues to serve its original community, that is, the scientists and engineers who design rocket propellants. For this use, the updated tables offer additional species and in some cases, corrected data for older species. The use of the NIST-JANAF Thermochemical Tables, however, now far transcends the original need. Today, as modeling of complex chemical processes is becoming routine, NIST-JANAF information is an invaluable resource for reliable thermochemical data. Care of preparation and critical evaluation still form the essence of the compilation. New users are demanding new species, and the tables are being responsive to those demands. There is no other comprehensive source of temperature dependent thermochemical data for inorganic species, certainly none of such high quality.

From another perspective, this edition is an important milestone, for this publication again demonstrates the long-term commitment by NIST to providing evaluated scientific and technical data through its Standard Reference Data Program. Established by the Standard Reference Data Act of 1968, the program today operates data evaluation activities in most areas of NIST's scientific and engineering work.

The Physical and Chemical Properties Division of the NIST Chemical Science and Technology Laboratory (and its predecessors) has for many decades been committed to providing critically evaluated thermochemical data. The "International Critical Tables," "The NIST Tables of Chemical Thermodynamic Properties; Selected Values for Inorganic and C₁ and C₂ Organic Substances in SI Units," and now the "NIST-JANAF Thermochemical Tables" are prime examples of the fruit of this commitment.

The scientific effort required to produce critically evaluated data is difficult for the non-specialist to appreciate. Even though many thermochemical, experimental, and theoretical techniques are well-developed, rarely does one individual measurement or calculation provide "property data." Instead most properties of substances come from repeated measurements, done over time and by different groups, and it is the job of the data evaluator to reconcile conflicting information and extract standard reference data of the type presented in the NIST-JANAF Thermochemical Tables. Malcolm W. Chase was the responsible scientist for the third and fourth editions, and the high quality of data contained in this latest edition is a tribute to his experience and skills as an evaluator.

Finally, it should be noted that the change of name to the NIST-JANAF Thermochemical Tables is the result of greater involvement by NIST in supporting the new edition. Data work at NIST is a team effort, in this case, of the Physical and Chemical Properties Division and the Standard Reference Data Program. The NIST-JANAF Thermochemical Tables represent a renewed dedication on the part of both organizations to make sure that scientists and engineers in industry, government, and academe have access to numeric recommendations of known reliability, for use in research, development, and related technical activities. NIST is proud to present this data compilation to the technical community.

Gaithersburg, Maryland
January 1998

Richard F. Kayser
Chief, Physical and Chemical Properties Division
and
John R. Rumble
Chief, Standard Reference Data Program

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Part I contains pp. 1–XI and 1–957 (Tables for Al–Co), and

Part II contains pp. 959–1951 (Tables for Cr–Zr).

1. Introduction

The Fourth Edition to the NIST-JANAF Thermochemical Tables has been assembled under the sponsorship of the Standard Reference Data Program at the National Institute of Standards and Technology. It contains tables of recommended temperature-dependent values for the standard enthalpy of formation, Gibbs (free) energy of formation, the logarithm of the equilibrium constant of formation, the heat capacity, entropy, enthalpy, and Gibbs energy function for 48 elements and many of their compounds. This publication is a current collection of all tables issued through 1997 under contracts with the U.S. Department of Energy and the U.S. Air Force Office of Scientific Research, NASA, the JANAF Combustion Subcommittee, and the Standard Reference Data Program. It supersedes the Third Edition,¹ which, in turn, superseded the Second Edition,² and the four supplemental updates published in the Journal of Physical and Chemical Reference Data.³⁻⁶

Numerous new and revised thermochemical tables are included in this collection. [Refer to Sec. 7] Unlike the Third Edition of these tables, the Fourth Edition is not a rewriting and a recalculation of all the tables; no attempt has been made to reanalyze the data for all tables. A continued effort was made to correct all typographical errors from previous publications and to force an increasingly consistent style and format. The tables adhere more closely to the current IUPAC recommendations on symbols and notation. The tables, as published in the previous Third Edition, are all based on the 1981 IUPAC^{7a} and 1973 CODATA^{8a} recommendations for relative molecular masses and fundamental constants. As a result, a comparison of a table in the Fourth and Third Editions and their previously published form (i.e., same revision date) will reveal differences; however, these result from the adjustments mentioned above rather than from a reanalysis of the data. For tables issued since the Third Edition, values of the fundamental constants and relative molecular masses are based on the 1993 IUPAC^{7b} and 1986 CODATA^{8b} recommendations. It should be noted that there is a revised set of recommendations for the fundamental constants due in late 1998. Also, it should be remembered that the relative molecular masses are reassessed and updated every two years. The effects of these changes will be discussed later.

All thermal functions have been calculated using the same auxiliary data. Following a similar procedure for the formation properties has introduced slight inconsistencies in those tables for which the formation properties were derived from the previous thermal functions.

2. History of the JANAF Thermochemical Tables

Between 1955 and 1958, severe difficulties were encountered by individuals attempting to conduct rigorous performance calculations for propellant systems that gave multiphase combustion products characterized by complex chemical and thermal equilibria. Several of these individuals

approached the Armed Services requesting that a group be assembled to assess the validity of the calculation methods and thermochemical data which were being employed at that time.

January 1958, the Armed Services jointly instructed the Solid Propellant Information Agency to organize the Joint Army-Navy-Air Force Ad Hoc Panel on Performance Calculation Methods and Thermodynamic Data. This panel, which consisted of 38 representatives of military facilities, defense contractors, and research organizations, terminated its operations in June 1959, with a recommendation that future activities under its purview could more appropriately be handled by a smaller working group. An additional recommendation included in the panel's final report was that this working group initiate the establishment of a thermochemical data compilation, evaluation, and dissemination program utilizing the available personnel and facilities of the Dow Chemical Company.

On 1 September 1959, the Joint Army-Navy-Air Force Thermochemical Panel was formed under the sponsorship of the Bureau of Naval Weapons, Department of the Navy; Office, Chief of Ordnance, Department of the Army; Air Research and Development Command, Department of the Air Force; and the Advanced Research Projects Agency, Department of Defense. The panel operated in accordance with the Rules of Operations of Solid Propellant Panels as adopted by representatives of the above offices on 1 September 1959.

The JANAF Thermochemical Panel Membership, which consisted originally of approximately 15 individuals with special experience in the technological subject under panel purview, met at the Pentagon on 16 November 1959, at which time plans for the thermochemical compilation project were reviewed and the project formally initiated.

Urgency required that a large set of consistent tables be assembled as quickly as possible. Computer programs had to be developed, and at first it was not possible to adequately assess the input information for every table. When the original data were evaluated, the table was printed on white paper; otherwise, the table was printed on gray paper. By the end of 1960, the first set was ready for distribution to some 1000 qualified recipients. For a number of years, at the end of each quarter, a supplement was issued which contained additional tables and revised tables. Some of the gray tables were revised to white tables.

The distribution of quarterly supplements continued through 31 December 1967, at which time the distribution shifted to semiannual supplements. Simultaneously, the tables were prepared under the auspices of the Interagency Chemical Rocket Propulsion Group, Working Group on Thermochemistry. On 31 December 1970, the working group became the Ad Hoc Working Group on Thermochemistry. By 30 June 1971, the tables project was sponsored by the U. S. Air Force Office of Scientific Research (AFOSR) and prepared under the advice and assistance of a thermochemistry group, referred to as reviewers. In late 1976, the U.S. Energy Research and Development Administration (now reorganized to be the U.S. Department of Energy) joined in sponsoring the tables.

The distribution reverted to a quarterly schedule with an expanded list of reviewers. AFOSR and DOE jointly funded this activity until late 1982. AFOSR continued as the sole sponsor until 1986.

From 1967 through 1985, the JANAF Thermochemical Tables have been sponsored by the U.S. Air Force Office of Scientific Research and the U.S. Department of Energy under the following contracts:

Air Force Contracts F04611-67-C-0009	Department of Energy Contracts DE AC22-76ET10637
F04611-70-C-0028	DE AC22-81PC41514
F44620-70-C-0104	
F44620-75-C-0048	
F49620-82-C-0016	

In addition, there was an interagency transfer of funds, from AFOSR to DOE, in the period 1976-1981.

In 1970 the output of the JANAF project was incorporated into the National Standard Reference Data System, a national program on evaluated physical and chemical data which is coordinated by the National Institute of Standards and Technology. Since that time the JANAF Thermochemical Tables have been disseminated as part of the Journal of Physical and Chemical Reference Data. Loose-leaf supplements were terminated with the publication of the Third Edition.

In January 1986, the JANAF Thermochemical Tables project transferred from the Dow Chemical Company to the National Institute of Standards and Technology. Funding since 1986 has come in large part from the Standard Reference Data Program, with additional contracts with NASA, JANAF Combustion Subcommittee, and the U. S. Army. Updates to this Fourth Edition are being made in separate articles, many of which (but not all) are to be published in the Journal of Physical and Chemical Reference Data.

2.1. Members of the JANAF Thermochemical Panel (1959-1961) and the JANAF Thermochemical Working Group (1961-1964)

T. O. Dobbins, Advanced Research Projects Agency (Past Chairman)	
W. H. Jones, Institute for Defense Analyses; Aerospace Corporation (Past Chairman)	
W. G. May, Institute for Defense Analyses; Esso Research and Engineering Company (Past Chairman)	
C. W. Beckett, National Bureau of Standards (Vice Chairman)	
G. W. Avery, Chemical Propulsion Information Agency (Past Secretary)	
B. K. Farris, Chemical Propulsion Information Agency (Past Secretary)	
T. L. Reedy, Chemical Propulsion Information Agency (Secretary)	
B. J. Alley, Army Materiel Command	
P. W. Bender, University of Wisconsin	
W. A. Bennett, Bureau of Naval Weapons	

B. Brown, Hercules Powder Company
C. L. Funk, Jet Propulsion Laboratory
J. S. Gordon, Thiokol Chemical Corporation
L. J. Gordon, Aerojet-General Corporation
S. A. Greene, North American Aviation
C. B. Henderson, Atlantic Research Corporation
D. L. Hildenbrand, Philco Corporation
J. L. Margrave, University of Wisconsin
J. P. McCullough, U.S. Bureau of Mines
P. L. Nichols, Jr., Jet Propulsion Laboratory
C. C. Selph, Air Force Systems Command
D. R. Stull, Dow Chemical Company

The Thermochemical Working Group of the Interagency Chemical Rocket Propulsion Group (ICRPG) has consisted of the following at various times during its existence (1964-1969).

Members

J. F. Masi, Air Force Office of Scientific Research
(Chairman)
C. W. Beckett, National Bureau of Standards
(Vice Chairman)
T. O. Dobbins, Advanced Research Projects Agency
S. Gordon, National Aeronautics and Space Administration
R. Jackel, Office of Naval Research
J. Murrin, Naval Ordnance Systems Command
R. Odom, Army Materiel Command
C. C. Selph, Air Force Rocket Propulsion Laboratory
D. Squire, Army Research Office

Participants

G. S. Bahn, Marquardt Corporation
B. Brown, Hercules, Inc.
H. F. Calcote, AeroChem Research Laboratories
J. P. Coughlin, Aerojet-General Corporation
J. S. Gordon, Atlantic Research Corporation
D. R. Douslin, U.S. Bureau of Mines
M. Farber, Space Sciences, Inc.
R. M. Fristrom, Applied Physics Laboratory
C. B. Henderson, Atlantic Research Corporation
D. L. Hildenbrand, Douglas Aircraft Company
J. L. Margrave, Rice University
W. G. May, Esso Research and Engineering Company
W. Mitchell, Thiokol Chemical Corporation
C. F. Robillard, Jet Propulsion Laboratory
L. Schieler, Aerospace Corporation
C. H. Shomate, Naval Weapons Center
D. R. Stull, Dow Chemical Company
M. Zimmer, Naval Ordnance Station

Secretariat (Chemical Propulsion Information Agency)

T. Gilliland
M. McCormack
T. L. Reedy

In the period 1969-1984, various scientists donated their time to critique the loose-leaf supplements to the JANAF

Thermochemical Tables prior to their distribution. Their efforts certainly increased the quality of the tables. As of January 1982 the reviewers of the JANAF Thermochemical Tables were:

DOE Reviewers

Francis E. Spencer, Jr., DOE/PETC Combustion Technical Division
 Joseph W. Martin, DOE/METC, Coal Projects Management Division
 Thomas C. Ehler, Marquette University
 R. Howald, Montana State University
 Fred C. Fehsenfeld, NOAA Environmental Research Laboratory
 Gerd Rosenblatt, Los Alamos National Laboratory
 Martin Steinberg, University of California, Santa Barbara
 C. B. Alcock, University of Toronto
 J. Brian Pedley, University of Sussex
 Malcolm H. Rand, AERE Harwell.

AFOSR Reviewers

David White, University of Pennsylvania
 W. L. Worrell, University of Pennsylvania
 Stanley Abramowitz, U.S. National Bureau of Standards
 David A. Ditmars, U.S. National Bureau of Standards
 H. M. Rosenstock, U.S. National Bureau of Standards
 Leonard Caveny, AFOSR/NA, Bolling AFB
 John L. Haas, Jr., U.S. Geological Survey
 John S. Gordon, TRW Energy Systems
 Joseph F. Masi, AFOSR (retired)
 Sanford Gordon, NASA Lewis Research Center
 Edgar F. Westrum, Jr., University of Michigan
 William D. Good, DOE/BETC
 R. H. Hauge, Rice University
 John L. Margrave, Rice University
 Milton Farber, Space Sciences, Inc.
 Curtis C. Selph, AFRPL/LKDH
 Donald L. Hildenbrand, SRI International
 Leo Brewer, University of California
 James P. Coughlin, Aerojet Tactical Systems Co.
 N. A. Gokcen, U.S. Bureau of Mines, AMRC

2.2. Project Personnel

The Tables began under the direction of Daniel R. Stull in 1959. Major contributions in the first two years were made by Thomas E. Dergazarian, Samuel Levine, and Louis A. DuPlessis. In 1969 Harold Prophet succeeded Daniel R. Stull as project director and continued in that position until his untimely death in late 1972. Malcolm W. Chase has been project director since late 1972.

The following professional personnel of the Dow Chemical Company have been involved in the preparation of the JANAF Thermochemical Tables:

Project Director, D. R. Stull	1959-1969
Project Director, H. Prophet	1969-1972

Project Director, M. W. Chase	1972-1985
P. A. Andreozzi	1980-83
J. Chao	1961-69
J. L. Curnutt	1969-79
T. E. Dergazarian	1959-63
C. A. Davies	1980-85
J. R. Downey, Jr.	1976-85
L. A. DuPlessis	1960-61
D. J. Frurip	1983-85
S. T. Hadden	1962
A. T. Hu	1965-70
B. H. Justice	1964
G. C. Karris	1965-68
S. Levine	1960-61
R. A. McDonald	1971-85
F. L. Oetting	1961
R. S. Orehotsky	1963-64
R. V. Petrella	1961-62
E. W. Phillips	1963-66
J. A. Rizos	1962-63
G. C. Sinke	1962,65,69,70
A. C. Swanson	1962-64
A. N. Syverud	1963-84
H. K. Unger	1963-64
E. A. Valenzuela	1975-81
L. C. Walker	1971-73
D. U. Webb	1967-68
S. K. Wollert	1963-65

We also wish to mention the valuable assistance in the typing of these Tables of Norma Dumont, 1959-64; Viola E. Harrington, 1964-66; Carol S. Scheffier, 1966-67; Wildene B. Harris, 1967-68; Mary J. Walter, 1968-71; and for the time period of 1971-78 of Joan Weldon, Cheri Snow, Barbara Boman, Sheila Knoerr, Patricia Grochowski, and Lisa Ittner. For the years 1978-1985 Betty Clark, Jan Crouch, and Rhoda Toth have typed the tables. Isabel Carr provided valuable services to the group in abstracting, searching and ordering documents, and proofreading the Tables for the Second Edition. For the period 1978-1985 Dana Donley, Debbie Simpson, Marge Sheets, Barbara Meier, Diana Scribner, and Anne Schmidt have provided similar assistance. Milton D. Marks was very instrumental in all computer aspects of this project in the 1980's.

In the time period of 1985 to 1998, technical contributions have been made by Stanley Abramowitz and David Neumann. Additional help in literature searching, data collection, and data entry has been provided by Cindy Jackson, Rhoda Levin, and Sabina Crisen.

3. Notation and Terminology

The symbols and terminology for physicochemical quantities and units are those recommended by IUPAC through its Physical Chemistry Division.^{9,10} For the thermodynamic notation needed but not specified by these two sources, the recom-

mendations of the Bulletin of Chemical Thermodynamics¹¹ are used. Similarly, for spectroscopic nomenclature, the common practice of Moore¹² and Herzberg¹³⁻¹⁶ is followed.

3.1. Definition of the Standard State

This description of the standard state is an abbreviated version of that given by the IUPAC Physical Chemistry Division.¹⁰

Absolute values of some thermodynamic quantities are unknown. Only changes in values caused by changes in parameters such as temperature and pressure can be determined. It is therefore important to define a base line for substances, to which the effect of such variations may be referred. The standard state is such a base line. The properties of these standard states are indicated by use of the symbol°. For a pure substance the concept of standard state applies to the substance in a well-defined state of aggregation at a well-defined but arbitrarily chosen standard pressure.

Historically, the defined pressure for the standard state, i.e., the standard-state pressure, had been one standard atmosphere (101 325 Pa). With the growing use of SI units, continued use of the atmosphere is inconvenient. IUPAC has recommended that the thermodynamic data should be reported for a defined standard-state pressure of 100 000 Pa. The standard-state pressure in general is symbolized as p° . Previously all JANAF thermochemical publications prior to the Third Edition, p° was taken as 1 atm. Beginning with the Third Edition of the JANAF Thermochemical Tables, p° is taken as 100 000 Pa (1 bar). It should be understood that the present change in the standard-state pressure carries no implication for "standard pressures" used in other contexts, e.g., the convention that "normal boiling points" refer to a pressure of 101 325 Pa (1 atm).

The change of the customary value of p° from 1 atm (101 325 Pa) to 1 bar (100 000 Pa) results in small alterations in standard values of some thermodynamic quantities for all substances. For condensed phases the magnitude of these alterations is nearly always negligible in comparison with the uncertainty of current data. However, the alterations in values of entropy and the Gibbs energy function for a pure gaseous substance and of the Gibbs energy of reaction for a reaction involving gaseous species may not be negligible. This will be discussed in detail later (Sec. 4.3).

Hence, in all the tables appearing in this publication the standard state for a pure gaseous substance is that of the substance as an (hypothetical) ideal gas at 1 bar; the standard state for a pure liquid substance is that of the pure liquid under a pressure of 1 bar; the standard state for a pure solid substance is that of the pure crystalline substance under a pressure of 1 bar.

Since an enthalpy measurement is made as a difference between an initial and a final state, the reference temperature for enthalpy must be arbitrarily chosen. It is taken to be 298.15 K in all tables. Refer to the discussion of types of thermochemical tables for further details (Secs. 4.2 and 6).

3.2. Symbols

States of aggregation

The symbols and their corresponding descriptions for the states of aggregation are exactly those given by IUPAC.^{9,10} They are rewritten here for the convenience of the reader.

Single letters are used to denote the three basic states of aggregation, gas, liquid, and solid, while combinations of letters are used for more subtle descriptions of states.

g	gas or a vapor
l	liquid
s	solid
cd	condensed phase (i.e., either the solid or the liquid state)
fl	fluid (i.e., either the gaseous or the liquid state)
cr	crystalline solid; where polymorphism occurs, it may be necessary to augment the symbol cr with a descriptor for the crystal modification under discussion; the preferred descriptors are Roman numerals, with textual definition of the crystallographic significance of the numerals used
am	amorphous solid
vit	vitreous substance (a glass)
mon	monomeric form
pol	polymeric form (in many cases the monomeric or polymeric character of the entity will be clear from the context without the symbol and the symbol should be used only in cases where ambiguity might result)
sln	solution; in many contexts it will be clear whether a liquid solution or a solid solution is meant, but where this is unclear it must be made clear by supplemental notation
aq	solution in which water is the solvent (an aqueous solution); in the past this symbol has sometimes been used to denote an infinitely dilute aqueous solution, but infinite dilution should henceforward be denoted by the extra symbol ∞ .
sat	saturated; the state of equilibrium between phases, whether of a pure substance or a system of more than one component.

Processes

The symbols and their corresponding descriptions for processes are exactly those given by IUPAC.^{9,10} The remaining six processes are denoted by the symbols recommended by the Bulletin of Chemical Thermodynamics.¹¹ The use of special symbols to denote a process are as follows:

vap	vaporization (evaporation) of a liquid
sub	sublimation (evaporation) of a solid
fus	melting (fusion) of a solid
trs	transition of one solid phase to another
mix	the mixing of fluids
sol	the process of solution (dissolution)
r	chemical reaction in general

c	combustion reaction; also can denote critical properties	B_0, B_c	rotational constant
f	a reaction in which a compound is formed from its elements (formation)	D	centrifugal distortion constant
at	a process in which a substance is separated into its constituent gaseous atoms (atomization)	D°	dissociation energy is defined as the enthalpy of the ground-state products relative to the lowest existing level of the molecule; $D^\circ = \Delta_{at}H^\circ$ (0 K).
dcm	a process in which a substance decomposes (not given by IUPAC)	E_i	ionization energy (IP)
dso	a process in which a substance dissociates (not given by IUPAC)	E_{ca}	electron affinity (EA)
dim	a process in which a substance dimerizes (not given by IUPAC)	g_i	quantum (or statistical) weight of the i th electronic state; quantity is the product of the spin multiplicity and state degeneracy of the electronic level under consideration
dil	the dilution of a solution	I_A, I_B, I_C	principal moments of inertia of a molecule
gt	glass transition (not given by IUPAC)	k	Hooke's law force constant
hyd	hydrolysis (not given by IUPAC)	n	number of potential maxima in an internal rotation; also refers to principal quantum number in describing energy levels of atoms
ion	ionization (not given by IUPAC)	N	number of atoms in molecule

Fundamental Constants

c	speed of light in vacuum	r_c	internuclear distance (for the "equilibrium" structure of the molecule)
h	Planck constant	V_0	potential barrier to internal rotation
N_A	Avogadro constant	α_c	first-order rotation-vibration interaction constant
e	elementary charge	ϵ_i	i th electronic energy level
F	Faraday constant	σ	symmetry number
R	gas constant	μ	reduced mass of the molecule
T_0	absolute temperature of "ice point"	ν	observed vibrational fundamental
k	Boltzmann constant	ω_c	vibrational fundamental for infinitesimal amplitude
c_2	second radiation constant	$\omega_{cx}, \omega_{cy}, \omega_{cz}$	vibrational anharmonicity constants

Units

cal	calorie
eV	electron volt
$g\text{-atom}$	a mole of atoms
J	joule
K	kelvin
kcal	kilocalorie
kJ	kilojoule
mol	mole
L	liter

Mathematical Quantities

ln	logarithm to the base e
lg	logarithm to the base 10 (log)

Spectroscopic Quantities

The spectroscopic symbols, use, and description follow the well-established practices of Moore¹² and Herzberg.¹³⁻¹⁶ These sources provide more extensive discussion as to the meaning and use of the various spectroscopic quantities.

The measured quantities often are reported in the literature for a specific isotopic molecule. The thermochemical tables in this publication normally use spectroscopic information for a natural isotopic abundance "molecule." Care should be exercised in noting to which molecule the spectroscopic data pertains.

\AA	Angstrom
AP	appearance potential

Thermodynamic and Other Quantities

A_r	relative atomic mass (atomic weight)
C_p	molar heat capacity at constant pressure
C_s	molar heat capacity at saturation
ΔU	change in internal energy
ΔG	change in Gibbs energy, $G = H - TS = U + PV - TS$
ΔH	change in enthalpy, $H = U + PV$
K	equilibrium constant
M_r	relative molecular mass (molecular weight)
p	pressure
T	temperature, in kelvin
t	temperature, in degrees Celsius (°C)
V	volume
Δ	indicates the increment in a given property for a given process or reaction, taken as the value for the final state (or sum for the products) less that for the initial state (or sum for reactants).
$\Delta_f H^\circ$	represents the standard enthalpy of formation, which is the increment in enthalpy associated with the reaction of forming the given compound from its elements in their reference states, with each substance in its thermodynamic standard state at the given temperature.

Experimental Method Techniques

dsc	differential scanning calorimetry
dta	differential thermal analysis
emf	electromotive force
esr	electron spin resonance
glc	gas-liquid chromatography
gpc	gel permeation chromatography
ir	infrared spectroscopy
nmr	nuclear magnetic resonance
tga	thermogravimetric analysis
LLE	liquid-liquid equilibria
VLE	vapor-liquid equilibria
VP/xxxx	vapor pressure/experimental technique
/ebul	= ebulliometric
/Knud	= Knudsen effusion
/stat	= static
/Kems	= Knudsen effusion-mass spectrometry
/Kete	= Knudsen effusion-torsion effusion
/tran	= transpiration
/Lang	= Langmuir free evaporation
/Lams	= Langmuir-mass spectrometry

3.3. Relative Atomic Masses and Natural Isotopic Composition of the Elements

The Table of Atomic Weights of the Elements 1981^{7a} is reprinted below. Added to this list are the relative atomic

masses for the electron (e-) and deuterium (D). The relative atomic mass for the electron is given by Cohen and Taylor.^{8a}

The 1981 report on atomic weights¹⁷ includes a complete review of the natural isotopic composition of the elements and also tabulates the relative atomic masses for selected radioisotopes. This information is required for the conversion of spectroscopic data from that corresponding to specific isotopes to the naturally occurring isotopic abundance. For tabulations issued with dates later than 1985, more recent values are used.

As in the IUPAC report, values in parentheses are used for radioactive elements whose relative masses cannot be quoted exactly without knowledge of the origin of the elements; the value given is the atomic mass number of the isotope of that element of longest known half life. Alternatively, the relative atomic mass of the isotope with the longest known half life or that of a commonly used isotope could be listed, since the relative atomic masses of the individual isotopes are accurately known.

As mentioned in the Introduction (Sec. 1), for tables issued since the Third Edition, values of the molecular masses are based on the 1993 IUPAC recommendations.

NIST-JANAF THERMOCHEMICAL TABLES

Table of relative atomic masses of the elements, 1981
[Pure Appl. Chem. 55, 1101 (1983), alphabetical order, based on the relative atomic mass, $A_r(^{12}\text{C}) = 12$]

Name	Symbol	atomic number	Relative atomic mass	Name	Symbol	atomic number	Relative atomic mass
Actinium	Ac	89	227.0278	Mercury	Hg	80	200.59
Aluminum	Al	13	26.98154	Molybdenum	Mo	42	95.94
Americium	Am	95	(243)	Neodymium	Nd	60	144.24
Antimony (Stibium)	Sb	51	121.75	Neon	Ne	10	20.179
Argon	Ar	18	39.948	Neptunium	Np	93	237.0482
Arsenic	As	33	74.9216	Nickel	Ni	28	58.69
Astatine	At	85	(210)	Niobium	Nb	41	92.9064
Barium	Ba	56	137.33	Nitrogen	N	7	14.0067
Berkelium	Bk	97	(247)	Nobelium	No	102	(259)
Beryllium	Be	4	9.01218	Osmium	Os	76	190.2
Bismuth	Bi	83	208.9804	Oxygen	O	8	15.9994
Boron	B	5	10.81	Palladium	Pd	46	106.42
Bromine	Br	35	3579.904	Phosphorus	P	15	30.97376
Cadmium	Cd	48	112.418	Platinum	Pt	78	195.0
Caesium	Cs	55	132.9054	Plutonium	Pu	94	(244)
Calcium	Ca	20	40.08	Polonium	Po	84	(209)
Californium	Cf	98	(251)	Potassium (Kalium)	K	19	39.0983
Carbon	C		12.011	Praseodymium	Pr	59	140.9077
Cerium	Ce	58	140.12	Promethium	Pm	61	(145)
Chlorine	Cl	17	35.453	Protactinium	Pa	91	231.0359
Chromium	Cr	24	51.996	Radium	Ra	88	226.0254
Cobalt	Co	27	58.9312	Radon	Rn	86	(222)
Copper	Cu	29	63.546	Rhenium	Re	75	186.207
Curium	Cm	96	(247)	Rhodium	Rh	45	102.9055
Deuterium	D	1	2.014102	Rubidium	Rb	37	85.4678
Dysprosium	Dy	66	162.50	Ruthenium	Ru	44	101.07
Einsteinium	Es	99	(252)	Samarium	Sm	62	150.36
Electron	e-		0.000 548 58	Scandium	Sc	21	44.9559
Erbium	Er	68	167.26	Selenium	Se	34	78.96
Europium	Eu	63	151.96	Silicon	Si	14	28.0855
Fermium	Fm	100	(257)	Silver	Ag	47	107.8682
Fluorine	F	9	18.998403	Sodium (Natrium)	Na	11	22.98977
Francium	Fr	87	(223)	Strontium	Sr	38	87.62
Gadolinium	Gd	64	157.25	Sulfur	S	16	32.06
Gallium	Ga	31	69.72	Tantalum	Ta	73	180.9479
Germanium	Ge	32	72.59	Technetium	Tc	43	(98)
Gold	Au	79	196.9665	Tellurium	Te	52	127.60
Hafnium	Hf	72	178.49	Terbium	Th	65	158.9254
Helium	He	2	4.00260	Thallium	Tl	81	204.383
Holmium	Ho	67	164.9304	Thorium	Th	90	232.0381
Hydrogen	H	1	1.00794	Thulium	Tm	69	168.9342
Indium	In	49	114.82	Tin	Sn	50	118.69
Iodine	I	53	126.9045	Titanium	Ti	22	47.88
Iridium	Ir	77	192.22	Tungsten (Wolfram)	W	74	183.85
Iron	Fe	26	55.847	(Unnilhexium)	(Unh)	106	(263)
Krypton	Kr	36	83.80	(Unnilpentium)	(Unp)	105	(262)
Lanthanum	La	57	138.9055	(Unnilquadium)	(Unq)	104	(261)
Lawrencium	Lr	103	(260)	Uranium	U	92	238.0289
Lead	Pb	82	207.2	Vanadium	V	23	50.9415
Lithium	Li	3	6.941	Xenon	Xe	54	131.29
Lutetium	Lu	71	174.967	Ytterbium	Yb	70	173.04
Magnesium	Mg	12	24.305	Yttrium	Y	39	88.9059
Manganese	Mn	25	54.9380	Zinc	Zn	30	65.38
Medelevium	Md	101	(258)	Zirconium	Zr	40	91.22

3.4 Fundamental Constants and Conversion Factors

The numerical values of the fundamental constants used in our calculations are those obtained by Cohen and Taylor^{8a} based on a least-squares adjustment of data existing in 1973. These values have been adopted by CODATA.^{8a}

As mentioned in the Introduction (Sec. 1), for tables issued since the Third Edition, values of the fundamental constants are based on the 1986 CODATA recommendations.^{8b}

Fundamental constants

Quantity	Symbol	Value ^a
Speed of light in vacuum	<i>c</i>	299 792 458(1.2) m s ⁻¹
Planck constant	<i>h</i>	6.626 176(36) × 10 ⁻³⁴ J s
	<i>h/2π</i>	1.054 588 7(57) × 10 ⁻³⁴ J s
Avogadro constant	<i>N_A</i>	6.022 045(31) × 10 ²³ mol ⁻¹
Elementary charge	<i>e</i>	1.602 189 2(46) × 10 ⁻¹⁹ C
Faraday constant, <i>N_Ae</i>	<i>F</i>	9.648 456(27) × 10 ⁴ C mol ⁻¹
Absolute temperature of "ice point," 0 °C	<i>T₀</i>	273.150 0 K
Molar gas constant	<i>R</i>	8.314 41(26) J mol ⁻¹ K ⁻¹
Boltzmann constant, <i>RN_A⁻¹</i>	<i>k</i>	1.380 662(44) × 10 ⁻²³ J K ⁻¹
Second radiation constant, <i>hc/k</i> ⁻¹	<i>c₂</i>	1.438 786(45) × 10 ⁻² m K

^aNumbers in parentheses are the one standard deviation uncertainties in the last digits of the quoted value.

Conversion factors for energy-related units. 1973 CODATA constants

	kJ mol ⁻¹	kcal mol ⁻¹	eV (per molecule)	cm ⁻¹	MHz
1 kJ mol ⁻¹	1	0.239 005 7	0.010 364 35	83.593 47	2.506 069 × 10 ⁶
1 kcal mol ⁻¹	4.184	1	0.043 364 45	349.755 1	1.048 539 × 10 ⁷
1 eV (per molecule)	96.4846	23.06036	1	8065.479	2.417 970 × 10 ⁸
1 MHz	3.990 313 × 10 ⁻¹	9.537 077 × 10 ⁻⁸	4.135 701 × 10 ⁻⁹	3.335 641 × 10 ⁻⁵	1
1 cm ⁻¹	0.011 962 66	2.859 144 × 10 ⁻³	1.239 852 × 10 ⁻⁴	1	2.997 924 × 10 ⁴
1 K (degree)	8.314 41 × 10 ⁻³	1.987 19 × 10 ⁻¹	8.617 349 × 10 ⁻⁵	0.695 030 4 ^a	2.083 649 × 10 ⁴
1 hartree	2625.500	627.509 5	27.211 606	2.194 746 × 10 ⁵	6.579 684 × 10 ⁹
1 rydberg	1312.750	313.754 7	13.605 803	1.097 373 × 10 ⁵	3.289 842 × 10 ⁹

^aThis value is inverse of the second radiation constant *c₂*; $(hc/k)^{-1} = c_2^{-1} = 0.695\ 030\ 4$.

3.5. Temperature Scale

Since the NIST-JANAF Thermochemical Tables deal with properties that vary with temperature, the temperature scale is of significance. The International Temperature Scales are devised to approximate, as closely as possible, the absolute thermodynamic (kelvin) temperature suggested by W. Thomson (Lord Kelvin) in 1854. The International Temperature Scale is established by the Comité International des Poids et Mesures (International Committee of Weights and Measures).

There have been four international temperature scales: The International Temperature Scale of 1927,¹⁸ The International Temperature Scale of 1948 which was renamed the International Practical Temperature Scale of 1948 (IPTS-48) in 1960,^{19–20} The International Practical Temperature Scale of 1968 (IPTS-68)²¹ and The International Temperature Scale of 1990 (ITS-90).²²

Our concern in the preparation of the NIST-JANAF Thermochemical Tables is to adjust any experimental measurements to the thermodynamic scale. In practice, this means

converting to the ITS-90 scale since it is the currently accepted closest approximation to the thermodynamic scale.

To facilitate temperature adjustments, the article by Corruccini¹⁹ was used for the 1927 to 1948 conversions and the article by Douglas²³ for the 1948 to 1968 conversion. Guilder and Edsinger²⁴ included a plot showing the deviation of IPTS-69 from the thermodynamic temperatures from 273.16 to 730 K. For conversions to the current scale (ITS-90), there are numerous articles which discuss the conversion of experimental data or smoothed results to the new temperature scale.

Ideal-gas tables of thermodynamic properties derived from statistical mechanics are based on the thermodynamic temperatures (as well as on the values of the physical constants used) and are hence independent of any practical temperature scale. The enthalpy of formation, Gibbs energy of formation, and logarithm of the equilibrium constant might depend on temperature-adjusted data.

For condensed phase tables, the temperature scale conversion is often not necessary and is not made since the correction would be small compared with the uncertainty in the data.

4. Reference States and Conversions

There are three types of tables included in this publication: single-phase, multiphase, and reference state tables. The tables are clearly labeled as to the type at the top of each page and by the state designations associated with the chemical formula. The reference state can involve a single phase or multiphases. The major difference between a multiphase table and a single-phase table is the existence of a discontinuity in each function (or in its first derivative) at a first-order transition temperature.

4.1. Reference State

A related set of thermodynamic property tables requires that there be a reference table of the thermodynamic properties for each element to which all other forms of that element or any compound involving that element may be referred. If the temperature range of interest (0 K to 6000 K herein) can be represented by a single phase for that material (say hydrogen) the tabulated values in the reference table will be smooth and regular. If the temperature range of interest includes more than one phase (say magnesium), there will be a solid phase (from 0 K to 923 K, the melting temperature), a liquid phase (923 K to 1378 K, where the vapor pressure reaches 1 bar), and a gas phase (1378 K to 6000 K), and the tabulated values in the reference table will be discontinuous at these temperatures or phase boundaries. Practical usage dictates that in so far as possible the phase most stable at 1 bar pressure be selected. This practice is followed in these tables, and does lead to discontinuities in the thermodynamic functions. Attention is called to these discontinuities in the reference state tables by insertion of a comment as to the type of transition at the temperature of the phase transition.

Since these tables deal with ideal gases, the pressure is really the fugacity. Calculating a boiling temperature as the temperature at which $\Delta_{\text{vap}}G^\circ = 0$ for the process $\text{Mg(l)} \rightarrow \text{Mg(g)}$ corresponds to an (ideal) fugacity of 1 bar. This will differ from the real (observed) boiling point at 1 bar which is also different from the real (observed) boiling point at 1 atm. Each of these "three boiling points" corresponds to a different $\Delta_{\text{vap}}G^\circ$ value.

With the use of f and $^\circ$, as in Δ_fH° , the implication is that both the compound in question and its constituent elements are in standard states and that the elements, moreover, are in their reference states; for any given temperature the reference states of the elements will normally be those that are stable at the chosen standard-state pressure and at that temperature. A resulting feature of tabulations of Δ_fH° and Δ_fG° as functions of temperature for compounds is that discontinuous changes are sometimes to be seen; these correspond to changes in the stable reference states of the elements, as phase-transition temperatures are passed. Thus, values of Δ_fH° ($\text{SO}_2\text{Cl}_2\text{g}$) would show discontinuous changes at three temperatures corresponding to the transitions $\text{S(cr,I)} \rightarrow \text{S(cr,II)}$, $\text{S(cr,II)} \rightarrow \text{S(l)}$, and $\text{S(l)} \rightarrow 1/2 \text{S}_2\text{g}$, where I refers to rhombic and II to monoclinic crystal forms.

4.2. Single-Phase and Multiphase Tables

A multiphase table contains the data for two or more phases of a pure substance. Each phase is limited to the temperature range in which it is more stable (i.e., has a lower Δ_fG° than the other phases in the table). There are discontinuities in the properties C_p° , S° , and H° at the temperatures where each phase transforms ($\Delta G^\circ = 0$) to the next phase. Alternatively, the properties of a pure substance can be given in a series of tables where each table is devoted to a single phase. Single-phase tables do not have discontinuities in the properties C_p° , S° , and H° at transition temperatures. Moreover, the properties are extrapolated beyond the transition temperatures into regions where that phase is less stable than its other phases. These characteristics of continuity and extrapolation of properties lead directly to the advantages and problems of single-phase tables. The enthalpy of formation and Gibbs energy of formation may have discontinuities, even in single-phase tables, corresponding to transitions in the reference states.

Single-phase tables are more convenient than multiphase tables in certain computer applications. Interpolation and approximation (curve fitting) apply directly to the continuous properties in a single-phase table. Multiphase tables must first be divided into segments using the stored values of the transition temperatures; then interpolation and approximation must be limited to the temperatures in the pertinent segment.

Single-phase tables are essential in uses that involve unstable phases. This includes phases that persist in a metastable region or those that are unstable at all temperatures. [Such cases abound in the real world.] Single-phase tables are often applied to solid-solid or solid-liquid equilibrium in mixtures, where an unstable phase is "stabilized" in the presence of other components. Analysis of such equilibria often requires liquid or solid properties that are many hundreds of degrees into the metastable region of each pure phase. Single-phase tables are designed to supply these properties, but their preparation is not trivial.

The NIST-JANAF Thermochemical Tables often include estimated glass transitions in the liquid tables. The glass temperature is usually assumed to be ~ 0.7 times the melting temperature. The heat capacity of the glass is usually assumed to be equal to that of the stable crystalline phase, since existing glass data show a decrease in C_p° to values near those of the crystal. Such tables are, in fact, not single-phase tables but two-phase glass-liquid tables.

The glass transition is of practical concern when thermochemical tables are used near the glass transition temperature of any of the pure liquids. Although the ratio of the glass temperature to the melting temperature can vary from perhaps 0.35 to >0.8 , it often is ~ 0.7 . Temperatures this low are not uncommon when tables for liquids are used in the analysis of binary or multicomponent phase diagrams.

It is important to ask whether glass transitions should be included in liquid tables intended for such use. Estimated glass transitions are included for two reasons: the transition is usually observed in supercooled liquids and its inclusion avoids an entropy paradox. The first reason presumes that

glass transitions do occur but cannot be observed in liquids that readily crystallize. The more compelling reason is the avoidance of the paradox in which the entropy of the supercooled liquid (a disordered state) becomes less than that of the stable crystalline state.

The choice remains as to what temperature and what phase should be used as the reference point for enthalpy in the extrapolated single-phase tables. Since 298.15 K was adopted as the reference temperature for multiphase and reference state tables, there is strong incentive for retention of that temperature in single-phase tables. The choice has been made to have the reference at the same arbitrary point in each phase. Thus, the JANAF Thermochemical Tables use a reference temperature of 298.15 K in the table for the high-temperature phase even when that phase is not stable at 298.15 K.

Enthalpies at all temperatures depend on the arbitrary extrapolations needed to relate the observed data to the reference temperature. Each single-phase table has a different reference $\Delta_f H^\circ$ dependent on an arbitrary extrapolation of enthalpy.

For the reference temperature of 298.15 K, the enthalpy at $T \rightarrow 0$ is always negative. This means that the function $-(G^\circ - H)/T$ approaches positive ∞ at $T \rightarrow 0$ and is therefore difficult to interpolate near $T \rightarrow 0$.

4.3. Conversion to SI Units and the Standard-State Pressure

In all previous JANAF Thermochemical Tables, the standard-state pressure was one atmosphere (101 325 Pa) and the unit of energy was the thermochemical calorie (4.184 J). For this publication, the standard-state pressure is changed to one bar (100 000 Pa) and the energy unit to the joule. The values from previous JANAF tabulations have been converted as described below. This information is provided not only to make clear the correspondence between this publication and previous JANAF Thermochemical Tables but also to assist the reader in making comparisons with other tables. This information is the same as that provided in "The NBS Tables of Chemical Thermodynamic Properties."⁶

Conversion of Values in Calories to Joules

For the energy units the defined conversion factor of 4.184 J·cal⁻¹ is used.

Conversion for Change in Pressure

The following expressions define the effect of pressure on the properties of all substances.

$$\begin{aligned} (\partial H / \partial p)_T &= V - T(\partial V / \partial T)_p = V(1 - \alpha T), \\ (\partial C_p / \partial p)_T &= -T(\partial^2 V / \partial T^2), \\ (\partial S / \partial p)_T &= -V\alpha = -(\partial V / \partial T)_p, \\ (\partial G / \partial p)_T &= V, \\ \alpha &\approx (1/V)(\partial V / \partial T)_p \end{aligned}$$

For the small pressure change from 1 atm to 1 bar, the pressure coefficients may be taken as constants for condensed phases. There are no condensed phase cases in this publica-

tion for which the pressure coefficients are large enough to affect the tabulated values. Typical values of α for solids are 10^{-5} to 2×10^{-4} K⁻¹ and $V < 10^{-3}$ m³ mol⁻¹. For ideal gases, $V = RT/p$ and $\alpha = R/pV = 1/T$. The pressure coefficients for gases are large enough to affect high-accuracy data. In practice the only properties tabulated here that are affected are $S^\circ(T)$ and $-(G^\circ(T) - H^\circ[298.15 \text{ K}])/T$ for all gases, and $\Delta_f G^\circ(T)$ and $\lg K_f$ for any substance whenever gases are involved.

The conversion equations used for the change in standard-state pressure are listed below together with some that apply to thermal functions. Superscripts $^\circ$ and $*$ denote values at 1 bar and 1 atm, respectively. These equations apply to the small change in pressure from 1 atm to 1 bar.

For all substances, exactly for ideal gases and within the limit of experimental inaccuracy for all other phases:

$$\begin{aligned} \Delta_f H^\circ(T) - \Delta_f H^*(T) &= 0, \\ [H^\circ(T) - H^\circ(T_1)] &= [H^*(T) - H^*(T_1)] = 0, \\ C_p^\circ(T) - C_p^*(T) &= 0, \end{aligned}$$

where T_1 is a reference temperature.

For condensed phases, within the limit of experimental inaccuracy:

$$\begin{aligned} S^\circ(T) - S^*(T) &= 0 \\ G^\circ(T) - G^*(T) &= 0 \end{aligned}$$

For substances that are gaseous:

$$\begin{aligned} S^\circ(T) - S^*(T) &= R \ln p^*/p^\circ \\ &= R \ln \frac{101325}{100\,000} = 0.109\,444 \text{ J}\cdot\text{K}^{-1} \text{ mol}^{-1}. \end{aligned}$$

For substances that are gaseous at T but may or may not be gaseous at T_1 :

$$\begin{aligned} -[G^\circ(T) - H^\circ(T_1)]/T + [G^*(T) - H^*(T_1)]/T \\ &= R \ln p^*/p^\circ \text{ as for } S. \\ [G^\circ(T) - G^\circ(T_1)] - [G^*(T) - G^*(T_1)] \\ &= R(T - T_1) \ln p^*/p^\circ, \end{aligned}$$

where $T > T_1 \geq T_i$ and T_i is the temperature at which the function begins to apply to the ideal gas, usually the boiling temperature at 1 bar.

For each substance with gases in its formation reaction:

$$\begin{aligned} \Delta_f G^\circ(T) - \Delta_f G^*(T) \\ &= -\delta RT \ln 1.013\,25 \\ &= -0.032\,63 \delta \text{ kJ mol}^{-1} \text{ at } 298.15 \text{ K}. \end{aligned}$$

where δ is the net increase in the number of moles of gas in the formation reaction.

Conversions for Entropies of Gases

To convert from:	$S^\circ(g, 0.1 \text{ MPa})$ $\text{J}\cdot\text{K}^{-1} \text{ mol}^{-1}$	$S^*(g, 1 \text{ atm})$ $\text{cal}\cdot\text{K}^{-1} \text{ mol}^{-1}$	$S(g, 1 \text{ atm})$ $\text{J}\cdot\text{K}^{-1} \text{ mol}^{-1}$
To:	Use		
$S^\circ(g, 0.1 \text{ MPa})$ $\text{J}\cdot\text{K}^{-1} \text{ mol}^{-1}$	- S°	$4.184(S^* + 0.026\ 157)$	$S^* + 0.109\ 442$
$S(g, 1 \text{ atm})$ $\text{J}\cdot\text{K}^{-1} \text{ mol}^{-1}$	- $S^\circ - 0.109\ 442$	$4.184 S^*$	S^*
$S(g, 0.1 \text{ MPa})$ $\text{cal}\cdot\text{K}^{-1} \text{ mol}^{-1}$	- $S^\circ/4.184$	$S^* + 0.026\ 157$	$(S^* + 0.109\ 442)/4.184$
$S^*(g, 1 \text{ atm})$ $\text{cal}\cdot\text{K}^{-1} \text{ mol}^{-1}$	- $(S^\circ - 0.109\ 442)/4.184$	S^*	$S^*/4.184$

 S° entropy for a gas at 0.1 MPa in $\text{J}\cdot\text{K}^{-1} \text{ mol}^{-1}$. S^* entropy for a gas at 1 atm in $\text{cal}\cdot\text{K}^{-1} \text{ mol}^{-1}$. S^* entropy for a gas at 1 atm in $\text{J}\cdot\text{K}^{-1} \text{ mol}^{-1}$.

4.4. Boiling Temperature and the Standard-State Pressure

In these tables, the defined pressure for the standard state is 1 bar (100 000 Pa). As stated by IUPAC,⁹ the present recommended change in the standard-state pressure carries no implication for "standard pressures" used in other contexts, e.g., the convention that "normal boiling points" refer to a pressure of 1 atm (101 325 Pa). Instances may occur where it is desirable to adopt yet other values for p° and so all authors must clearly state the value adopted.

In these tables, the temperature at which $\Delta_f G^\circ = 0$ for the process liquid to gas, refers to a fugacity of 1 bar. Typically the real (i.e., observed) boiling point (corresponding to a nonideal gas) is slightly higher. In many cases the experimental uncertainties in measuring a boiling point (at 1 bar) and the uncertainties in the calculated value due to uncertainties in the thermal functions make this difference meaningless. Such a situation exists whether the standard-state pressure is 1 bar or 1 atm.

The phrase "boiling point" must be used carefully for other reasons. Care must be exercised such that the boiling process is indeed defined. Two examples which illustrate this point are MgO and LiF. Magnesium oxide does not vaporize congruently (so that the total vapor pressure depends on the ambient oxygen potential), whereas LiF vaporizes congruently but monomer, dimer, and trimer species exist in the vapor.

5. Evaluation of Thermodynamic Data

Interconsistency

The basic aim of these thermodynamic property tables is to provide a related and consistent set of enthalpies of formation and Gibbs energies of formation. This allows the prediction of the enthalpy and Gibbs energy changes and the equilibrium constants for any reaction among the constituents of the tables.

The enthalpy of formation and Gibbs energy of formation are related to each other through the entropy of formation of the substance. Self-consistency can be assured by use of this constraint to derive any one property from selected values of the other two. The entropy, which is an absolute quantity in thermochemical calculations, is suitable for one of the selected properties. The enthalpy of formation is convenient for the other, since enthalpy of reaction is the most commonly measured link between different substances.

Enthalpy changes are relative quantities, so it is important to relate each substance to a consistent base. This is done by referring each enthalpy of formation to the chemical elements in their standard reference states. By convention, the enthalpy of formation of an element in its standard reference state is zero at all temperatures.

The reference state table may involve a single phase or several phases and examples of both kinds are found in this compilation. For elements which are solid at room temperature, the reference state is normally the stable solid state(s) up to the melting point, the liquid up to the boiling point at 1 bar, and thereafter the gas phase which may be monatomic or diatomic. For other elements, the choices for the reference states are:

(1) the ideal monatomic gas for the inert rare gases and the electron gas He, Ne, Ar, Kr, Xe, Rn, and e⁻. The classical statistical mechanical values are assumed for $H^\circ(T) - H^\circ(0)$ for the electron.

(2) the ideal diatomic gas for the following gases: H₂, D₂, N₂, O₂, F₂, and Cl₂.

(3) crystalline white phosphorus and the ideal diatomic gas, $\frac{1}{2}\text{P}_2(\text{g})$. The early JANAF publications used red phosphorus as the reference state. Although red phosphorus is the more stable form, it is less well characterized and its properties are less reproducible.

(4) the ideal diatomic gas combined with the appropriate condensed phases for Br₂, I₂, and S; for sulfur, the gaseous portion of the reference state is $\frac{1}{2}$ S₂(g).

(5) graphite (Acheson-spectroscopic grade) for carbon at all temperatures.

These choices are arbitrary and vary in different compilations. Enthalpies or Gibbs energies of formation taken from different sources should be converted to common reference states before use.

The establishment of reference states is the first step in any scheme for interconsistency. The next step, ideally, would be to solve simultaneously for all $\Delta_f H^\circ$, $\Delta_f G^\circ$, S° using all the suitable data for $\Delta_f H^\circ$, $\Delta_f G^\circ$, $\Delta_f S^\circ$, and S° . This would provide values for enthalpies, Gibbs energies, and entropies which, when combined, would yield the minimum overall deviations from the measured values. Simultaneous solution is limited in practice to small groups of interrelated substances.

We have used this simultaneous approach in a limited way for treating groups of interrelated fluorides. Dr. John L. Haas, Jr. (U.S. Geological Survey) has treated, simultaneously, the data for some geologically important systems as a function of temperature and pressure.²⁵ Dr. J. Brian Pedley (University of Sussex) has treated $\Delta_f H^\circ$ data for several systems, the most pertinent involving all the diatomic oxides.²⁶ Dr. Vivian Parker and Dr. David Garvin (NBS) have refined the latter method and applied it to some species that were adopted by CODATA.²⁷ JANAF policy is to use the results of these treatments.

Since simultaneous solution has not been attempted for all substances it is necessary to fix, simultaneously when possible, certain key values for common substances. These are then used in the usual sequential way to help fix other substances. JANAF policy is to adopt the key values recommended by the CODATA Task Group for Key Values in Chemical Thermodynamics.²⁸ Exceptions to this policy only occur when additional recent data are available.

Because of the many revisions of these tables, perfect interconsistency is not always attained. However, any inconsistency of the tables is a prime concern and is a cause for revision if the effects are of the same order of magnitude as the stated uncertainties.

An approximate type of consistency relates to trends in properties within families in the periodic table. Expected trends can aid both in estimation of missing data and in evaluation of observed data, for example, in a series from fluoride to iodide or from polyhalide to monohalide.

5.1. General Evaluation Techniques

Heat Capacities and Enthalpy Difference

The evaluation of reported values is a judgmental process, but the analysis should be as objective as possible and therefore certain ground rules must be established. The first step involves the examination of a plot of all information so that a general idea of the agreement can be visually obtained. If

certain data sets differ from the majority, they are examined for possible causes of the difference. Calibration data, sample purity, and experimental scatter are checked. If the source of error can be located, the data are given appropriately less weight. Otherwise all data of equal reliability are considered equal, even if they disagree. Such data are then smoothed by a weighted least-squares curve fit. Enthalpy data are smoothed similarly and heat capacities are derived exactly from the differentiated polynomial. The smoothing of enthalpy data often requires constraining the fit so that it passes through zero at the reference temperature. Additional constraints are often used to fix the heat capacity at 298.15 K or to join enthalpy data smoothly with low-temperature heat capacities.

Transitions

The evaluation of solid-state transitions involves first the recognition of the type of transition, which may not always be obvious. A first-order transition such as fusion involves a discontinuous change of enthalpy and entropy at the transition point, whereas second-order transitions involve only discontinuities in heat capacity. Because of impurities and other factors, first-order transitions often do not occur sharply at one temperature; instead, they spread a little on either side and are sometimes difficult to distinguish from λ -type second-order transitions.

Many enthalpies of fusion and enthalpies of solid-state transitions are obtained from enthalpy measurements. Here the enthalpies are given directly by the difference in enthalpy at the transition temperature. Normally, the enthalpy above and below can be smoothly extended to the temperature of transition, although the transition temperature may not be clearly obtainable from the enthalpy data.

The enthalpies of the transitions involving vaporization and sublimation are evaluated from equilibrium data by the second- and third-law methods. When reliable calorimetric measurements are available, the adopted enthalpy of transition is usually based on them.

Equilibrium

Perhaps the most significant facts to be established in evaluating equilibrium data are whether equilibrium was attained and whether the process was properly described. For example, in a sublimation process the most accurate measurements are valueless if the vapor phase is not uniquely defined. If polymerization or breakdown might have occurred, it is important to establish the exact reaction first. Because mass spectroscopy has shown that vapor phases are often extremely complex, it is almost a requirement that the vapor composition be established by a mass spectrometer before equilibrium data can be accepted. Some methods of measurement are less accurate than others and should be given less weight. For example, equilibria determined in a mass spectrometer may have significant uncertainty because of the approximations involved in obtaining absolute pressures. On the other hand, measurements of the electromotive force of reversible cells can have great accuracy. Mass spectra provide identification

of the vapor species while a very precise emf measurement tells nothing as to the reaction which is occurring. Each method has inherent limitations; these may be more critical in some uses than in other uses. Clues to the existence of these limitations often appear in the second- and third-law analyses.

The Second-Law Method

Starting from the equation $\Delta G^\circ = -RT \ln K$, by differentiation with respect to T and substitution of $d(\Delta G^\circ)/dT = -\Delta S^\circ$, we obtain $\Delta H^\circ = RT^2 d(\ln K)/dT$, the well-known van't Hoff equation. By substituting $dT = -T^2 d(1/T)$, one obtains $\Delta H^\circ = -R d(\ln K)/d(1/T)$; thus, the slope of $\ln K$ versus $1/T$ plot is $-\Delta H^\circ/R$. If ΔH° is constant, then the slope is constant and the plot is a straight line. Since the variation of ΔH° with temperature is often quite small, it is customary to assume a straight-line relationship. This method of obtaining enthalpies of reaction from equilibrium measurements is known as a "second-law" calculation. For greatest accuracy the equilibrium measurements should extend over a wide range of temperature, and in this case ΔH° is usually not constant.

Curvature corrections can be applied by assuming a specific form for the variation of ΔH° with temperature. In this manner we can calculate ΔH° (298.15 K) from $\Delta H^\circ(T)$. The effects of such corrections may be of significance. It should be noted that the second law cannot be applied to a single observation, but the third-law method, which is described below, can be so used. The second-law method also can be applied when only relative values of the equilibrium constant are available, for example, from mass-spectroscopic intensity measurements.

The Third-Law Method

The "third-law" method is based on a knowledge of the absolute entropy of the reactants and products. It allows the calculation of a reaction enthalpy from each data point when the change in the Gibbs energy function for the reaction is known. The Gibbs energy function used here is defined as

$$\text{gef}(T) = [G^\circ(T) - H^\circ(298.15 \text{ K})]/T$$

and is easily calculated from the relation

$$\begin{aligned} S^\circ(T) &= -[G^\circ(T) - H^\circ(T)]/T \\ &= [H^\circ(T) - H^\circ(298.15 \text{ K})]/T \\ &\quad - [G^\circ(T) - H^\circ(298.15 \text{ K})]/T \end{aligned}$$

thus,

$$\text{gef}(T) = -S^\circ(T) + [H^\circ(T) - H^\circ(298.15 \text{ K})]/T$$

From the definition we can write for the change in a reaction

$$\Delta G^\circ/T = \text{gef}(T) + \Delta H^\circ(298.15 \text{ K})/T = -R \ln K,$$

thus,

$$\Delta H^\circ(298.15 \text{ K})/T = -R \ln K - \Delta \text{gef}(T),$$

where Δgef signifies $\text{gef}(\text{products}) - \text{gef}(\text{reactants})$.

In the NIST-JANAF Thermochemical Tables, Gibbs energy functions are based on an enthalpy reference temperature

of 298.15 K and thus yield enthalpy changes at 298.15 K regardless of the temperature of the reaction. It should be noted that the Gibbs energy function in a single-phase table is based on the enthalpy of that phase at 298.15 K even though the phase may not be stable at 298.15 K. This differs from the usual convention of combining all condensed phases into one multiphase table such that the enthalpy of reaction refers to the phase stable at the reference temperature. In the JANAF tables the functions always refer to the designated phase for 298.15 K regardless of its stability. For example, if the vapor pressure over liquid copper is analyzed using Cu(l) Gibbs energy functions, the result is the enthalpy of vaporization of the liquid at 298.15 K. To calculate the enthalpy of sublimation of Cu(cr) it is necessary to add the enthalpy of fusion at 298.15 K, which is the difference in the enthalpy of formation of Cu(l) and Cu(cr) at 298.15 K. It should also be noted that Gibbs energy functions are always negative, thus the negative of the function is usually tabulated and the proper sign must be remembered when using these functions.

The analysis of data by the third-law method is generally considered superior to the second-law analysis. It is definitely superior if the Gibbs energy functions are accurately known because each equilibrium point yields one value for the enthalpy change. These values will often reveal trends that indicate nonequilibrium or erroneous values in the equilibrium constants of a set of data. If the data are good, the second-law value should agree. When the Gibbs energy functions are estimated, the third-law values derived from them must be handled carefully. Values that are constant and that agree with the second-law enthalpy indicate that the Gibbs energy functions and equilibrium data are mutually consistent. A drift with temperature of the third-law values indicates errors in either the data or the functions. The magnitude of such drifts is often given in the table write-up and represents the entropy change required to bring the second- and third-law values into agreement. If the drift is within the uncertainty of the experimental entropy, then the data are acceptable. Drifts that are much larger than reasonable entropy errors generally indicate failure to attain equilibrium or improperly estimated Gibbs energy functions.

We have found a combination of the two methods to be so valuable that a third-law calculation is always accompanied by a second-law treatment of the same data. The calculation is done in ascending temperature order to give $\Delta H^\circ(298.15 \text{ K})$ and its deviation from the mean along with the calculated log K and its deviation from the least-square line. Third-law analysis enables bad points to be seen as deviations from the general trend of the differences; thus the method can be used even when the Gibbs energy functions are estimated. If these bad points are located on the ends of the data set, the second-law line often fits them quite well and by itself does not arouse suspicion. But the dropping of such points can bring widely discordant ΔH° values into agreement with each other and often with the third-law values.

In our analysis of equilibrium data, tabulations for both the second- and third-law results are normally given. In addition, we often list values for the drift of δS , as defined by

- drift = $\delta S = \Delta_f S^\circ$ (2nd law, 298.15 K)
- $\Delta_f S^\circ$ (3rd law, 298.15 K)

δS previously called a drift (in $\Delta_f H^\circ$), gives a direct comparison of the deviation of the calculated second-law entropies from our adopted functions. The current policy is to use δS rather than drift. $\Delta_f S^\circ$ (2nd law, 298.15 K) is not calculated, however, via the usual second-law method or the method.^{29,31} It is instead derived from the slope of the assumed linear temperature dependence of the deviations from the mean of the third-law enthalpies of reaction. Our experience indicates that this method agrees closely, but not exactly, with the method.

6. Construction of the Tables

The NIST-JANAF Thermochemical Tables consist of thermal functions and formation functions, both of which are temperature dependent. The thermal functions consist of heat capacity, enthalpy increments, entropy, and Gibbs energy function. The normal relationships hold between thermal functions:

$$H^\circ(T) = \int_0^T C_p^\circ(T) dT,$$

$$S^\circ(T) = \int_0^T [C_p^\circ(T)/T] dT,$$

$$\begin{aligned} [G^\circ(T) - H^\circ(298.15 \text{ K})]/T \\ = -S^\circ(T) + [H^\circ(T) - H^\circ(298.15 \text{ K})]/T. \end{aligned}$$

The formation functions consist of enthalpy of formation, Gibbs energy of formation, and the logarithm of the equilibrium constant of formation. Enthalpies of formation at temperatures other than 298.15 K require a knowledge of enthalpies of the reference elements:

$$\begin{aligned} \Delta_f H^\circ(T) &= \Delta_f H^\circ(298.15 \text{ K}) \\ &+ [H^\circ(T) - H^\circ(298.15 \text{ K})]_{\text{compound}} \\ &- \sum [H^\circ(T) - H^\circ(298.15 \text{ K})]_{\text{elements}}. \end{aligned}$$

The Gibbs energy of formation is readily calculated from the enthalpy of formation when the entropies of the elements are known. Thus

$$\begin{aligned} \Delta_f G^\circ(T) &= \Delta_f H^\circ(T) \\ &- T\{S^\circ(T)_{\text{compound}} - \sum S^\circ(T)_{\text{elements}}\}. \end{aligned}$$

The logarithm of the equilibrium constant of formation is then found from the relation $\Delta_f G^\circ(T) = -RT \ln K_f$.

Solid Phase Thermal Functions

The solid phase thermal functions are derived from recommended heat capacity and/or enthalpy increment values. Although the NIST-JANAF Thermochemical Tables place more emphasis on high temperatures ($T > 298.15 \text{ K}$), it is desirable to have data in the temperature range of $T \rightarrow 0$ to 298.15 K.

There is no basic difference in evaluating low-temperature data, but many more heat capacity points are needed to describe fully the large curvature in the temperature dependence of the heat capacity. In order to evaluate the enthalpy increment it is necessary to start with the temperature $T = 0$ and integrate up to 298.15 K; then the value at 298.15 K is subtracted from the intermediate values, giving negative values for the enthalpy below 298.15 K.

The tables extend to well above the normal melting point to provide data in a metastable region which in this case is a superheated region. Explanations are inserted in the tabulations to indicate the end of the phase stability and any solid-state transitions.

Liquid Phase Thermal Functions

The construction of the liquid single-phase thermal functions is identical with that used for the solid phase; however, the required data at 298.15 K are not usually readily available. The data are obtained by calculating a preliminary table using the chosen heat capacities with zero values for $\Delta_f H^\circ$ (298.15 K) and S° (298.15 K). The correct starting values are then determined by comparing the values from the tables of crystal and liquid, using the following equations:

$$\Delta_{\text{fus}} H^\circ = \Delta_f H^\circ(T_{\text{fus}}, \text{l}) - \Delta_f H^\circ(T_{\text{fus}}, \text{cr}),$$

$$\Delta_{\text{fus}} S^\circ = \Delta_{\text{fus}} H^\circ/T_{\text{fus}} = S^\circ(T_{\text{fus}}, \text{l}) - S^\circ(T_{\text{fus}}, \text{cr}).$$

The correct values at 298.15 K may be obtained from the above relations. A typical liquid table is extrapolated both below the melting point (if the melting point is above 298.15 K) and above the boiling point to facilitate interpolation and to provide data in the metastable regions, both in the supercooled and superheated regions. A glass transition may be included in which case the tabulation becomes a multi-phase table.

Gas Phase Thermal Functions

The gas phase thermal functions are generated using statistical mechanical relationships. Minimal data required for the various types of molecules are summarized below. Some of the equations used are given in Sec. 6.1 on Calculational Methods. The relative molecular mass is required for all molecules. Minimum information required is:

Monatomic species:

Low-lying atomic energy levels and their statistical weights.

Diatomeric species:

Spectroscopic parameters such as the vibrational-rotational constants, symmetry number, and low-lying electronic energy levels.

Linear polyatomic species:

Rotational constant, symmetry number, vibrational frequencies, and low-lying electronic levels.

Nonlinear polyatomic species:

Principal moments of inertia, symmetry number, vibrational frequencies, and low-lying electronic levels.

Multiphase Tables

Tables which show only values for the stable phases at 1 bar pressure are multiphase tables. Multiphase tables can always be recognized by the presence of solid lines, indicating phase transitions, on the table. They are prepared in a manner similar to tables for condensed phases. The functions are evaluated in the same manner as for a solid up to the first transition point; then the enthalpy and entropy of transition are added and the integration is continued using the heat capacities of the next phase. At each transition, the above process is repeated.

6.1. Calculational Methods

The calculation of the temperature-dependent values of the thermal function is performed using a variety of procedures. Some of these procedures were developed internally while others were developed at other locations. A general description of the traditional equations used in the JANAF project follows. Numerous higher order calculational schemes are used whenever the data are sufficient. These procedures are detailed on the appropriate tables.

In gas phase calculations, all thermodynamic variables are calculated in dimensionless form, e.g., C_p/R to at least seven significant figures. This is an arbitrary choice since most data do not warrant this accuracy. This has been done to permit the calculation of the crossover temperatures and enthalpies between single-phase tables accurately and to permit conversion to the desired units without loss of accuracy. The printed tables, however, will only contain three decimal places. Condensed phase tables do not depend directly on R (the gas constant) and they are not calculated in dimensionless form, but are calculated to five decimal places for units conversion.

Condensed Phase Species

Thermodynamic data for condensed states are derived from either measured or estimated information. The thermochemical table is obtained normally by the appropriate integration of heat capacity data. At the appropriate temperatures, transition enthalpies are added to the enthalpy total, while the quotient of the transition enthalpy divided by the thermodynamic temperature is added to the entropy total.

Gaseous Species

Calculation of the contributions of rotation and translation involves the use of quantum statistics, but to obtain a numerical solution, the quantum statistics are usually replaced by classical statistics at temperatures above about 10 K; below 10 K this classical approximation no longer holds. For this reason the equations presented here fail in the vicinity of $T \rightarrow 0$. In agreement with the third-law concept, C_p° and S° are zero at $T \rightarrow 0$. For a reference element, $\log K_f$ is zero at $T \rightarrow 0$, while for compounds the absolute values of the Gibbs energy function and $\log K_f$ become infinite at $T \rightarrow 0$, for the choice of the enthalpy reference temperature of 298.15 K.

In addition, classical statistics can sometimes lead to erroneous results at high temperatures. For example, the classical

approximation could give abnormally high C_p° values for a diatomic molecule having a shallow potential energy curve.

The functions calculated for gases are obtained, in general, from molecular constants that have been adjusted to the natural isotopic abundance. Normally, the approximation of adjusting the molecular parameters by a weighting according to a weighted natural isotopic abundance can be made. The proper correction (which is used for all reference states) is based on a weighted isotopic average of the tabulations.

An electronic term of unit statistical weight lying at 30 000 cm^{-1} and above contributes a negligible amount to the thermodynamic functions at temperatures of 6000 K and below. On the other hand, a number of such terms cannot be neglected. In these cases, the number of terms and their values have been summed and their contribution included.

Some fundamental vibrational frequencies have been estimated by analogy with related molecules. Occasionally, two or more fundamentals are estimated at the same value. This is not to be confused with a true degeneracy which is indicated by placing the degeneracy value in parentheses following the frequency. However, when the information has been taken from another compilation, the degeneracies indicated by the compiler have been retained.

The method used in generating the thermal functions depends not only on the quality/quantity of information available but also on the specifics of the nature of the information (e.g., split ground state, shallow potential wells, etc.). The gas phase tables are generated using the following relationships unless stated otherwise. These relationships are given in Mayer and Mayer³⁰ and Pitzer and Brewer.³¹

Use of a more sophisticated approach will always be noted and details given on the appropriate tables. The more common alternative approaches are given by McBride and Gordon³² and McDowell³³ for monatomic and polyatomic gases. For many diatomic gaseous molecules (the alkali metal dimers, the alkaline earth metal dimers, the halogens, hydrogen, deuterium, nitrogen, oxygen, sulfur), a direct summation technique has been used. This technique, stated explicitly on the individual tables, involves a summation over the individual rotation-vibrational energy levels for each electronic state in the partition function expression. In addition, the summation is terminated at the dissociation energy for a particular electronic state of the diatomic molecule; although in some cases, the metastable states (above the dissociation energy) are included in the summation.

6.1.1. Ideal Monatomic Gas

(a) Translation

$$C_p^\circ/R = 5/2,$$

$$[H^\circ(T) - H^\circ(0 \text{ K})]/RT = 5/2$$

$$S^\circ/R = 3/2 \ln M_r + 5/2 \ln T + 5/2 + \ln \frac{k}{p^\circ} \left(\frac{2\pi k}{Nh^2} \right)^{3/2},$$

$$- [G^\circ(T) - H^\circ(0 \text{ K})]/RT = 3/2 \ln M_r + 5/2 \ln T + \ln \frac{k}{p^\circ} \left(\frac{2\pi k}{Nh^2} \right)^{3/2}.$$

(b) Electronic

$$C_p^o/R = T^2 \frac{d^2 \ln Q}{dT^2} + 2T \frac{d \ln Q}{dT}$$

$$[H^o(T) - H^o(0 \text{ K})]/RT = T \frac{d \ln Q}{dT},$$

$$S^o/R = T \frac{d \ln Q}{dT} + \ln Q,$$

$$-[G^o(T) - H^o(0 \text{ K})]/RT = \ln Q,$$

where

$$Q = \sum_i g_i \exp(-c_2 \epsilon_i/T),$$

where ϵ_i is in cm^{-1} and the electronic levels to be included are discussed on the appropriate gas phase table.

$$[H^o(T) - H^o(0 \text{ K})]/RT \\ = \frac{8\gamma}{u} + \frac{u(\delta e^u - 2X)}{(e^u - 1)^2} + \frac{4Xu^2 e^u}{(e^u - 1)}$$

$$S^o/R = \frac{16\gamma}{u} + \frac{\delta}{(e^u - 1)} + \frac{\delta u e^u}{(e^u - 1)^2} + \frac{4Xu^2 e^u}{(e^u - 1)^3},$$

$$-[G^o(T) - H^o(0 \text{ K})]/RT \\ = \frac{8\gamma}{u} + \frac{\delta}{(e^u - 1)} + \frac{2Xu}{(e^u - 1)^2},$$

where $u = (\omega_c - 2\omega_c x_c)(c_2/T)$, $X = \omega_c x_c/\omega_c$, $\delta = \alpha_c/B_c$, and $\gamma = B_c/\omega_c$; ω_c , $\omega_c x_c$, B_c and α_c are in cm^{-1} .

6.1.2. Ideal Diatomic Gas

(a) Translation: Same as in I(a).

(b) Rotation

$$C_p^o/R = 1 + (c_2 B/T)^2/45,$$

$$[H^o(T) - H^o(0 \text{ K})]/RT = 1 - (c_2 B/T)/3 - (c_2 B/T)^2/45.$$

$$S^o/R = 1 - \ln(c_2 B \sigma/T) - (c_2 B/T)/90.$$

$$-[G^o(T) - H^o(0 \text{ K})]/RT$$

$$= -\ln(c_2 B \sigma/T) + (c_2 B/T)/3 + (c_2 B/T)^2/90,$$

where

$$B = (B_c - \alpha_c/2);$$

in cm^{-1} when spectroscopic constants are available, or

$$B = h/8\pi^2 c I = 2.799 \ 320 \times 10^{-39}/I;$$

in cm^{-1} when calculated from molecular model, I in $\text{g} \cdot \text{cm}^2$.

(c) vibration

$$C_p^o/R = u^2 e^{-u}/(1 - e^{-u})^2,$$

$$[H^o(T) - H^o(0 \text{ K})]/RT = u e^{-u}/(1 - e^{-u}),$$

$$S^o/R = u e^{-u}/(1 - e^{-u}) - \ln(1 - e^{-u}),$$

$$-[G^o(T) - H^o(0 \text{ K})]/RT = -\ln(1 - e^{-u}),$$

where

$$u = c_2(\omega_c - 2\omega_c x_c)/T;$$

when spectroscopic constants (in cm^{-1}) are available, or

$$u = c_2 \omega/T;$$

where ω (in cm^{-1}) is the fundamental frequency of a harmonic oscillator.

(d) Corrections for anharmonic vibrations

$$C_p^o/R = \frac{16\gamma}{u} - \frac{\delta u^2 e^u}{(e^u - 1)^2} \\ + \frac{u^2 e^u (2\delta e^u - 4Xu - 8x)}{(e^u - 1)^3} + \frac{12Xu^3 e^{2u}}{(e^u - 1)^4},$$

(e) Electronic

Same as I(b) when the i th-state vibrational partition function, Q_v^i , and the i th-state rotational partition function, Q_r^i , are equal to the respective ground-state partition functions. In this case the partition function

$$Q = Q_v Q_r \sum_i Q_c^i,$$

otherwise all the thermodynamic functions are derived from

$$Q = Q \sum_i Q_v^i Q_r^i Q_c^i,$$

where Q_t is the translational partition function and

$$Q_c^i = g_i \exp(-c_2 \epsilon_i/T).$$

6.1.3. Linear Polyatomic Molecule

(a) Translation: Same as in I(a).

(b) Rotation: Same as in II(b).

(c) Vibration: Same as in II(c) for $3N - 5$ vibrational degrees of freedom.

(d) Corrections for anharmonic vibrations: This contribution is normally neglected.

(e) Electronic: Same as II(e) where levels and quantum weights are known.

6.1.4. Nonlinear Polyatomic Molecule
(Rigid Rotator, Harmonic Oscillator)

(a) Translation: Same as in I(a).

(b) Rotation:

$$C_p^o/R = 3/2,$$

$$[H^o(T) - H^o(0 \text{ K})]/RT = 3/2,$$

$$\begin{aligned}
 S^\circ/R &= \frac{3}{2} + \frac{1}{2}\ln(I_A I_B I_C) - \ln\sigma + \frac{3}{2}\ln T \\
 &\quad + \left(-\frac{3}{2}\ln\frac{h^2}{8R\pi^\circ} + \frac{1}{2}\ln\pi\right) \\
 &\quad - [G^\circ(T) - H^\circ(0\text{ K})]/RT = \frac{1}{2}\ln(I_A I_B I_C) - \ln\sigma \\
 &\quad + \frac{3}{2}\ln T + \left(-\frac{3}{2}\ln\frac{h^2}{8R\pi^\circ} + \frac{1}{2}\ln\pi\right)
 \end{aligned}$$

- (c) Vibration
Same as II(c) for $3N - 6$ vibrational degree of freedom.
- (d) Corrections for anharmonic vibrations.
This contribution is normally neglected.
- (e) Electronic
Same as II(e) where levels and quantum weight are known.

6.2. Dates

At the bottom of the tabulation side of each table, there are one or two dates. These dates refer to the approximate time at which the evaluation for these tables was completed. The data for the most recent and the preceding evaluation are given. These dates will be at the bottom of the page at the right-hand side and left-hand side, respectively. Previously, all revision dates had been listed. Current practice will limit the dates to two. For the gas phase tables, the standard-state pressure is given in parentheses after the date(s). If the dates are identical, then the difference in this current table and its predecessor lies in the changes due to the standard-state pressure. Contrary to previous practice, the latest issue date of each table is not given in either of the two indices in this publication.

7. Additions, Revisions, and Corrections

In this Fourth Edition there are numerous typographical errors from the Third Edition which have been corrected. However, there are calculation errors in the formation properties for the following compounds: $\text{AlCl}_4\text{Na}(\text{cr})$, $\text{BHO}_2(\text{cr})$, $\text{BH}_2\text{O}_2(\text{g})$, $\text{B}_8\text{K}_2\text{O}_{13}(\text{l})$, $\text{Be}_4\text{O}_4(\text{g})$, $\text{Br}_3\text{OP}(\text{g})$, $\text{Br}_3\text{PS}(\text{g})$, $\text{CH}^+(\text{g})$, $\text{CN}(\text{g})$, $\text{CO}(\text{g})$, $\text{CTi}(\text{cr})$, $\text{C}_2\text{H}_2(\text{g})$, $\text{C}_2\text{Li}_2(\text{cr})$, $\text{C}_2\text{Mg}(\text{cr})$, $\text{CH}_3\text{Cl}_3\text{Si}(\text{g})$, $\text{CH}_3\text{F}_3\text{Si}(\text{g})$, $\text{ClF}_3\text{Mg}(\text{g})$, $\text{ClH}_4\text{N}(\text{cr})$, $\text{Cl}_4\text{Mo}(\text{g})$, $\text{Cl}_4\text{Pb}(\text{g})$, $\text{Cl}_4\text{Ti}(\text{cr}, \text{l}, \text{cr/l})$, $\text{F}_2\text{Hg}_2(\text{cr})$, $\text{F}_2\text{Ti}(\text{g})$, $\text{FeH}_2\text{O}_2(\text{g})$, $\text{HP}(\text{g})$, $\text{HS}(\text{g})$, $\text{H}_2\text{P}(\text{g})$, $\text{H}_3\text{P}(\text{g})$, $\text{Hg}^+(\text{g})$, $\text{LiO}^-(\text{g})$, $\text{Mg}_3\text{P}_2\text{O}_8(\text{cr})$, $\text{OS}_2(\text{g})$, $\text{W}(\text{g})$, $\text{W}^+(\text{g})$, $\text{Zr}(\text{g})$, and $\text{Zr}^+(\text{g})$. These also have been corrected.

In addition new tables have been constructed many halogen oxides. These include 5 iodine oxides, 5 bromine oxides, 7 chlorine oxides, and 4 oxygen fluorides.

8. Acknowledgments

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processor was handled admirably by Mrs. Betty Clark and Mrs. Jan Crouch. Their patience, hard work, and talents are very much appreciated and will be long remembered.

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10. Indices to Tables

There are two indices provided with this publication. Both indices are alphabetical, one by chemical name and one by chemical formula. In both cases the state of the compound is given in parentheses after the chemical formula. The tables and discussions are arranged in the same order as given in the chemical formula index.

10.1. Description of the Chemical Formula Index to the NIST-JANAF Thermochemical Tables

The tables included in this publication are ordered as given by the Chemical Formula Index. The modified Hill indexing system [J. Am. Chem. Soc. 22, 478 (1900)] for chemical compounds, as used by Chemical Abstracts, is employed here to order the tables.

The Hill empirical formula is obtained for a particular compound by placing the elements in their alphabetical order unless C is present, in which case C is placed first, H second, and the remaining elements in alphabetical order. Substances with the same Hill formula are ordered alphabetically by their name. However, tables representing different states of the same species are in the order crystal, liquid, crystal-liquid, and ideal gas.

As examples, BeCl(g) would appear as written, whereas NaCl(g) would be filed under ClNa(g). To expand on the ordering of carbon compounds, the C always comes first, followed immediately by H if hydrogen is present, and then followed by any other elements present in their normal alphabetical order. The number of atoms of the element indexed first also influences the order of indexing the compound; e.g., all formulas with C (one carbon atom only) come before those with C₂ (two carbon atoms), followed by C compounds, and so on. Thus: CHBF₄O (formyl fluoride, compound with BF₃), CHCl₃ (chloroform), CH₂F₃P (trifluormethylphosphine), CH₃NO₃ (methyl nitrate), CH₄C₁₂Si (dichloromethylsilane), CH₁₀N₄O₃ (hydrazine carbonate), CO (carbon monoxide), CO₂ (carbon dioxide), CO₃Zn (zinc carbonate), CZr (zirconium carbide), C₂Ba (barium acetylidyde), C₂BrClF₂ (bromo-chlorodifluoroethylene), C₂Ca (calcium carbide), and so on. See any formula index of Chemical Abstracts for further details and examples.

The electron gas, e⁻ (ref st), is inserted in the filing order after the deuterium species. Nonstoichiometric compounds are inserted just prior to or just after the corresponding stoichiometric order.

10.2. Description of the Chemical Name Index to the NIST-JANAF Thermochemical Tables

The nomenclature for the chemical species included in this publication does not fully correspond to the current Chemical Abstracts practice. The attempt has been made to use names as easily understandable as possible while not deviating far from the Chemical Abstracts system. Cited are two examples where the Chemical Abstracts nomenclature is followed, AlBr₃(g) and BBr₃(g) are listed as aluminum bromide and tribromoborane, respectively. For historical reasons, we would have preferred to name BBr₃(g) as boron bromide. However, Chemical Abstracts refers to most boron halides as borane derivatives. On the other hand, whereas Al₂Br₆ is called di- μ -bromotetrabromaluminum in Chemical Abstracts, this publication uses aluminum bromide.

In summary, general comments on the nomenclature are:

- (1) The carbon and silicon neutral species follow the Chemical Abstracts organic-type nomenclature in which the name reflects the type of bonding.
- (2) The -ium suffix that denotes positive ions is not used. CH⁺(g) is named 'methyldyne, ion' whereas Chemical Abstracts uses methylumylidene.
- (3) Salts are not named as an acid, metal salt of. For example, BaSO₄ is barium sulfate, not sulfuric acid, barium salt.
- (4) Many mineral names are used.
- (5) The sometimes confusing nomenclature for bridged structures in dimers is not used. Normally the monomer name is used.

In adopting this modified Chemical Abstracts nomenclature, there are numerous species for which the name will be significantly different from earlier JANAF publications. It is impractical to list all name changes, but in the more severe cases, a comment is made on the tables as to the previously used name.

10.3 Chemical Formula Index

Formula	Table Title	Page	Formula	Table Title	Page
Al ₁ (ref)	Aluminum (Al)	59	Al ₁ F ₆ Na ₃ (cr,l)	Cryolite (Na ₃ AlF ₆)	113
Al ₁ (cr)	Aluminum (Al)	60	Al ₁ H ₁ (g)	Aluminum hydride (AlH)	114
Al ₁ (l)	Aluminum (Al)	61	Al ₁ H ₁ O ₁ (g)	Aluminum hydride oxide (OAIH)	115
Al ₁ (cr,l)	Aluminum (Al)	62	Al ₁ H ₁ O ₁ (g)	Aluminum hydroxide (AlOH)	116
Al ₁ (g)	Aluminum (Al)	63	Al ₁ H ₁ O ₁ ⁺ (g)	Aluminum hydroxide, ion (AlOH ⁺)	117
Al ₁ ⁺ (g)	Aluminum, ion (Al ⁺)	64	Al ₁ H ₁ O ₁ ⁻ (g)	Aluminum hydroxide, ion (AlOH ⁻)	118
Al ₁ ⁻ (g)	Aluminum, ion (Al ⁻)	65	Al ₁ H ₁ O ₂ (g)	Aluminum hydroxide oxide (OAIH)	119
Al ₁ B ₁ O ₂ (g)	Aluminum borate (AlBO ₂)	66	Al ₁ H ₁ Li ₁ (cr)	Lithium tetrahydroaluminate (LiAlH ₄)	120
Al ₁ Br ₁ (g)	Aluminum bromide (AlBr)	67	Al ₁ I ₁ (g)	Aluminum iodide (AlI)	121
Al ₁ Br ₃ (cr)	Aluminum bromide (AlBr ₃)	68	Al ₁ I ₃ (cr)	Aluminum iodide (AlI ₃)	122
Al ₁ Br ₃ (l)	Aluminum bromide (AlBr ₃)	69	Al ₁ I ₃ (l)	Aluminum iodide (AlI ₃)	123
Al ₁ Br ₃ (cr,l)	Aluminum bromide (AlBr ₃)	70	Al ₁ I ₃ (cr,l)	Aluminum iodide (AlI ₃)	124
Al ₁ Br ₃ (g)	Aluminum bromide (AlBr ₃)	71	Al ₁ I ₃ (g)	Aluminum iodide (AlI ₃)	125
Al ₁ Cl ₁ (g)	Aluminum chloride (AlCl)	72	Al ₁ Li ₁ O ₂ (cr)	Lithium aluminum oxide (LiAlO ₂)	126
Al ₁ Cl ₁ ⁺ (g)	Aluminum chloride, ion (AlCl ⁺)	73	Al ₁ Li ₁ O ₂ (l)	Lithium aluminum oxide (LiAlO ₂)	127
Al ₁ Cl ₁ F ₁ (g)	Aluminum chloride fluoride (AlClF)	74	Al ₁ Li ₁ O ₂ (cr,l)	Lithium aluminum oxide (LiAlO ₂)	128
Al ₁ Cl ₁ F ₁ (g)	Aluminum chloride fluoride, ion (AlClF ⁺)	75	Al ₁ N ₁ (cr)	Aluminum nitride (AlN)	129
Al ₁ Cl ₁ F ₂ (g)	Aluminum chloride fluoride (AlClF ₂)	76	Al ₁ N ₁ (g)	Aluminum nitride (AlN)	130
Al ₁ Cl ₁ O ₁ (cr)	Aluminum chloride oxide (OAICl)	77	Al ₁ Na ₁ O ₂ (cr)	Sodium aluminum oxide (NaAlO ₂)	131
Al ₁ Cl ₁ O ₁ (g)	Aluminum chloride oxide (OAICl)	78	Al ₁ O ₁ (g)	Aluminum oxide (AlO)	132
Al ₁ Cl ₂ (g)	Aluminum chloride (AlCl ₂)	79	Al ₁ O ₁ ⁺ (g)	Aluminum oxide, ion (AlO ⁺)	133
Al ₁ Cl ₂ ⁺ (g)	Aluminum chloride, ion (AlCl ₂ ⁺)	80	Al ₁ O ₁ ⁻ (g)	Aluminum oxide, ion (AlO ⁻)	134
Al ₁ Cl ₂ ²⁻ (g)	Aluminum chloride, ion (AlCl ₂ ²⁻)	81	Al ₁ O ₂ (g)	Aluminum oxide (AlO ₂)	135
Al ₁ Cl ₂ F ₁ (g)	Aluminum chloride fluoride (AlCl ₂ F)	82	Al ₁ O ₂ ⁻ (g)	Aluminum oxide, ion (AlO ₂ ⁻)	136
Al ₁ Cl ₃ (cr)	Aluminum chloride (AlCl ₃)	83	Al ₁ S ₁ (g)	Aluminum sulfide (AlS)	137
Al ₁ Cl ₃ (l)	Aluminum chloride (AlCl ₃)	84	Al ₂ (g)	Aluminum (Al ₂)	138
Al ₁ Cl ₃ (cr,l)	Aluminum chloride (AlCl ₃)	85	Al ₂ Be ₁ O ₄ (cr)	Beryllium aluminum oxide (BeAl ₂ O ₄)	139
Al ₁ Cl ₃ (g)	Aluminum chloride (AlCl ₃)	86	Al ₂ Be ₁ O ₄ (l)	Beryllium aluminum oxide (BeAl ₂ O ₄)	140
Al ₁ Cl ₄ K ₁ (cr)	Potassium tetrachloroaluminate (KAICl ₄)	87	Al ₂ Be ₁ O ₄ (cr,l)	Beryllium aluminum oxide (BeAl ₂ O ₄)	141
Al ₁ Cl ₄ Na ₁ (cr)	Sodium tetrachloroaluminate (NaAlCl ₄)	88	Al ₂ Br ₆ (g)	Aluminum bromide ((AlBr ₃) ₂)	142
Al ₁ Cl ₆ K ₃ (cr)	Potassium hexachloroaluminate (K ₃ AlCl ₆)	89	Al ₂ Cl ₆ (g)	Aluminum chloride ((AlCl ₃) ₂)	143
Al ₁ Cl ₆ Na ₃ (cr)	Sodium hexachloroaluminate (Na ₃ AlCl ₆)	90	Al ₂ Cl ₉ K ₃ (cr)	Potassium aluminum chloride (K ₃ Al ₂ Cl ₉)	144
Al ₁ F ₁ (g)	Aluminum fluoride (AlF)	91	Al ₂ F ₆ (g)	Aluminum fluoride ((AlF ₃) ₂)	145
Al ₁ F ₁ ⁺ (g)	Aluminum fluoride, ion (AlF ⁺)	92	Al ₂ I ₆ (g)	Aluminum iodide ((AlI ₃) ₂)	146
Al ₁ F ₁ O ₁ (g)	Aluminum fluoride oxide (OAIF)	93	Al ₂ Mg ₁ O ₄ (cr)	Magnesium aluminum oxide (MgAl ₂ O ₄)	147
Al ₁ F ₂ (g)	Aluminum fluoride (AlF ₂)	94	Al ₂ Mg ₁ O ₄ (l)	Magnesium aluminum oxide (MgAl ₂ O ₄)	148
Al ₁ F ₂ ⁺ (g)	Aluminum fluoride, ion (AlF ₂ ⁺)	95	Al ₂ Mg ₁ O ₄ (cr,l)	Magnesium aluminum oxide (MgAl ₂ O ₄)	149
Al ₁ F ₂ ⁻ (g)	Aluminum fluoride, ion (AlF ₂ ⁻)	96	Al ₂ O ₁ (g)	Aluminum oxide (Al ₂ O)	150
Al ₁ F ₂ O ₁ (g)	Aluminum fluoride oxide (OAIF ₂)	97	Al ₂ O ₁ ⁺ (g)	Aluminum oxide, ion (Al ₂ O ⁺)	151
Al ₁ F ₂ O ₁ ⁻ (g)	Aluminum fluoride oxide, ion (OAIF ₂ ⁻)	98	Al ₂ O ₂ (g)	Aluminum oxide ((AlO) ₂)	152
Al ₁ F ₃ (cr)	Aluminum fluoride (AlF ₃)	99	Al ₂ O ₂ ⁻ (g)	Aluminum oxide, ion (Al ₂ O ₂ ⁻)	153
Al ₁ F ₃ (l)	Aluminum fluoride (AlF ₃)	100	Al ₂ O ₃ (cr)	Aluminum oxide, alpha (Al ₂ O ₃)	154
Al ₁ F ₃ (cr,l)	Aluminum fluoride (AlF ₃)	101	Al ₂ O ₃ (cr)	Aluminum oxide, delta (Al ₂ O ₃)	155
Al ₁ F ₃ (g)	Aluminum fluoride (AlF ₃)	102	Al ₂ O ₃ (cr)	Aluminum oxide, gamma (Al ₂ O ₃)	156
Al ₁ F ₃ ⁻ (g)	Tetrafluoroaluminate, ion (AlF ₄ ⁻)	103	Al ₂ O ₃ (cr)	Aluminum oxide, kappa (Al ₂ O ₃)	157
Al ₁ F ₄ Li ₁ (g)	Lithium tetrafluoroaluminate (LiAlF ₄)	104	Al ₂ O ₃ (l)	Aluminum oxide (Al ₂ O ₃)	158
Al ₁ F ₄ Na ₁ (g)	Sodium tetrafluoroaluminate (NaAlF ₄)	105	Al ₂ O ₃ (cr,l)	Aluminum oxide (Al ₂ O ₃)	159
Al ₁ F ₆ K ₃ (cr)	Potassium hexafluoroaluminate (K ₃ AlF ₆)	106	Al ₂ O ₅ Si ₁ (cr)	Aluminum silicate, andalusite (Al ₂ SiO ₅)	160
Al ₁ F ₆ Li ₃ (cr)	Lithium hexafluoroaluminate (Li ₃ AlF ₆)	107	Al ₂ O ₅ Si ₁ (cr)	Aluminum silicate, kyanite (Al ₂ SiO ₅)	161
Al ₁ F ₆ Li ₃ (l)	Lithium hexafluoroaluminate (Li ₃ AlF ₆)	108	Al ₂ O ₅ Si ₁ (cr)	Aluminum silicate, sillimanite (Al ₂ SiO ₅)	162
Al ₁ F ₆ Li ₃ (cr,l)	Lithium hexafluoroaluminate (Li ₃ AlF ₆)	109	Al ₂ S ₃ (cr)	Aluminum sulfide (Al ₂ S)	163
Al ₁ F ₆ Na ₃ (cr)	Cryolite, alpha (Na ₃ AlF ₆)	110	Al ₃ F ₁₄ Nas(cr)	Chiolite (Na ₅ Al ₁ F ₁₄)	164
Al ₁ F ₆ Na ₃ (cr)	Cryolite, beta (Na ₃ AlF ₆)	111	Al ₃ F ₁₄ Nas(l)	Chiolite (Na ₅ Al ₁ F ₁₄)	165
Al ₁ F ₆ Na ₃ (l)	Cryolite (Na ₃ AlF ₆)	112	Al ₃ F ₁₄ Nas(cr,l)	Chiolite (Na ₅ Al ₁ F ₁₄)	166

Formula	Table Title	Page	Formula	Table Title	Page
$\text{Al}_6\text{Be}_1\text{O}_{10}(\text{cr})$	Beryllium aluminum oxide ($\text{BeAl}_6\text{O}_{10}$)	167	$\text{B}_1\text{H}_1\text{O}_2(\text{cr})$	Boric acid (HBO_2)	225
$\text{Al}_6\text{Be}_1\text{O}_{10}(\text{l})$	Beryllium aluminum oxide ($\text{BeAl}_6\text{O}_{10}$)	168	$\text{B}_1\text{H}_1\text{O}_2(\text{g})$	Boric acid (HBO_2)	226
$\text{Al}_6\text{Be}_1\text{O}_{10}(\text{cr,l})$	Beryllium aluminum oxide ($\text{BeAl}_6\text{O}_{10}$)	169	$\text{B}_1\text{H}_1\text{S}_1(\text{g})$	Boron hydride sulfide (HBS)	227
$\text{Al}_6\text{O}_1\text{Si}_2(\text{cr})$	Aluminum silicate, mullite ($\text{Al}_6\text{Si}_2\text{O}_{11}$)	170	$\text{B}_1\text{H}_1\text{S}_1^+(\text{g})$	Boron hydride sulfide, ion (HBS^+)	228
			$\text{B}_1\text{H}_2(\text{g})$	Borane (BH_2)	229
$\text{Ar}_1(\text{ref})$	Argon (Ar)	175	$\text{B}_1\text{H}_2\text{O}_2(\text{g})$	Dihydroxyborane ($\text{B}(\text{OH})_2$)	230
$\text{Ar}_1^+(\text{g})$	Argon, ion (Ar^+)	176	$\text{B}_1\text{H}_3(\text{g})$	Borane (BH_3)	231
$\text{B}_1(\text{ref})$	Boron (B)	177	$\text{B}_1\text{H}_3\text{O}_1(\text{g})$	Boric acid (H_3BO_3)	232
$\text{B}_1(\text{cr})$	Boron, beta-rhombohedral (B)	178	$\text{B}_1\text{H}_4\text{K}_1(\text{cr})$	Potassium tetrahydroborate (KBH_4)	234
$\text{B}_1(\text{l})$	Boron (B)	179	$\text{B}_1\text{H}_4\text{Li}_1(\text{cr})$	Lithium tetrahydroborate (LiBH_4)	235
$\text{B}_1(\text{cr,l})$	Boron (B)	180	$\text{B}_1\text{H}_4\text{Na}_1(\text{cr})$	Sodium tetrahydroborate (NaBH_4)	236
$\text{B}_1(\text{g})$	Boron (B)	181	$\text{B}_1\text{I}_1(\text{g})$	Iodoborane (BI)	237
$\text{B}_1^+(\text{g})$	Boron, ion (B^+)	182	$\text{B}_1\text{I}_2(\text{g})$	Diiodoborane (BI_2)	238
$\text{B}_1^-(\text{g})$	Boron, ion (B^-)	183	$\text{B}_1\text{I}_3(\text{g})$	Triiodoborane (BI_3)	239
$\text{B}_1\text{Be}_1\text{O}_2(\text{g})$	Beryllium borate (BeBO_2)	184	$\text{B}_1\text{K}_1\text{O}_2(\text{cr})$	Potassium borate (KBO_2)	240
$\text{B}_1\text{Br}_1(\text{g})$	Bromoborane (BBr)	185	$\text{B}_1\text{K}_1\text{O}_2(\text{l})$	Potassium borate (KBO_2)	241
$\text{B}_1\text{Br}_1\text{Cl}_1(\text{g})$	Bromochloroborane (BBrCl)	186	$\text{B}_1\text{K}_1\text{O}_2(\text{cr,l})$	Potassium borate (KBO_2)	242
$\text{B}_1\text{Br}_1\text{Cl}_2(\text{g})$	Bromodichloroborane (BBrCl_2)	187	$\text{B}_1\text{K}_1\text{O}_2(\text{g})$	Potassium borate (KBO_2)	243
$\text{B}_1\text{Br}_1\text{F}_1(\text{g})$	Bromo-fluoroborane (BBrF)	188	$\text{B}_1\text{Li}_1\text{O}_2(\text{cr})$	Lithium borate (LiBO_2)	244
$\text{B}_1\text{Br}_1\text{F}_2(\text{g})$	Bromodifluoroborane (BBrF_2)	189	$\text{B}_1\text{Li}_1\text{O}_2(\text{l})$	Lithium borate (LiBO_2)	245
$\text{B}_1\text{Br}_1\text{O}_1(\text{g})$	Boron bromide oxide (OBBr)	190	$\text{B}_1\text{Li}_1\text{O}_2(\text{cr,l})$	Lithium borate (LiBO_2)	246
$\text{B}_1\text{Br}_2(\text{g})$	Dibromoborane (BBr_2)	191	$\text{B}_1\text{Li}_1\text{O}_2(\text{g})$	Lithium borate (LiBO_2)	247
$\text{B}_1\text{Br}_2\text{Cl}_1(\text{g})$	Dibromochloroborane (BBr_2Cl)	192	$\text{B}_1\text{N}_1(\text{cr})$	Boron nitride (BN)	248
$\text{B}_1\text{Br}_2\text{F}_1(\text{g})$	Dibromofluoroborane (BBr_2F)	193	$\text{B}_1\text{N}_1(\text{g})$	Boron nitride (BN)	249
$\text{B}_1\text{Br}_2\text{H}_1(\text{g})$	Dibromoborane (BHBBr_2)	194	$\text{B}_1\text{Na}_1\text{O}_2(\text{cr})$	Sodium borate (NaBO_2)	250
$\text{B}_1\text{Br}_3(\text{l})$	Tribromoborane (BBr_3)	195	$\text{B}_1\text{Na}_1\text{O}_2(\text{l})$	Sodium borate (NaBO_2)	251
$\text{B}_1\text{Br}_3(\text{g})$	Tribromoborane (BBr_3)	196	$\text{B}_1\text{Na}_1\text{O}_2(\text{cr,l})$	Sodium borate (NaBO_2)	252
$\text{B}_1\text{Cl}_1(\text{g})$	Chloroborane (BCl)	197	$\text{B}_1\text{Na}_1\text{O}_2(\text{g})$	Sodium borate (NaBO_2)	253
$\text{B}_1\text{Cl}_1^+(\text{g})$	Chloroborane, ion (BCl^+)	198	$\text{B}_1\text{O}_1(\text{g})$	Boron oxide (BO)	254
$\text{B}_1\text{Cl}_1\text{F}_1(\text{g})$	Chlorofluoroborane (BClF)	199	$\text{B}_1\text{O}_2(\text{g})$	Boron oxide (BO_2)	255
$\text{B}_1\text{Cl}_1\text{F}_2(\text{g})$	Chlorodifluoroborane (BClF_2)	200	$\text{B}_1\text{O}_2^-(\text{g})$	Boron oxide, ion (BO_2^-)	256
$\text{B}_1\text{Cl}_1\text{O}_1(\text{g})$	Boron chloride oxide (OBCl)	201	$\text{B}_1\text{S}_1(\text{g})$	Boron sulfide (BS)	257
$\text{B}_1\text{Cl}_2(\text{g})$	Dichloroborane (BCl_2)	202	$\text{B}_1\text{Ti}_1(\text{cr})$	Titanium boride (TiB)	258
$\text{B}_1\text{Cl}_2^+(\text{g})$	Dichloroborane, ion (BCl_2^+)	203	$\text{B}_2(\text{g})$	Boron (B_2)	259
$\text{B}_1\text{Cl}_2^-(\text{g})$	Dichloroborane, ion (BCl_2^-)	204	$\text{B}_2\text{Be}_1\text{O}_4(\text{g})$	Beryllium borate ($\text{Be}(\text{BO}_2)_2$)	260
$\text{B}_1\text{Cl}_2\text{F}_1(\text{g})$	Dichlorofluoroborane (BCl_2F)	205	$\text{B}_2\text{Be}_1\text{O}_6(\text{cr})$	Beryllium borate ($\text{Be}_3\text{B}_2\text{O}_6$)	261
$\text{B}_1\text{Cl}_2\text{H}_1(\text{g})$	Dichloroborane (BHC_2I_2)	206	$\text{B}_2\text{Cl}_4(\text{g})$	Dichloroborane ($((\text{BCl}_2)_2$)	262
$\text{B}_1\text{Cl}_3(\text{g})$	Trichloroborane (BCl_3)	207	$\text{B}_2\text{F}_4(\text{g})$	Difluoroborane ($((\text{BF}_2)_2$)	263
$\text{B}_1\text{F}_1(\text{g})$	Fluoroborane (BF)	208	$\text{B}_2\text{F}_4\text{O}_1(\text{g})$	Difluoroborane oxide ($\text{O}(\text{BF}_2)_2$)	264
$\text{B}_1\text{F}_1\text{O}_1(\text{g})$	Boron fluoride oxide (OBF)	209	$\text{B}_2\text{H}_4\text{O}_4(\text{cr})$	Dihydroxyborane ($((\text{B}(\text{OH})_2)_2$)	265
$\text{B}_1\text{F}_2(\text{g})$	Disfluoroborane (BF_2)	210	$\text{B}_2\text{H}_4\text{O}_4(\text{g})$	Dihydroxyborane ($((\text{B}(\text{OH})_2)_2$)	266
$\text{B}_1\text{F}_2^+(\text{g})$	Disfluoroborane, ion (BF_2^+)	211	$\text{B}_2\text{H}_6(\text{g})$	Diborane (B_2H_6)	267
$\text{B}_1\text{F}_2^-(\text{g})$	Disfluoroborane, ion (BF_2^-)	212	$\text{B}_2\text{Mg}_1(\text{cr})$	Magnesium boride (MgB_2)	268
$\text{B}_1\text{F}_2\text{H}_1(\text{g})$	Disfluoroborane (BHF_2)	213	$\text{B}_2\text{O}_1(\text{g})$	Boron oxide (B_2O)	269
$\text{B}_1\text{F}_2\text{H}_1\text{O}_1(\text{g})$	Disfluoro-hydroxyborane (BF_2OH)	214	$\text{B}_2\text{O}_2(\text{g})$	Boron oxide ($(\text{BO})_2$)	270
$\text{B}_1\text{F}_2\text{O}_1(\text{g})$	Boron fluoride oxide (OBF_2)	215	$\text{B}_2\text{O}_3(\text{cr})$	Boron oxide (B_2O_3)	271
$\text{B}_1\text{F}_3(\text{g})$	Trifluoroborane (BF_3)	216	$\text{B}_2\text{O}_3(\text{l})$	Boron oxide (B_2O_3)	272
$\text{B}_1\text{F}_4\text{K}_1(\text{cr})$	Potassium tetrafluoroborate (KBF_4)	217	$\text{B}_2\text{O}_3(\text{cr,l})$	Boron oxide (B_2O_3)	273
$\text{B}_1\text{F}_4\text{K}_1(\text{l})$	Potassium tetrafluoroborate (KBF_4)	218	$\text{B}_2\text{O}_4(\text{g})$	Boron oxide (B_2O_3)	274
$\text{B}_1\text{F}_4\text{K}_1(\text{cr,l})$	Potassium tetrafluoroborate (KBF_4)	219	$\text{B}_2\text{O}_4\text{Pb}_1(\text{cr})$	Lead borate (PbB_2O_4)	275
$\text{B}_1\text{F}_4\text{K}_1(\text{g})$	Potassium tetrafluoroborate (KBF_4)	220	$\text{B}_2\text{Ti}_1(\text{cr})$	Titanium boride (TiB_2)	276
$\text{B}_1\text{H}_1(\text{g})$	Borane (BH)	221	$\text{B}_2\text{Ti}_1(\text{l})$	Titanium boride (TiB_2)	277
$\text{B}_1\text{H}_1\text{O}_1(\text{g})$	Boron hydride oxide (HBO)	222	$\text{B}_2\text{Ti}_1(\text{cr,l})$	Titanium boride (TiB_2)	278
$\text{B}_1\text{H}_1\text{O}_1^+(\text{g})$	Boron hydride oxide, ion (HBO^+)	223	$\text{B}_2\text{Zr}_1(\text{cr})$	Zirconium boride (ZrB_2)	279
$\text{B}_1\text{H}_1\text{O}_1^-(\text{g})$	Boron hydride oxide, ion (HBO^-)	224	$\text{B}_2\text{Zr}_1(\text{l})$	Zirconium boride (ZrB_2)	280

Formula	Table Title	Page	Formula	Table Title	Page
B ₂ Zr ₁ (cr,l)	Zirconium boride (ZrB ₂)	281	Ba ₁ F ₂ (l)	Barium fluoride (BaF ₂)	338
B ₃ Cl ₁ O ₁ (g)	Trichloroboroxin (B ₃ O ₁ Cl ₁)	282	Ba ₁ F ₂ (cr,l)	Barium fluoride (BaF ₂)	339
B ₃ F ₁ H ₂ O ₃ (g)	Fluoroboroxin (B ₃ H ₂ O ₃ F)	283	Ba ₁ F ₂ (g)	Barium fluoride (BaF ₂)	340
B ₃ F ₂ H ₁ O ₃ (g)	Difluoroboroxin (B ₃ HO ₃ F ₂)	284	Ba ₁ H ₁ O ₁ (g)	Barium hydroxide (BaOH)	341
B ₃ F ₃ O ₃ (cr)	Trifluoroboroxin (B ₃ O ₃ F ₃)	285	Ba ₁ H ₁ O ₁ ⁺ (g)	Barium hydroxide, ion (BaOH ⁺)	342
B ₃ F ₄ O ₃ (g)	Trifluoroboroxin (B ₃ O ₃ F ₃)	286	Ba ₁ H ₂ O ₂ (cr)	Barium hydroxide, alpha (Ba(OH) ₂)	343
B ₃ H ₁ O ₁ (cr)	Boroxin (B ₃ H ₁ O ₃)	287	Ba ₁ H ₂ O ₂ (l)	Barium hydroxide (Ba(OH) ₂)	344
B ₃ H ₂ O ₃ (g)	Boroxin (B ₃ H ₂ O ₃)	288	Ba ₁ H ₂ O ₂ (cr,l)	Barium hydroxide (Ba(OH) ₂)	345
B ₃ H ₃ O ₆ (g)	Boric acid ((HBO ₂) ₃)	289	Ba ₁ H ₂ O ₂ (g)	Barium hydroxide (Ba(OH) ₂)	346
B ₃ H ₆ N ₃ (g)	Borazine (B ₃ H ₆ N ₃)	290	Ba ₁ I ₁ (g)	Barium iodide (BaI)	347
B ₄ K ₂ O ₇ (cr)	Potassium borate (K ₂ B ₄ O ₇)	291	Ba ₁ I ₂ (cr)	Barium iodide (BaI ₂)	348
B ₄ K ₂ O ₇ (l)	Potassium borate (K ₂ B ₄ O ₇)	292	Ba ₁ I ₂ (l)	Barium iodide (BaI ₂)	349
B ₄ K ₂ O ₇ (cr,l)	Potassium borate (K ₂ B ₄ O ₇)	293	Ba ₁ I ₂ (cr,l)	Barium iodide (BaI ₂)	350
B ₄ Li ₂ O ₇ (cr)	Lithium borate (Li ₂ B ₄ O ₇)	294	Ba ₁ I ₂ (g)	Barium iodide (BaI ₂)	351
B ₄ Li ₂ O ₇ (l)	Lithium borate (Li ₂ B ₄ O ₇)	295	Ba ₁ O ₁ (cr)	Barium oxide (BaO)	352
B ₄ Li ₂ O ₇ (cr,l)	Lithium borate (Li ₂ B ₄ O ₇)	296	Ba ₁ O ₁ (l)	Barium oxide (BaO)	353
B ₄ Mg ₁ (cr)	Magnesium boride (MgB ₄)	297	Ba ₁ O ₁ (cr,l)	Barium oxide (BaO)	354
B ₄ Na ₂ O ₇ (cr)	Sodium borate (Na ₂ B ₄ O ₇)	298	Ba ₁ O ₁ (g)	Barium oxide (BaO)	355
B ₄ Na ₂ O ₇ (l)	Sodium borate (Na ₂ B ₄ O ₇)	299	Ba ₁ S ₁ (cr)	Barium sulfide (BaS)	356
B ₄ Na ₂ O ₇ (cr,l)	Sodium borate (Na ₂ B ₄ O ₇)	300	Ba ₁ S ₁ (g)	Barium sulfide (BaS)	357
B ₄ O ₇ Pb ₁ (cr)	Lead borate (PbB ₄ O ₇)	301	Be ₁ (ref)	Beryllium (Be)	361
B ₅ H ₉ (l)	Pentaborane (B ₅ H ₉)	302	Be ₁ (cr)	Beryllium (Be)	362
B ₅ H ₉ (g)	Pentaborane (B ₅ H ₉)	303	Be ₁ (l)	Beryllium (Be)	363
B ₆ K ₂ O ₁₀ (cr)	Potassium borate (K ₂ B ₆ O ₁₀)	304	Be ₁ (cr,l)	Beryllium (Be)	364
B ₆ Li ₂ O ₁₀ (cr)	Lithium borate (Li ₂ B ₆ O ₁₀)	305	Be ₁ (g)	Beryllium (Be)	365
B ₆ Na ₂ O ₁₀ (cr)	Sodium borate (Na ₂ B ₆ O ₁₀)	306	Be ₁ ⁺ (g)	Beryllium, ion (Be ⁺)	366
B ₆ O ₁₀ Pb ₁ (cr)	Lead borate (PbB ₆ O ₁₀)	307	Be ₁ Br ₁ (g)	Beryllium bromide (BeBr)	367
B ₈ K ₂ O ₁₃ (cr)	Potassium borate (K ₂ B ₈ O ₁₃)	308	Be ₁ Br ₂ (cr)	Beryllium bromide (BeBr ₂)	368
B ₈ K ₂ O ₁₃ (l)	Potassium borate (K ₂ B ₈ O ₁₃)	309	Be ₁ Br ₂ (g)	Beryllium bromide (BeBr ₂)	369
B ₈ K ₂ O ₁₃ (cr,l)	Potassium borate (K ₂ B ₈ O ₁₃)	310	Be ₁ Cl ₁ (g)	Beryllium chloride (BeCl)	370
B ₈ Li ₂ O ₁₃ (cr)	Lithium borate (Li ₂ B ₈ O ₁₃)	311	Be ₁ Cl ₁ ^{+(g)}	Beryllium chloride, ion (BeCl ⁺)	371
B ₁₀ H ₁₄ (cr)	Decaborane (B ₁₀ H ₁₄)	312	Be ₁ Cl ₁ F ₁ (g)	Beryllium chloride fluoride (BeClF)	372
B ₁₀ H ₁₄ (l)	Decaborane (B ₁₀ H ₁₄)	313	Be ₁ Cl ₂ (cr)	Beryllium chloride, alpha (BeCl ₂)	373
B ₁₀ H ₁₄ (cr,l)	Decaborane (B ₁₀ H ₁₄)	314	Be ₁ Cl ₂ (cr)	Beryllium chloride, beta (BeCl ₂)	374
B ₁₀ H ₁₄ (g)	Decaborane (B ₁₀ H ₁₄)	315	Be ₁ Cl ₂ (l)	Beryllium chloride (BeCl ₂)	375
B ₁₀ O ₁₇ Pb ₂ (cr)	Lead borate (Pb ₂ B ₁₀ O ₁₇)	316	Be ₁ Cl ₂ (cr,l)	Beryllium chloride (BeCl ₂)	376
Ba ₁ (ref)	Barium (Ba)	319	Be ₁ Cl ₂ (g)	Beryllium chloride (BeCl ₂)	377
Ba ₁ (cr)	Barium (Ba)	320	Be ₁ F ₁ (g)	Beryllium fluoride (BeF)	378
Ba ₁ (l)	Barium (Ba)	321	Be ₁ F ₂ (cr)	Beryllium fluoride (BeF ₂)	379
Ba ₁ (cr,l)	Barium (Ba)	322	Be ₁ F ₂ (l)	Beryllium fluoride (BeF ₂)	380
Ba ₁ (g)	Barium (Ba)	323	Be ₁ F ₂ (cr,l)	Beryllium fluoride (BeF ₂)	381
Ba ₁ ⁺ (g)	Barium, ion (Ba ⁺)	324	Be ₁ F ₂ (g)	Beryllium fluoride (BeF ₂)	382
Ba ₁ Br ₁ (g)	Barium bromide (BaBr)	325	Be ₁ F ₃ Li ₁ (cr)	Lithium trifluoroberyllate (LiBeF ₃)	383
Ba ₁ Br ₂ (cr)	Barium bromide (BaBr ₂)	326	Be ₁ F ₃ Li ₁ (l)	Lithium trifluoroberyllate (LiBeF ₃)	384
Ba ₁ Br ₂ (l)	Barium bromide (BaBr ₂)	327	Be ₁ F ₃ Li ₁ (cr,l)	Lithium trifluoroberyllate (LiBeF ₃)	385
Ba ₁ Br ₂ (cr,l)	Barium bromide (BaBr ₂)	328	Be ₁ F ₃ Li ₁ (g)	Lithium trifluoroberyllate (LiBeF ₃)	386
Ba ₁ Br ₂ (g)	Barium bromide (BaBr ₂)	329	Be ₁ F ₄ Li ₂ (cr)	Lithium tetrafluoroberyllate (Li ₂ BeF ₄)	387
Ba ₁ Cl ₁ (g)	Barium chloride (BaCl)	330	Be ₁ F ₄ Li ₂ (l)	Lithium tetrafluoroberyllate (Li ₂ BeF ₄)	388
Ba ₁ Cl ₂ (cr)	Barium chloride (BaCl ₂)	331	Be ₁ F ₄ Li ₂ (cr,l)	Lithium tetrafluoroberyllate (Li ₂ BeF ₄)	389
Ba ₁ Cl ₂ (l)	Barium chloride (BaCl ₂)	332	Be ₁ H ₁ (g)	Beryllium hydride (BeH)	390
Ba ₁ Cl ₂ (cr,l)	Barium chloride (BaCl ₂)	333	Be ₁ H ₁ ⁺ (g)	Beryllium hydride, ion (BeH ⁺)	391
Ba ₁ Cl ₂ (g)	Barium chloride (BaCl ₂)	334	Be ₁ H ₁ O ₁ (g)	Beryllium hydroxide (BeOH)	392
Ba ₁ F ₁ (g)	Barium fluoride (BaF)	335	Be ₁ H ₁ O ₁ ⁺ (g)	Beryllium hydroxide, ion (BeOH ⁺)	393
Ba ₁ F ₁ ⁺ (g)	Barium fluoride, ion (BaF ⁺)	336	Be ₁ H ₂ (g)	Beryllium hydride (BeH ₂)	394
Ba ₁ F ₂ (cr)	Barium fluoride (BaF ₂)	337	Be ₁ H ₂ O ₂ (cr)	Beryllium hydroxide, alpha (Be(OH) ₂)	395

Formula	Table Title	Page	Formula	Table Title	Page
Be ₁ H ₂ O ₂ (cr)	Beryllium hydroxide, beta (Be(OH) ₂)	396	Br ₁ Mo ₁ (g)	Molybdenum bromide (MoBr)	452
Be ₁ H ₂ O ₂ (g)	Beryllium hydroxide (Be(OH) ₂)	397	Br ₁ N ₁ (g)	Bromoimidogen (NBr)	453
Be ₁ I ₁ (g)	Beryllium iodide (BeI)	398	Br ₁ N ₁ O ₁ (g)	Nitrosyl bromide (ONBr)	454
Be ₁ I ₂ (cr)	Beryllium iodide (BeI ₂)	399	Br ₁ Na ₁ (cr)	Sodium bromide (NaBr)	455
Be ₁ I ₂ (l)	Beryllium iodide (BeI ₂)	400	Br ₁ Na ₁ (l)	Sodium bromide (NaBr)	456
Be ₁ I ₂ (cr,l)	Beryllium iodide (BeI ₂)	401	Br ₁ Na ₁ (cr,l)	Sodium bromide (NaBr)	457
Be ₁ I ₂ (g)	Beryllium iodide (BeI ₂)	402	Br ₁ Na ₁ (g)	Sodium bromide (NaBr)	458
Be ₁ N ₁ (g)	Beryllium nitride (BeN)	403	Br ₁ O ₁ (g)	Bromine oxide (BrO)	459
Be ₁ O ₁ (cr)	Beryllium oxide, alpha (BeO)	404	Br ₁ O ₂ (g)	Bromine oxide (OB ₂)	460
Be ₁ O ₁ (cr)	Beryllium oxide, beta (BeO)	405	Br ₁ O ₂ (g)	Bromine oxide (BrOO)	461
Be ₁ O ₁ (l)	Beryllium oxide (BeO)	406	Br ₁ O ₃ (g)	Bromine oxide (BrO ₃)	462
Be ₁ O ₁ (cr,l)	Beryllium oxide (BeO)	407	Br ₁ P ₁ (g)	Phosphorus bromide (PBr)	463
Be ₁ O ₁ (g)	Beryllium oxide (BeO)	408	Br ₁ Pb ₁ (g)	Lead bromide (PbBr)	464
Be ₁ O ₄ S ₁ (cr)	Beryllium sulfate, alpha (BeSO ₄)	409	Br ₁ Si ₁ (g)	Bromosilylidene (SiBr)	465
Be ₁ O ₄ S ₁ (cr)	Beryllium sulfate, beta (BeSO ₄)	410	Br ₁ Sr ₁ (g)	Strontium bromide (SrBr)	466
Be ₁ O ₄ S ₁ (cr)	Beryllium sulfate, gamma (BeSO ₄)	411	Br ₁ Ti ₁ (g)	Titanium bromide (TiBr)	467
Be ₁ O ₄ W ₁ (cr)	Beryllium tungsten oxide (BeWO ₄)	412	Br ₁ W ₁ (g)	Tungsten bromide (WBr)	468
Be ₁ S ₁ (cr)	Beryllium sulfide (BeS)	413	Br ₁ Zr ₁ (g)	Zirconium bromide (ZrBr)	469
Be ₁ S ₁ (g)	Beryllium sulfide (BeS)	414	Br ₂ (ref)	Bromine (Br ₂)	470
Be ₂ (g)	Beryllium (Be ₂)	415	Br ₂ (cr,l)	Bromine (Br ₂)	471
Be ₂ Cl ₄ (g)	Beryllium chloride ((BeCl ₂) ₂)	416	Br ₂ (g)	Bromine (Br ₂)	472
Be ₂ F ₂ O ₁ (g)	Beryllium fluoride oxide (O(BeF) ₂)	417	Br ₂ Ca ₁ (cr)	Calcium bromide (CaBr ₂)	473
Be ₂ O ₁ (g)	Beryllium oxide (Be ₂ O)	418	Br ₂ Ca ₁ (l)	Calcium bromide (CaBr ₂)	474
Be ₂ O ₂ (g)	Beryllium oxide ((BeO) ₂)	419	Br ₂ Ca ₁ (cr,l)	Calcium bromide (CaBr ₂)	475
Be ₂ O ₄ Si ₁ (cr)	Beryllium silicate (Be ₂ SiO ₄)	420	Br ₂ Ca ₁ (g)	Calcium bromide (CaBr ₂)	476
Be ₃ N ₂ (cr)	Beryllium nitride, alpha (Be ₃ N ₂)	421	Br ₂ Fe ₁ (cr)	Iron bromide (FeBr ₂)	477
Be ₃ N ₂ (l)	Beryllium nitride (Be ₃ N ₂)	422	Br ₂ Fe ₁ (l)	Iron bromide (FeBr ₂)	478
Be ₃ N ₂ (cr,l)	Beryllium nitride (Be ₃ N ₂)	423	Br ₂ Fe ₁ (cr,l)	Iron bromide (FeBr ₂)	479
Be ₃ O ₁ (g)	Beryllium oxide ((BeO) ₃)	424	Br ₂ Fe ₁ (g)	Iron bromide (FeBr ₂)	480
Be ₄ O ₄ (g)	Beryllium oxide ((BeO) ₄)	425	Br ₂ H ₂ Si ₁ (g)	Dibromosilane (SiH ₂ Br ₂)	481
Be ₅ O ₅ (g)	Beryllium oxide ((BeO) ₅)	426	Br ₂ Hg ₁ (cr)	Mercury bromide (HgBr ₂)	482
Be ₆ O ₆ (g)	Beryllium oxide ((BeO) ₆)	427	Br ₂ Hg ₁ (l)	Mercury bromide (HgBr ₂)	483
Br ₁ (g)	Bromine (Br)	429	Br ₂ Hg ₁ (cr,l)	Mercury bromide (HgBr ₂)	484
Br ₁ ⁺ (g)	Bromine, ion (Br ⁺)	430	Br ₂ Hg ₁ (g)	Mercury bromide (HgBr ₂)	485
Br ₁ ⁻ (g)	Bromine, ion (Br ⁻)	431	Br ₂ Hg ₂ (cr)	Mercury bromide (Hg ₂ Br ₂)	486
Br ₁ Ca ₁ (g)	Calcium bromide (CaBr)	432	Br ₂ K ₂ (g)	Potassium bromide ((KBr) ₂)	487
Br ₁ Cl ₁ (g)	Bromine chloride (BrCl)	433	Br ₂ Li ₂ (g)	Lithium bromide ((LiBr) ₂)	488
Br ₁ F ₁ (g)	Bromine fluoride (BrF)	434	Br ₂ Mg ₁ (cr)	Magnesium bromide (MgBr ₂)	489
Br ₁ F ₁ (g)	Bromine fluoride (BrF ₃)	435	Br ₂ Mg ₁ (l)	Magnesium bromide (MgBr ₂)	490
Br ₁ F ₃ (g)	Bromine fluoride (BrF ₃)	436	Br ₂ Mg ₁ (cr,l)	Magnesium bromide (MgBr ₂)	491
Br ₁ F ₅ S ₁ (g)	Sulfur bromide fluoride (SBrF ₅)	437	Br ₂ Mg ₁ (g)	Magnesium bromide (MgBr ₂)	492
Br ₁ H ₁ (g)	Hydrogen bromide (HBr)	438	Br ₂ Mg ₁ ⁺ (g)	Magnesium bromide, ion (MgBr ₂ ⁺)	493
Br ₁ H ₁ Si ₁ (g)	Bromosilane (SiH ₂ Br)	439	Br ₂ Mo ₁ (cr)	Molybdenum bromide (MoBr ₂)	494
Br ₁ H ₄ N ₁ (cr)	Ammonium bromide (NH ₄ Br)	440	Br ₂ Mo ₁ (l)	Molybdenum bromide (MoBr ₂)	495
Br ₁ Hg ₁ (g)	Mercury bromide (HgBr)	441	Br ₂ Na ₂ (g)	Sodium bromide ((NaBr) ₂)	496
Br ₁ I ₁ (g)	Iodine bromide (IBr)	442	Br ₂ O ₁ (g)	Bromine oxide (BrOBr)	497
Br ₁ K ₁ (cr)	Potassium bromide (KBr)	443	Br ₂ O ₁ (l)	Bromine oxide (BrBrO)	498
Br ₁ K ₁ (l)	Potassium bromide (KBr)	444	Br ₂ Pb ₁ (cr)	Lead bromide (PbBr ₂)	499
Br ₁ K ₁ (cr,l)	Potassium bromide (KBr)	445	Br ₂ Pb ₁ (l)	Lead bromide (PbBr ₂)	500
Br ₁ K ₁ (g)	Potassium bromide (KBr)	446	Br ₂ Pb ₁ (cr,l)	Lead bromide (PbBr ₂)	501
Br ₁ Li ₁ (cr)	Lithium bromide (LiBr)	447	Br ₂ Pb ₁ (g)	Lead bromide (PbBr ₂)	502
Br ₁ Li ₁ (l)	Lithium bromide (LiBr)	448	Br ₂ Si ₁ (g)	Dibromosilylene (SiBr ₂)	503
Br ₁ Li ₁ (cr,l)	Lithium bromide (LiBr)	449	Br ₂ Sr ₁ (cr)	Strontium bromide (SrBr ₂)	504
Br ₁ Li ₁ (g)	Lithium bromide (LiBr)	450	Br ₂ Sr ₁ (l)	Strontium bromide (SrBr ₂)	505
Br ₁ Mg ₁ (g)	Magnesium bromide (MgBr)	451	Br ₂ Sr ₁ (cr,l)	Strontium bromide (SrBr ₂)	506
			Br ₂ Sr ₁ (g)	Strontium bromide (SrBr ₂)	507

Formula	Table Title	Page	Formula	Table Title	Page
Br ₂ Ti ₁ (cr)	Titanium bromide (TiBr ₂)	508	C ₁ Br ₁ N ₁ (g)	Cyanogen bromide (BrCN)	564
Br ₂ Ti ₁ (g)	Titanium bromide (TiBr ₂)	509	C ₁ Br ₄ (g)	Tetrabromomethane (CBr ₄)	565
Br ₂ Zr ₁ (cr)	Zirconium bromide (ZrBr ₂)	510	C ₁ Cl ₁ (g)	Chloromethylidyne (CCl)	566
Br ₂ Zr ₁ (l)	Zirconium bromide (ZrBr ₂)	511	C ₁ Cl ₁ F ₁ O ₁ (g)	Carbonic chloride fluoride (COClF)	567
Br ₂ Zr ₁ (cr,l)	Zirconium bromide (ZrBr ₂)	512	C ₁ Cl ₁ F ₃ (g)	Chlorotrifluoromethane (CClF ₃)	568
Br ₂ Zr ₁ (g)	Zirconium bromide (ZrBr ₂)	513	C ₁ Cl ₁ N ₁ (g)	Cyanogen chloride (ClCN)	569
Br ₃ H ₁ Si ₁ (g)	Tribromosilane (SiHBr ₃)	514	C ₁ Cl ₁ O ₁ (g)	Carbonyl chloride (COCl)	570
Br ₃ Mo ₁ (cr)	Molybdenum bromide (MoBr ₃)	515	C ₁ Cl ₂ (g)	Dichloromethylene (CCl ₂)	571
Br ₃ Mo ₁ (g)	Molybdenum bromide (MoBr ₃)	516	C ₁ Cl ₂ F ₂ (g)	Dichlorodifluoromethane (CCl ₂ F ₂)	572
Br ₃ O ₁ P ₁ (g)	Phosphoryl bromide (POBr ₃)	517	C ₁ Cl ₂ O ₁ (g)	Carbonic dichloride (COCl ₂)	573
Br ₃ P ₁ (g)	Phosphorus bromide (PBr ₃)	518	C ₁ Cl ₃ (g)	Trichloromethyl (CCl ₃)	574
Br ₃ P ₁ S ₁ (g)	Thiophosphoryl bromide (PSBr ₃)	519	C ₁ Cl ₃ F ₁ (g)	Trichlorofluoromethane (CCl ₃ F)	575
Br ₃ Si ₁ (g)	Tribromosilyl (SiBr ₃)	520	C ₁ Cl ₄ (g)	Tetrachloromethane (CCl ₄)	576
Br ₃ Ti ₁ (cr)	Titanium bromide (TiBr ₃)	521	C ₁ Cu ₁ N ₁ (cr)	Copper cyanide (CuCN)	577
Br ₃ Ti ₁ (g)	Titanium bromide (TiBr ₃)	522	C ₁ F ₁ (g)	Fluoromethylidyne (CF)	578
Br ₃ Zr ₁ (cr)	Zirconium bromide (ZrBr ₃)	523	C ₁ F ₁ ⁺ (g)	Fluoromethylidyne, ion (CF ⁺)	579
Br ₃ Zr ₁ (g)	Zirconium bromide (ZrBr ₃)	524	C ₁ F ₁ N ₁ (g)	Cyanogen fluoride (FCN)	580
Br ₄ Fe ₁ (g)	Iron bromide ((FeBr ₂) ₂)	525	C ₁ F ₁ O ₁ (g)	Carbonyl fluoride (COF)	581
Br ₄ Mg ₂ (g)	Magnesium bromide ((MgBr ₂) ₂)	526	C ₁ F ₂ (g)	Difluoromethylene (CF ₂)	582
Br ₄ Mo ₁ (cr)	Molybdenum bromide (MoBr ₄)	527	C ₁ F ₂ ⁺ (g)	Difluoromethylene, ion (CF ₂ ⁺)	583
Br ₄ Mo ₁ (g)	Molybdenum bromide (MoBr ₄)	528	C ₁ F ₂ O ₁ (g)	Carbonic difluoride (COF ₂)	584
Br ₄ Pb ₁ (g)	Lead bromide (PbBr ₄)	529	C ₁ F ₃ (g)	Trifluoromethyl (CF ₃)	585
Br ₄ Si ₁ (l)	Tetrabromosilane (SiBr ₄)	530	C ₁ F ₃ ⁺ (g)	Trifluoromethyl, ion (CF ₃ ⁺)	586
Br ₄ Si ₁ (g)	Tetrabromosilane (SiBr ₄)	531	C ₁ F ₃ I ₁ (g)	Trifluoriodomethane (CIF ₃)	587
Br ₄ Ti ₁ (cr)	Titanium bromide (TiBr ₄)	532	C ₁ F ₄ (g)	Tetrafluoromethane (CF ₄)	588
Br ₄ Ti ₁ (l)	Titanium bromide (TiBr ₄)	533	C ₁ F ₄ O ₁ (g)	Trifluoromethyl hypofluorite (CF ₃ OF)	589
Br ₄ Ti ₁ (cr,l)	Titanium bromide (TiBr ₄)	534	C ₁ F ₈ S ₁ (g)	Pentafluoro(trifluoromethyl)sulfur (CF ₃ SF ₃)	590
Br ₄ Ti ₁ (g)	Titanium bromide (TiBr ₄)	535	C ₁ H ₁ (g)	Methylidyne (CH)	591
Br ₄ Zr ₁ (cr)	Zirconium bromide (ZrBr ₄)	536	C ₁ H ₁ ⁺ (g)	Methylidyne, ion (CH ⁺)	592
Br ₄ Zr ₁ (g)	Zirconium bromide (ZrBr ₄)	537	C ₁ H ₁ Cl ₁ (g)	Chloromethylene (CHCl)	593
Br ₅ Nb ₁ (cr)	Niobium bromide (NbBr ₅)	538	C ₁ H ₁ Cl ₁ F ₂ (g)	Chlorodifluoromethane (CHClF ₂)	594
Br ₅ Nb ₁ (l)	Niobium bromide (NbBr ₅)	539	C ₁ H ₁ Cl ₂ F ₁ (g)	Dichlorofluoromethane (CHCl ₂ F)	595
Br ₅ Nb ₁ (cr,l)	Niobium bromide (NbBr ₅)	540	C ₁ H ₁ Cl ₃ (g)	Trichloromethane (CHCl ₃)	596
Br ₅ Nb ₁ (g)	Niobium bromide (NbBr ₅)	541	C ₁ H ₁ F ₁ (g)	Fluoromethylene (CHF)	597
Br ₅ W ₁ (cr)	Tungsten bromide (WBr ₅)	542	C ₁ H ₁ F ₁ O ₁ (g)	Formyl fluoride (HCOF)	598
Br ₅ W ₁ (l)	Tungsten bromide (WBr ₅)	543	C ₁ H ₁ F ₃ (g)	Trifluoromethane (CHF ₃)	599
Br ₅ W ₁ (cr,l)	Tungsten bromide (WBr ₅)	544	C ₁ H ₁ N ₁ (g)	Hydrogen cyanide (HCN)	600
Br ₅ W ₁ (g)	Tungsten bromide (WBr ₅)	545	C ₁ H ₁ N ₁ O ₁ (g)	Hydrogen isocyanate (HNCO)	601
Br ₆ W ₁ (cr)	Tungsten bromide (WBr ₆)	546	C ₁ H ₁ O ₁ (g)	Formyl (HCO)	602
Br ₆ W ₁ (g)	Tungsten bromide (WBr ₆)	547	C ₁ H ₁ O ₁ ⁺ (g)	Formyl, ion (HCO ⁺)	603
C _{0.98} Nb ₁ (cr)	Niobium carbide (NbC _{0.98})	549	C ₁ H ₁ P ₁ (g)	Methinophosphide (CHP)	604
C ₁ (ref)	Carbon (C)	550	C ₁ H ₂ (g)	Methylene (CH ₂)	605
C ₁ (g)	Carbon (C)	551	C ₁ H ₂ Cl ₁ F ₁ (g)	Chlorofluoromethane (CH ₂ ClF)	606
C ₁ ⁺ (g)	Carbon, ion (C ⁺)	552	C ₁ H ₂ Cl ₂ (g)	Dichloromethane (CH ₂ Cl ₂)	607
C ₁ ⁻ (g)	Carbon, ion (C ⁻)	553	C ₁ H ₂ F ₂ (g)	Difluoromethane (CH ₂ F ₂)	608
C ₁ Al ₁ (g)	Aluminum carbide (AlC)	554	C ₁ H ₃ (g)	Formaldehyde (H ₂ CO)	609
C ₁ B ₁ (g)	Boron carbide (BC)	555	C ₁ H ₃ Cl ₁ (g)	Methyl (CH ₃)	610
C ₁ B ₄ (cr)	Boron carbide (B ₄ C)	556	C ₁ H ₃ Cl ₃ Si ₁ (g)	Chloromethane (CH ₃ Cl)	611
C ₁ B ₄ (l)	Boron carbide (B ₄ C)	557	C ₁ H ₃ F ₁ (g)	Trichloromethylsilane (SiCH ₃ Cl ₃)	612
C ₁ B ₄ (cr,l)	Boron carbide (B ₄ C)	558	C ₁ H ₃ F ₃ Si ₁ (g)	Fluoromethane (CH ₃ F)	613
C ₁ Be ₂ (cr)	Beryllium carbide (Be ₂ C)	559	C ₁ H ₄ (g)	Trifluoromethylsilane (SiCH ₃ F ₃)	614
C ₁ Be ₂ (l)	Beryllium carbide (Be ₂ C)	560	C ₁ I ₁ N ₁ (g)	Methane (CH ₄)	615
C ₁ Be ₂ (cr,l)	Beryllium carbide (Be ₂ C)	561	C ₁ K ₁ N ₁ (cr)	Cyanogen iodide (CNI)	616
C ₁ Br ₁ (g)	Bromomethylidyne (CBr)	562	C ₁ K ₁ N ₁ (l)	Potassium cyanide (KCN)	617
C ₁ Br ₁ F ₃ (g)	Bromotrifluoromethane (CBrF ₃)	563	C ₁ K ₁ N ₁ (cr,l)	Potassium cyanide (KCN)	618
				Potassium cyanide (KCN)	619

Formula	Table Title	Page	Formula	Table Title	Page
C ₁ K ₁ N ₁ (g)	Potassium cyanide (KCN)	620	C ₂ H ₄ (g)	Ethene (C ₂ H ₄)	676
C ₁ K ₂ O ₃ (cr)	Potassium carbonate (K ₂ CO ₃)	621	C ₂ H ₄ O ₁ (g)	Oxirane (C ₂ H ₄ O)	677
C ₁ K ₂ O ₃ (l)	Potassium carbonate (K ₂ CO ₃)	622	C ₂ K ₂ N ₂ (g)	Potassium cyanide ((KCN) ₂)	678
C ₁ K ₂ O ₃ (cr,l)	Potassium carbonate (K ₂ CO ₃)	623	C ₂ Li ₂ (cr)	Lithium carbide (Li ₂ C ₂)	679
C ₁ Li ₂ O ₃ (cr)	Lithium carbonate (Li ₂ CO ₃)	624	C ₂ Mg ₁ (cr)	Magnesium carbide (MgC ₂)	680
C ₁ Li ₂ O ₃ (l)	Lithium carbonate (Li ₂ CO ₃)	625	C ₂ N ₁ (g)	CNC radical (C ₂ N)	681
C ₁ Li ₂ O ₃ (cr,l)	Lithium carbonate (Li ₂ CO ₃)	626	C ₂ N ₂ (g)	Ethanodinitrile ((CN) ₂)	682
C ₁ Mg ₁ O ₁ (cr)	Magnesium carbonate (MgCO ₃)	627	C ₂ N ₂ Na ₂ (g)	Sodium cyanide ((NaCN) ₂)	683
C ₁ N ₁ (g)	Cyanogen (CN)	628	C ₂ O ₁ (g)	CCO radical (C ₂ O)	684
C ₁ N ₁ ⁺ (g)	Cyanogen, ion (CN ⁺)	629	C ₂ Si ₁ (g)	Silicon carbide (SiC ₂)	685
C ₁ N ₁ ⁻ (g)	Cyanide (CN ⁻)	630	C ₃ (g)	Carbon (C ₃)	686
C ₁ N ₁ Na ₁ (cr)	Sodium cyanide (NaCN)	631	C ₃ Al ₄ (cr)	Aluminum carbide (Al ₃ C ₃)	687
C ₁ N ₁ Na ₁ (l)	Sodium cyanide (NaCN)	632	C ₃ Cr ₇ (cr)	Chromium carbide (Cr ₇ C ₃)	688
C ₁ N ₁ Na ₁ (cr,l)	Sodium cyanide (NaCN)	633	C ₃ Mg ₁ (cr)	Magnesium carbide (Mg ₂ C ₃)	689
C ₁ N ₁ Na ₁ (g)	Sodium cyanide (NaCN)	634	C ₃ O ₂ (g)	Carbon suboxide (C ₃ O ₂)	690
C ₁ N ₁ O ₁ (g)	NCO radical (NCO)	635	C ₄ (g)	Carbon (C ₄)	691
C ₁ N ₂ (g)	CNN radical (CNN)	636	C ₄ H ₁₂ Si ₁ (g)	Tetramethylsilane (Si(CH ₃) ₄)	692
C ₁ N ₂ (g)	NCN radical (NCN)	637	C ₄ N ₂ (g)	2-Butynedinitrile (C ₄ N ₂)	693
C ₁ Na ₂ O ₁ (cr)	Sodium carbonate (Na ₂ CO ₃)	638	C ₄ Ni ₁ O ₄ (l)	Nickel carbonyl (Ni(CO) ₄)	694
C ₁ Na ₂ O ₁ (l)	Sodium carbonate (Na ₂ CO ₃)	639	C ₄ Ni ₁ O ₄ (g)	Nickel carbonyl (Ni(CO) ₄)	695
C ₁ Na ₂ O ₁ (cr,l)	Sodium carbonate (Na ₂ CO ₃)	640	C ₅ (g)	Carbon (C ₅)	696
C ₁ O ₁ (g)	Carbon monoxide (CO)	641	C ₅ Fe ₁ O ₃ (l)	Iron carbonyl (Fe(CO) ₅)	697
C ₁ O ₁ S ₁ (g)	Carbon oxide sulfide (COS)	642	C ₅ Fe ₁ O ₃ (g)	Iron carbonyl (Fe(CO) ₅)	698
C ₁ O ₂ (g)	Carbon dioxide (CO ₂)	643	C ₆ Cr ₂ (cr)	Chromium carbide (Cr ₂ C ₆)	699
C ₁ O ₂ ⁻ (g)	Carbon dioxide, ion (CO ₂ ⁻)	644			
C ₁ P ₁ (g)	Carbon phosphide (CP)	645	Ca ₁ (ref)	Calcium (Ca)	703
C ₁ S ₁ (g)	Carbon sulfide (CS)	646	Ca ₁ (cr)	Calcium, alpha (Ca)	704
C ₁ S ₂ (g)	Carbon disulfide (CS ₂)	647	Ca ₁ (cr)	Calcium, beta (Ca)	705
C ₁ Si ₁ (cr)	Silicon carbide, alpha (SiC)	648	Ca ₁ (l)	Calcium (Ca)	706
C ₁ Si ₁ (cr)	Silicon carbide, beta (SiC)	649	Ca ₁ (cr,l)	Calcium (Ca)	707
C ₁ Si ₁ (g)	Silicon carbide (SiC)	650	Ca ₁ (g)	Calcium (Ca)	708
C ₁ Si ₂ (g)	Silicon carbide (Si ₂ C)	651	Ca ₁ ⁺ (g)	Calcium, ion (Ca ⁺)	709
C ₁ Ta ₁ (cr)	Tantalum carbide (TaC)	652	Ca ₁ Cl ₁ (g)	Calcium chloride (CaCl)	710
C ₁ Ta ₁ (l)	Tantalum carbide (TaC)	653	Ca ₁ Cl ₂ (cr)	Calcium chloride (CaCl ₂)	711
C ₁ Ta ₁ (cr,l)	Tantalum carbide (TaC)	654	Ca ₁ Cl ₂ (l)	Calcium chloride (CaCl ₂)	712
C ₁ Ti ₁ (cr)	Titanium carbide (TiC)	655	Ca ₁ Cl ₂ (cr,l)	Calcium chloride (CaCl ₂)	713
C ₁ Ti ₁ (l)	Titanium carbide (TiC)	656	Ca ₁ Cl ₂ (g)	Calcium chloride (CaCl ₂)	714
C ₁ Ti ₁ (cr,l)	Titanium carbide (TiC)	657	Ca ₁ F ₁ (g)	Calcium fluoride (CaF)	715
C ₁ Zr ₁ (cr)	Zirconium carbide (ZrC)	658	Ca ₁ F ₂ (cr)	Calcium fluoride (CaF ₂)	716
C ₁ Zr ₁ (l)	Zirconium carbide (ZrC)	659	Ca ₁ F ₂ (l)	Calcium fluoride (CaF ₂)	717
C ₁ Zr ₁ (cr,l)	Zirconium carbide (ZrC)	660	Ca ₁ F ₂ (cr,l)	Calcium fluoride (CaF ₂)	718
C ₂ (g)	Carbon (C ₂)	661	Ca ₁ F ₂ (g)	Calcium fluoride (CaF ₂)	719
C ₂ ⁻ (g)	Carbon, ion (C ₂ ⁻)	662	Ca ₁ H ₁ O ₁ (g)	Calcium hydroxide (CaOH)	720
C ₂ Be ₁ (g)	Beryllium carbide (BeC ₂)	663	Ca ₁ H ₁ O ₁ ⁺ (g)	Calcium hydroxide, ion (CaOH ⁺)	721
C ₂ Cl ₂ (g)	Dichloroethyne (C ₂ Cl ₂)	664	Ca ₁ H ₂ O ₂ (cr)	Calcium hydroxide (Ca(OH) ₂)	722
C ₂ Cl ₄ (g)	Tetrachloroethene (C ₂ Cl ₄)	665	Ca ₁ H ₂ O ₂ (g)	Calcium hydroxide (Ca(OH) ₂)	723
C ₂ Cl ₆ (g)	Hexachloroethane (C ₂ Cl ₆)	666	Ca ₁ I ₁ (g)	Calcium iodide (CaI)	724
C ₂ Cr ₃ (cr)	Chromium carbide (Cr ₃ C ₂)	667	Ca ₁ I ₂ (cr)	Calcium iodide (CaI ₂)	725
C ₂ F ₂ (g)	Disfluoroethyne (C ₂ F ₂)	668	Ca ₁ I ₂ (l)	Calcium iodide (CaI ₂)	726
C ₂ F ₃ N ₁ (g)	Trifluoroacetonitrile (CF ₃ CN)	669	Ca ₁ I ₂ (cr,l)	Calcium iodide (CaI ₂)	727
C ₂ F ₄ (g)	Tetrafluoroethene (C ₂ F ₄)	670	Ca ₁ I ₂ (g)	Calcium iodide (CaI ₂)	728
C ₂ F ₆ (g)	Hexafluoroethane (C ₂ F ₆)	671	Ca ₁ O ₁ (cr)	Calcium oxide (CaO)	729
C ₂ H ₁ (g)	Ethyne (C ₂ H)	672	Ca ₁ O ₁ (l)	Calcium oxide (CaO)	730
C ₂ H ₁ Cl ₁ (g)	Chloroethyne (C ₂ HCl)	673	Ca ₁ O ₁ (cr,l)	Calcium oxide (CaO)	731
C ₂ H ₁ F ₁ (g)	Fluoroethyne (C ₂ HF)	674	Ca ₁ O ₁ (g)	Calcium oxide (CaO)	732
C ₂ H ₂ (g)	Ethyne (C ₂ H ₂)	675	Ca ₁ S ₁ (cr)	Calcium sulfide (CaS)	733

Formula	Table Title	Page	Formula	Table Title	Page
Ca ₁ S ₁ (g)	Calcium sulfide (CaS)	734	Cl ₁ Na ₁ (l)	Sodium chloride (NaCl)	790
Ca ₂ (g)	Calcium (Ca ₂)	735	Cl ₁ Na ₁ (cr,l)	Sodium chloride (NaCl)	791
Cl ₁ (g)	Chlorine (Cl)	737	Cl ₁ Na ₁ (g)	Sodium chloride (NaCl)	792
Cl ₁ ^{+(g)}	Chlorine, ion (Cl ⁺)	738	Cl ₁ Na ₁ O ₄ (cr)	Sodium perchlorate (NaClO ₄)	793
Cl ₁ ⁻ (g)	Chlorine, ion (Cl ⁻)	739	Cl ₁ Ni ₁ (g)	Nickel chloride (NiCl)	794
Cl ₁ Co ₁ (g)	Cobalt chloride (CoCl)	740	Cl ₁ O ₁ (g)	Chlorine oxide (ClO)	795
Cl ₁ Cs ₁ (cr)	Cesium chloride (CsCl)	741	Cl ₁ O ₁ Ti ₁ (g)	Titanium chloride oxide (OTiCl)	796
Cl ₁ Cs ₁ (l)	Cesium chloride (CsCl)	742	Cl ₁ O ₂ (g)	Chlorine oxide (OCIO)	797
Cl ₁ Cs ₁ (cr,l)	Cesium chloride (CsCl)	743	Cl ₁ O ₃ (g)	Chlorine oxide (ClOO)	798
Cl ₁ Cs ₁ (g)	Cesium chloride (CsCl)	744	Cl ₁ P ₁ (g)	Chlorine oxide (ClO ₂)	799
Cl ₁ Cu ₁ (cr)	Copper chloride (CuCl)	745	Cl ₁ Pb ₁ (g)	Phosphorus chloride (PCl)	800
Cl ₁ Cu ₁ (l)	Copper chloride (CuCl)	746	Cl ₁ Pb ₁ ⁺ (g)	Lead chloride (PbCl)	801
Cl ₁ Cu ₁ (cr,l)	Copper chloride (CuCl)	747	Cl ₁ S ₁ (g)	Lead chloride, ion (PbCl ⁺)	802
Cl ₁ Cu ₁ (g)	Copper chloride (CuCl)	748	Cl ₁ S ₁ ^{+(g)}	Sulfur chloride (SCl)	803
Cl ₁ D ₁ (g)	Hydrochloric acid-d (DCl)	749	Cl ₁ S ₂ (g)	Sulfur chloride (S ₂ Cl)	804
Cl ₁ D ₁ O ₁ (g)	Hypochlorous acid-d (DOCl)	750	Cl ₁ Si ₁ (g)	Strontium chloride (SrCl)	805
Cl ₁ F ₁ (g)	Chlorine fluoride (ClF)	751	Cl ₁ Ti ₁ (g)	Chlorosilylidyne (SiCl)	806
Cl ₁ F ₁ L ₂ (g)	Lithium chloride fluoride (Li ₂ ClF)	752	Cl ₁ W ₁ (g)	Titanium chloride (TiCl)	807
Cl ₁ F ₁ Mg ₁ (g)	Magnesium chloride fluoride (MgClF)	753	Cl ₁ Zr ₁ (g)	Tungsten chloride (WCl)	808
Cl ₁ F ₁ O ₂ S ₁ (g)	Sulfuryl chloride fluoride (SO ₂ ClF)	754	Cl ₂ (ref)	Zirconium chloride (ZrCl)	809
Cl ₁ F ₁ O ₃ (g)	Perchloryl fluoride (ClO ₄ F)	755	Cl ₂ Co ₁ (cr)	Chlorine (Cl ₂)	810
Cl ₁ F ₂ O ₁ P ₁ (g)	Phosphoryl chloride fluoride (POClF ₂)	756	Cl ₂ Co ₁ (l)	Cobalt chloride (CoCl ₂)	811
Cl ₁ F ₃ (g)	Chlorine fluoride (ClF ₃)	757	Cl ₂ Co ₁ (cr,l)	Cobalt chloride (CoCl ₂)	812
Cl ₁ F ₃ Si ₁ (g)	Chlorotrifluorosilane (SiClF ₃)	758	Cl ₂ Co ₁ (g)	Cobalt chloride (CoCl ₂)	813
Cl ₁ F ₃ (g)	Chlorine fluoride (ClF ₃)	759	Cl ₂ Cs ₂ (g)	Cesium chloride ((CsCl) ₂)	814
Cl ₁ F ₃ S ₁ (g)	Sulfur chloride fluoride (SClF ₃)	760	Cl ₂ Cu ₁ (cr)	Copper chloride (CuCl ₂)	815
Cl ₁ Fe ₁ (g)	Iron chloride (FeCl)	761	Cl ₂ F ₁ O ₁ P ₁ (g)	Phosphoryl chloride fluoride (POCl ₂ F)	816
Cl ₁ H ₁ (g)	Hydrogen chloride (HCl)	762	Cl ₂ Fe ₁ (cr)	Iron chloride (FeCl ₂)	817
Cl ₁ H ₁ O ₁ (g)	Hypochlorous acid (HOCl)	763	Cl ₂ Fe ₁ (l)	Iron chloride (FeCl ₂)	818
Cl ₁ H ₁ Si ₁ (g)	Chlorosilane (SiH ₂ Cl)	764	Cl ₂ Fe ₁ (cr,l)	Iron chloride (FeCl ₂)	819
Cl ₁ H ₄ N ₁ (cr)	Ammonium chloride (NH ₄ Cl)	765	Cl ₂ Fe ₁ (g)	Iron chloride (FeCl ₂)	820
Cl ₁ H ₄ N ₁ O ₄ (cr)	Ammonium perchlorate (NH ₄ ClO ₄)	766	Cl ₂ H ₂ Si ₁ (g)	Dichlorosilane (SiH ₂ Cl ₂)	821
Cl ₁ Hg ₁ (g)	Mercury chloride (HgCl)	767	Cl ₂ Hg ₁ (cr)	Mercury chloride (HgCl ₂)	822
Cl ₁ I ₁ (cr)	Iodine chloride (ICl)	768	Cl ₂ Hg ₁ (l)	Mercury chloride (HgCl ₂)	823
Cl ₁ I ₁ (l)	Iodine chloride (ICl)	769	Cl ₂ Hg ₁ (cr,l)	Mercury chloride (HgCl ₂)	824
Cl ₁ I ₁ (cr,l)	Iodine chloride (ICl)	770	Cl ₂ Hg ₁ (g)	Mercury chloride (HgCl ₂)	825
Cl ₁ I ₁ (g)	Iodine chloride (ICl)	771	Cl ₂ Hg ₂ (cr)	Mercury chloride (Hg ₂ Cl ₂)	826
Cl ₁ K ₁ (cr)	Potassium chloride (KCl)	772	Cl ₂ K ₂ (g)	Potassium chloride ((KCl) ₂)	827
Cl ₁ K ₁ (l)	Potassium chloride (KCl)	773	Cl ₂ Li ₂ (g)	Lithium chloride ((LiCl) ₂)	828
Cl ₁ K ₁ (cr,l)	Potassium chloride (KCl)	774	Cl ₂ Mg ₁ (cr)	Magnesium chloride (MgCl ₂)	829
Cl ₁ K ₁ (g)	Potassium chloride (KCl)	775	Cl ₂ Mg ₁ (l)	Magnesium chloride (MgCl ₂)	830
Cl ₁ K ₁ O ₄ (cr)	Potassium perchlorate (KClO ₄)	776	Cl ₂ Mg ₁ (cr,l)	Magnesium chloride (MgCl ₂)	831
Cl ₁ Li ₁ (cr)	Lithium chloride (LiCl)	777	Cl ₂ Mg ₁ (g)	Magnesium chloride (MgCl ₂)	832
Cl ₁ Li ₁ (l)	Lithium chloride (LiCl)	778	Cl ₂ Mo ₁ O ₂ (g)	Molybdenum chloride oxide (MoO ₂ Cl ₂)	833
Cl ₁ Li ₁ (cr,l)	Lithium chloride (LiCl)	779	Cl ₂ Na ₂ (g)	Sodium chloride ((NaCl) ₂)	834
Cl ₁ Li ₁ (g)	Lithium chloride (LiCl)	780	Cl ₂ Ni ₁ (cr)	Nickel chloride (NiCl ₂)	835
Cl ₁ Li ₁ O ₁ (g)	Lithium hypochlorite (LiOCl)	781	Cl ₂ Ni ₁ (l)	Nickel chloride (NiCl ₂)	836
Cl ₁ Li ₁ O ₄ (cr)	Lithium perchlorate (LiClO ₄)	782	Cl ₂ Ni ₁ (cr,l)	Nickel chloride (NiCl ₂)	837
Cl ₁ Li ₁ O ₄ (l)	Lithium perchlorate (LiClO ₄)	783	Cl ₂ Ni ₁ (g)	Nickel chloride (NiCl ₂)	838
Cl ₁ Li ₁ O ₄ (cr,l)	Lithium perchlorate (LiClO ₄)	784	Cl ₂ O ₁ (g)	Chlorine oxide (ClOCl)	839
Cl ₁ Mg ₁ (g)	Magnesium chloride (MgCl)	785	Cl ₂ O ₁ (g)	Chlorosyl Chloride (ClClO)	840
Cl ₁ Mg ₁ ⁺ (g)	Magnesium chloride, ion (MgCl ⁺)	786	Cl ₂ O ₁ Ti ₁ (g)	Titanium chloride oxide (TiOCl ₂)	841
Cl ₁ Ni ₁ O ₁ (g)	Nitrosyl chloride (ONCl)	787	Cl ₂ O ₂ (g)	Chlorine oxide (ClO ₂ Cl)	842
Cl ₁ Ni ₁ O ₂ (g)	Nitryl chloride (NO ₂ Cl)	788	Cl ₂ O ₂ (g)	Chlorine oxide (ClO ₂ Cl)	843
Cl ₁ Na ₁ (cr)	Sodium chloride (NaCl)	789	Cl ₂ O ₂ (g)	Chloryl Chloride (ClOClO)	844
					845

Formula	Table Title	Page	Formula	Table Title	Page
Cl ₂ O ₂ (g)	Chlorine chlorite (ClClO ₂)	846	Cl ₄ Si ₁ (g)	Tetrachlorosilane (SiCl ₄)	902
Cl ₂ O ₂ S ₁ (g)	Sulfuryl chloride (SO ₂ Cl ₂)	847	Cl ₄ Ti ₁ (cr)	Titanium chloride (TiCl ₄)	903
Cl ₂ O ₂ W ₁ (cr)	Tungsten chloride oxide (WO ₂ Cl ₂)	848	Cl ₄ Ti ₁ (l)	Titanium chloride (TiCl ₄)	904
Cl ₂ O ₂ W ₁ (g)	Tungsten chloride oxide (WO ₂ Cl ₂)	849	Cl ₄ Ti ₁ (cr,l)	Titanium chloride (TiCl ₄)	905
Cl ₂ Pb ₁ (cr)	Lead chloride (PbCl ₂)	850	Cl ₄ Ti ₁ (g)	Titanium chloride (TiCl ₄)	906
Cl ₂ Pb ₁ (l)	Lead chloride (PbCl ₂)	851	Cl ₄ W ₁ (cr)	Tungsten chloride (WCl ₄)	907
Cl ₂ Pb ₁ (cr,l)	Lead chloride (PbCl ₂)	852	Cl ₄ W ₁ (g)	Tungsten chloride (WCl ₄)	908
Cl ₂ Pb ₁ (g)	Lead chloride (PbCl ₂)	853	Cl ₄ Zr ₁ (cr)	Zirconium chloride (ZrCl ₄)	909
Cl ₂ Pb ₁ ⁺ (g)	Lead chloride, ion (PbCl ₂ ⁺)	854	Cl ₄ Zr ₁ (g)	Zirconium chloride (ZrCl ₄)	910
Cl ₂ S ₁ (l)	Sulfur chloride (SCl ₂)	855	Cl ₅ Mo ₁ (cr)	Molybdenum chloride (MoCl ₅)	911
Cl ₂ S ₁ (g)	Sulfur chloride (SCl ₂)	856	Cl ₅ Mo ₁ (l)	Molybdenum chloride (MoCl ₅)	912
Cl ₂ S ₁ ⁺ (g)	Sulfur chloride, ion (SCl ₂ ⁺)	857	Cl ₅ Mo ₁ (cr,l)	Molybdenum chloride (MoCl ₅)	913
Cl ₂ S ₂ (l)	Sulfur chloride (CISSCl)	858	Cl ₅ Mo ₁ (g)	Molybdenum chloride (MoCl ₅)	914
Cl ₂ S ₂ (g)	Sulfur chloride (CISSCl)	859	Cl ₅ Nb ₁ (cr)	Niobium chloride (NbCl ₅)	915
Cl ₂ Si ₁ (g)	Dichlorosilylene (SiCl ₂)	860	Cl ₅ Nb ₁ (l)	Niobium chloride (NbCl ₅)	916
Cl ₂ Sr ₁ (cr)	Strontium chloride (SrCl ₂)	861	Cl ₅ Nb ₁ (cr,l)	Niobium chloride (NbCl ₅)	917
Cl ₂ Sr ₁ (l)	Strontium chloride (SrCl ₂)	862	Cl ₅ Nb ₁ (g)	Niobium chloride (NbCl ₅)	918
Cl ₂ Sr ₁ (cr,l)	Strontium chloride (SrCl ₂)	863	Cl ₅ Pi ₁ (g)	Phosphorus chloride (PCl ₅)	919
Cl ₂ Sr ₁ (g)	Strontium chloride (SrCl ₂)	864	Cl ₅ Ta ₁ (cr)	Tantalum chloride (TaCl ₅)	920
Cl ₂ Ti ₁ (cr)	Titanium chloride (TiCl ₂)	865	Cl ₅ Ta ₁ (l)	Tantalum chloride (TaCl ₅)	921
Cl ₂ Ti ₁ (g)	Titanium chloride (TiCl ₂)	866	Cl ₅ Ta ₁ (cr,l)	Tantalum chloride (TaCl ₅)	922
Cl ₂ W ₁ (cr)	Tungsten chloride (WCl ₂)	867	Cl ₅ Ta ₁ (g)	Tantalum chloride (TaCl ₅)	923
Cl ₂ W ₁ (g)	Tungsten chloride (WCl ₂)	868	Cl ₅ W ₁ (cr)	Tungsten chloride (WCl ₅)	924
Cl ₂ Zr ₁ (cr)	Zirconium chloride (ZrCl ₂)	869	Cl ₅ W ₁ (l)	Tungsten chloride (WCl ₅)	925
Cl ₂ Zr ₁ (l)	Zirconium chloride (ZrCl ₂)	870	Cl ₅ W ₁ (cr,l)	Tungsten chloride (WCl ₅)	926
Cl ₂ Zr ₁ (cr,l)	Zirconium chloride (ZrCl ₂)	871	Cl ₅ W ₁ (g)	Tungsten chloride (WCl ₅)	927
Cl ₂ Zr ₁ (g)	Zirconium chloride (ZrCl ₂)	872	Cl ₆ Fe ₁ (g)	Iron chloride ((FeCl ₃) ₂)	928
Cl ₃ Co ₁ (g)	Cobalt chloride (CoCl ₃)	873	Cl ₆ Mo ₁ (cr)	Molybdenum chloride (MoCl ₆)	929
Cl ₃ Cu ₁ (g)	Copper chloride ((CuCl) ₃)	874	Cl ₆ Mo ₁ (g)	Molybdenum chloride (MoCl ₆)	930
Cl ₃ F ₁ Si ₁ (g)	Trichlorofluorosilane (SiCl ₃ F)	875	Cl ₆ W ₁ (cr)	Tungsten chloride, alpha (WCl ₆)	931
Cl ₃ Fe ₁ (cr)	Iron chloride (FeCl ₃)	876	Cl ₆ W ₁ (cr)	Tungsten chloride, beta (WCl ₆)	932
Cl ₃ Fe ₁ (l)	Iron chloride (FeCl ₃)	877	Cl ₆ W ₁ (l)	Tungsten chloride (WCl ₆)	933
Cl ₃ Fe ₁ (cr,l)	Iron chloride (FeCl ₃)	878	Cl ₆ W ₁ (cr,l)	Tungsten chloride (WCl ₆)	934
Cl ₃ Fe ₁ (g)	Iron chloride (FeCl ₃)	879	Cl ₆ W ₁ (g)	Tungsten chloride (WCl ₆)	935
Cl ₃ H ₁ Si ₁ (g)	Trichlorosilane (SiHCl ₃)	880	Cl ₁₀ W ₂ (g)	Tungsten chloride ((WCl ₃) ₂)	936
Cl ₃ Li ₃ (g)	Lithium chloride ((LiCl) ₃)	881			
Cl ₃ O ₁ P ₁ (g)	Phosphoryl chloride (OPCl ₃)	882			
Cl ₃ P ₁ (g)	Phosphorus chloride (PCl ₃)	883	Co ₁ (ref)	Cobalt (Co)	943
Cl ₃ P ₁ S ₁ (g)	Thiophosphoryl chloride (SPCl ₃)	884	Co ₁ (cr)	Cobalt (Co)	944
Cl ₃ Si ₁ (g)	Trichlorosilyl (SiCl ₃)	885	Co ₁ (l)	Cobalt (Co)	945
Cl ₃ Ti ₁ (cr)	Titanium chloride (TiCl ₃)	886	Co ₁ (cr,l)	Cobalt (Co)	946
Cl ₃ Ti ₁ (g)	Titanium chloride (TiCl ₃)	887	Co ₁ (g)	Cobalt (Co)	947
Cl ₃ Zr ₁ (cr)	Zirconium chloride (ZrCl ₃)	888	Co ₁ ^{+(g)}	Cobalt, ion (Co ⁺)	948
Cl ₃ Zr ₁ (g)	Zirconium chloride (ZrCl ₃)	889	Co ₁ ⁻ (g)	Cobalt, ion (Co ⁻)	949
Cl ₄ Co ₂ (g)	Cobalt chloride ((CoCl ₂) ₂)	890	Co ₁ F ₂ (cr)	Cobalt fluoride (CoF ₂)	950
Cl ₄ Fe ₂ (g)	Iron chloride ((FeCl ₂) ₂)	891	Co ₁ F ₂ (l)	Cobalt fluoride (CoF ₂)	951
Cl ₄ Mg ₂ (g)	Magnesium chloride ((MgCl ₂) ₂)	892	Co ₁ F ₂ (cr,l)	Cobalt fluoride (CoF ₂)	952
Cl ₄ Mo ₁ (cr)	Molybdenum chloride (MoCl ₄)	893	Co ₁ F ₂ (g)	Cobalt fluoride (CoF ₂)	953
Cl ₄ Mo ₁ (l)	Molybdenum chloride (MoCl ₄)	894	Co ₁ F ₃ (cr)	Cobalt fluoride (CoF ₃)	954
Cl ₄ Mo ₁ (cr,l)	Molybdenum chloride (MoCl ₄)	895	Co ₁ O ₁ (cr)	Cobalt oxide (CoO)	955
Cl ₄ Mo ₁ (g)	Molybdenum chloride (MoCl ₄)	896	Co ₁ O ₄ Si ₁ (cr)	Cobalt sulfate (CoSO ₄)	956
Cl ₄ O ₁ W ₁ (cr)	Tungsten chloride oxide (OWCl ₄)	897	Co ₁ O ₄ (cr)	Cobalt oxide (Co ₃ O ₄)	957
Cl ₄ O ₁ W ₁ (l)	Tungsten chloride oxide (OWCl ₄)	898			
Cl ₄ O ₁ W ₁ (cr,l)	Tungsten chloride oxide (OWCl ₄)	899	Cr ₁ (ref)	Chromium (Cr)	959
Cl ₄ O ₁ W ₁ (g)	Tungsten chloride oxide (OWCl ₄)	900	Cr ₁ (cr)	Chromium (Cr)	960
Cl ₄ Pb ₁ (g)	Lead chloride (PbCl ₄)	901	Cr ₁ (l)	Chromium (Cr)	961

Formula	Table Title	Page	Formula	Table Title	Page
Cr ₁ (cr,l)	Chromium (Cr)	962	Cu ₁ O ₁ (g)	Copper oxide (CuO)	1020
Cr ₁ (g)	Chromium (Cr)	963	Cu ₁ O ₄ S ₁ (cr)	Copper sulfate (CuSO ₄)	1021
Cr ₁ ^{+(g)}	Chromium, ion (Cr ⁺)	964	Cu ₂ (g)	Copper (Cu ₂)	1022
Cr ₁ ⁻ (g)	Chromium, ion (Cr ⁻)	965	Cu ₂ O ₁ (cr)	Copper oxide (Cu ₂ O)	1023
Cr ₁ N ₁ (cr)	Chromium nitride (CrN)	966	Cu ₂ O ₁ (l)	Copper oxide (Cu ₂ O)	1024
Cr ₁ N ₁ (g)	Chromium nitride (CrN)	967	Cu ₂ O ₁ (cr,l)	Copper oxide (Cu ₂ O)	1025
Cr ₁ O ₁ (g)	Chromium oxide (CrO)	968	Cu ₂ O ₃ S ₁ (cr)	Copper oxide sulfate (CuO·CuSO ₄)	1026
Cr ₁ O ₂ (g)	Chromium oxide (CrO ₂)	969	D ₁ (g)	Deuterium (D)	1029
Cr ₁ O ₃ (g)	Chromium oxide (CrO ₃)	970	D ₁ ⁺ (g)	Deuterium, ion (D ⁺)	1030
Cr ₂ N ₁ (cr)	Chromium nitride (Cr ₂ N)	971	D ₁ ⁻ (g)	Deuterium, ion (D ⁻)	1031
Cr ₂ O ₃ (cr)	Chromium oxide (Cr ₂ O ₃)	972	D ₁ F ₁ (g)	Hydrofluoric acid-d ₁ (DF)	1032
Cr ₂ O ₃ (l)	Chromium oxide (Cr ₂ O ₃)	973	D ₁ H ₁ (g)	Hydrogen-d ₁ (HD)	1033
Cr ₂ O ₃ (cr,l)	Chromium oxide (Cr ₂ O ₃)	974	D ₁ H ₁ ⁺ (g)	Hydrogen-d ₁ , ion (HD ⁺)	1034
Cs ₁ (ref)	Cesium (Cs)	977	D ₁ H ₁ ⁻ (g)	Hydrogen-d ₁ , ion (HD ⁻)	1035
Cs ₁ (cr)	Cesium (Cs)	978	D ₁ H ₁ O ₁ (g)	Water-d ₁ (HDO)	1036
Cs ₁ (l)	Cesium (Cs)	979	D ₁ N ₁ (g)	Imidogen-d ₁ (ND)	1037
Cs ₁ (cr,l)	Cesium (Cs)	980	D ₁ O ₁ (g)	Hydroxyl-d ₁ (OD)	1038
Cs ₁ (g)	Cesium (Cs)	981	D ₁ S ₁ (g)	Mercapto-d ₁ (SD)	1039
Cs ₁ ⁺ (g)	Cesium, ion (Cs ⁺)	982	D ₂ (ref)	Deuterium (D ₂)	1040
Cs ₁ ⁻ (g)	Cesium, ion (Cs ⁻)	983	D ₂ ² (g)	Deuterium, ion (D ₂ ⁺)	1041
Cs ₁ F ₁ (cr)	Cesium fluoride (CsF)	984	D ₂ ⁻ (g)	Deuterium, ion (D ₂ ⁻)	1042
Cs ₁ F ₁ (l)	Cesium fluoride (CsF)	985	D ₂ N ₁ (g)	Amidogen-d ₂ (ND ₂)	1043
Cs ₁ F ₁ (cr,l)	Cesium fluoride (CsF)	986	D ₂ N ₂ (g)	Diazene-d ₂ , cis (DNND)	1044
Cs ₁ F ₁ (g)	Cesium fluoride (CsF)	987	D ₂ O ₁ (g)	Water-d ₂ (D ₂ O)	1045
Cs ₁ H ₁ O ₁ (cr)	Cesium hydroxide (CsOH)	988	D ₂ S ₁ (g)	Hydrogen sulfide-d ₂ (D ₂ S)	1046
Cs ₁ H ₁ O ₁ (l)	Cesium hydroxide (CsOH)	989	D ₃ N ₁ (g)	Ammonia-d ₃ (ND ₃)	1047
Cs ₁ H ₁ O ₁ (cr,l)	Cesium hydroxide (CsOH)	990	e ⁻ (ref)	Electron gas (e ⁻)	1049
Cs ₁ H ₁ O ₁ (g)	Cesium hydroxide (CsOH)	991	F ₁ (g)	Fluorine (F)	1051
Cs ₁ H ₁ O ₁ ⁺ (g)	Cesium hydroxide, ion (CsOH ⁺)	992	F ₁ ⁺ (g)	Fluorine, ion (F ⁺)	1052
Cs ₁ O ₁ (g)	Cesium oxide (CsO)	993	F ₁ ⁻ (g)	Fluorine, ion (F ⁻)	1053
Cs ₂ (g)	Cesium (Cs ₂)	994	F ₁ Fe ₁ (g)	Iron fluoride (FeF)	1054
Cs ₂ F ₂ (g)	Cesium fluoride ((CsF) ₂)	995	F ₁ H ₁ (g)	Hydrogen fluoride (HF)	1055
Cs ₂ H ₂ O ₂ (g)	Cesium hydroxide ((CsOH) ₂)	996	F ₁ H ₁ O ₁ (g)	Hypofluorous acid (HOF)	1056
Cs ₂ O ₁ (g)	Cesium oxide (Cs ₂ O)	997	F ₁ H ₁ O ₁ S ₁ (g)	Fluorosulfuric acid (HSO ₃ F)	1057
Cs ₂ O ₄ S ₁ (cr)	Cesium sulfate, I (Cs ₂ SO ₄)	998	F ₁ H ₁ Si ₁ (g)	Fluorosilane (SiH ₃ F)	1058
Cs ₂ O ₄ S ₁ (cr)	Cesium sulfate, II (Cs ₂ SO ₄)	999	F ₁ H ₁ G ₁ (g)	Mercury fluoride (HgF)	1059
Cs ₂ O ₄ S ₁ (l)	Cesium sulfate (Cs ₂ SO ₄)	1000	F ₁ I ₁ (g)	Iodine fluoride (IF)	1060
Cs ₂ O ₄ S ₁ (cr,l)	Cesium sulfate (Cs ₂ SO ₄)	1001	F ₁ K ₁ (cr)	Potassium fluoride (KF)	1061
Cs ₂ O ₄ S ₁ (g)	Cesium sulfate (Cs ₂ SO ₄)	1002	F ₁ K ₁ (l)	Potassium fluoride (KF)	1062
Cu ₁ (ref)	Copper (Cu)	1005	F ₁ K ₁ (cr,l)	Potassium fluoride (KF)	1063
Cu ₁ (cr)	Copper (Cu)	1006	F ₁ K ₁ (g)	Potassium fluoride (KF)	1064
Cu ₁ (l)	Copper (Cu)	1007	F ₁ Li ₁ (cr)	Lithium fluoride (LiF)	1065
Cu ₁ (cr,l)	Copper (Cu)	1008	F ₁ Li ₁ (l)	Lithium fluoride (LiF)	1066
Cu ₁ (g)	Copper (Cu)	1009	F ₁ Li ₁ (cr,l)	Lithium fluoride (LiF)	1067
Cu ₁ ^{+(g)}	Copper, ion (Cu ⁺)	1010	F ₁ Li ₁ (g)	Lithium fluoride (LiF)	1068
Cu ₁ ⁻ (g)	Copper, ion (Cu ⁻)	1011	F ₁ Li ₁ O ₁ (g)	Lithium hypofluorite (LiOF)	1069
Cu ₁ F ₁ (cr)	Copper fluoride (CuF)	1012	F ₁ Mg ₁ (g)	Magnesium fluoride (MgF)	1070
Cu ₁ F ₁ (g)	Copper fluoride (CuF)	1013	F ₁ Mg ₁ ⁺ (g)	Magnesium fluoride, ion (MgF ⁺)	1071
Cu ₁ F ₂ (cr)	Copper fluoride (CuF ₂)	1014	F ₁ Mo ₁ (g)	Molybdenum fluoride (MoF)	1072
Cu ₁ F ₂ (l)	Copper fluoride (CuF ₂)	1015	F ₁ N ₁ (g)	Fluoroimidogen (NF)	1073
Cu ₁ F ₂ (cr,l)	Copper fluoride (CuF ₂)	1016	F ₁ N ₁ O ₁ (g)	Nitrosyl fluoride (ONF)	1074
Cu ₁ F ₂ (g)	Copper fluoride (CuF ₂)	1017	F ₁ N ₁ O ₂ (g)	Nitryl fluoride (NO ₂ F)	1075
Cu ₁ H ₂ O ₂ (cr)	Copper hydroxide (Cu(OH) ₂)	1018	F ₁ N ₁ O ₃ (g)	Fluorine nitrate (FONO ₂)	1076
Cu ₁ O ₁ (cr)	Copper oxide (CuO)	1019			

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F ₁ Na ₁ (cr)	Sodium fluoride (NaF)	1077	F ₂ O ₁ (g)	Oxygen fluoride (FOOF)	1133
F ₁ Na ₁ (l)	Sodium fluoride (NaF)	1078	F ₂ O ₂ S ₁ (g)	Sulfuryl fluoride (SO ₂ F ₂)	1134
F ₁ Na ₁ (cr,l)	Sodium fluoride (NaF)	1079	F ₂ P ₁ (g)	Phosphorus fluoride (PF ₃)	1135
F ₁ Na ₁ (g)	Sodium fluoride (NaF)	1080	F ₂ P ₁ ⁺ (g)	Phosphorus fluoride, ion (PF ₂ ⁺)	1136
F ₁ O ₁ (g)	Oxygen fluoride (OF)	1081	F ₂ P ₁ ⁻ (g)	Phosphorus fluoride, ion (PF ₂ ⁻)	1137
F ₁ O ₁ Ti ₁ (g)	Titanium fluoride oxide (OTiF)	1082	F ₂ Pb ₁ (cr)	Lead fluoride, alpha (PbF ₂)	1138
F ₁ O ₂ (g)	Oxygen fluoride (OFO)	1083	F ₂ Pb ₁ (cr)	Lead fluoride, beta (PbF ₂)	1139
F ₁ O ₂ (g)	Oxygen fluoride (FOO)	1084	F ₂ Pb ₁ (l)	Lead fluoride (PbF ₂)	1140
F ₁ P ₁ (g)	Phosphorus fluoride (PF)	1085	F ₂ Pb ₁ (cr,l)	Lead fluoride (PbF ₂)	1141
F ₁ P ₁ ⁺ (g)	Phosphorus fluoride, ion (PF ⁺)	1086	F ₂ Pb ₁ (g)	Lead fluoride (PbF ₂)	1142
F ₁ P ₁ ⁻ (g)	Phosphorus fluoride, ion (PF ⁻)	1087	F ₂ S ₁ (g)	Sulfur fluoride (SF ₂)	1143
F ₁ P ₁ S ₁ (g)	Thiophosphoryl fluoride (PSF)	1088	F ₂ S ₁ ⁺ (g)	Sulfur fluoride, ion (SF ₂ ⁺)	1144
F ₁ Pb ₁ (g)	Lead fluoride (PbF)	1089	F ₂ S ₁ ⁻ (g)	Sulfur fluoride, ion (SF ₂ ⁻)	1145
F ₁ S ₁ (g)	Sulfur fluoride (SF)	1090	F ₂ S ₂ (g)	Difluorodisulfane (FSSF)	1146
F ₁ S ₁ ⁺ (g)	Sulfur fluoride, ion (SF ⁺)	1091	F ₂ S ₂ (g)	Thiothionyl fluoride (SSF ₂)	1147
F ₁ S ₁ ⁻ (g)	Sulfur fluoride, ion (SF ⁻)	1092	F ₂ Si ₁ (g)	Difluorosilylene (SiF ₂)	1148
F ₁ Si ₁ (g)	Fluorosilylydine (SiF)	1093	F ₂ Si ₁ (cr)	Strontium fluoride (SrF ₂)	1149
F ₁ Sr ₁ (g)	Strontium fluoride (SrF)	1094	F ₂ Si ₁ (l)	Strontium fluoride (SrF ₂)	1150
F ₁ Sr ₁ ⁺ (g)	Strontium fluoride, ion (SrF ⁺)	1095	F ₂ Si ₁ (cr,l)	Strontium fluoride (SrF ₂)	1151
F ₁ Ti ₁ (g)	Titanium fluoride (TiF)	1096	F ₂ Si ₁ (g)	Strontium fluoride (SrF ₂)	1152
F ₁ W ₁ (g)	Tungsten fluoride (WF)	1097	F ₂ Ti ₁ (g)	Titanium fluoride (TiF ₂)	1153
F ₁ Zr ₁ (g)	Zirconium fluoride (ZrF)	1098	F ₂ Zr ₁ (cr)	Zirconium fluoride (ZrF ₂)	1154
F ₂ (ref)	Fluorine (F ₂)	1099	F ₂ Zr ₁ (l)	Zirconium fluoride (ZrF ₂)	1155
F ₂ Fe ₁ (cr)	Iron fluoride (FeF ₂)	1100	F ₂ Zr ₁ (cr,l)	Zirconium fluoride (ZrF ₂)	1156
F ₂ Fe ₁ (l)	Iron fluoride (FeF ₂)	1101	F ₂ Zr ₁ (g)	Zirconium fluoride (ZrF ₂)	1157
F ₂ Fe ₁ (cr,l)	Iron fluoride (FeF ₂)	1102	F ₃ Fe ₁ (cr)	Iron fluoride (FeF ₃)	1158
F ₂ Fe ₁ (g)	Iron fluoride (FeF ₂)	1103	F ₃ Fe ₁ (g)	Iron fluoride (FeF ₃)	1159
F ₂ H ₁ K ₁ (cr)	Potassium fluoride (K(HF ₂))	1104	F ₃ H ₁ Si ₁ (g)	Trifluorosilane (SiHF ₃)	1160
F ₂ H ₁ K ₁ (l)	Potassium fluoride (K(HF ₂))	1105	F ₃ H ₃ (g)	Hydrogen fluoride (H ₃ F ₃)	1161
F ₂ H ₁ K ₁ (cr,l)	Potassium fluoride (K(HF ₂))	1106	F ₃ Li ₁ (g)	Lithium fluoride ((LiF) ₃)	1162
F ₂ H ₂ (g)	Hydrogen fluoride ((HF) ₂)	1107	F ₃ Mo ₁ (g)	Molybdenum fluoride (MoF ₃)	1163
F ₂ H ₂ Si ₁ (g)	Disfluorosilane (SiH ₂ F ₂)	1108	F ₃ N ₁ (g)	Nitrogen fluoride (NF ₃)	1164
F ₂ Hg ₁ (cr)	Mercury fluoride (HgF ₂)	1109	F ₃ N ₁ O ₁ (g)	Nitrogen fluoride oxide (NF ₂ O)	1165
F ₂ Hg ₁ (l)	Mercury fluoride (HgF ₂)	1110	F ₃ O ₁ P ₁ (g)	Phosphoryl fluoride (POF ₃)	1166
F ₂ Hg ₁ (cr,l)	Mercury fluoride (HgF ₂)	1111	F ₃ P ₁ (g)	Phosphorus fluoride (PF ₃)	1167
F ₂ Hg ₁ (g)	Mercury fluoride (HgF ₂)	1112	F ₃ P ₁ Si ₁ (g)	Thiophosphoryl fluoride (PSF ₃)	1168
F ₂ Hg ₂ (cr)	Mercury fluoride (Hg ₂ F ₂)	1113	F ₃ S ₁ (g)	Sulfur fluoride (SF ₂)	1169
F ₂ K ₁ ⁻ (g)	Potassium fluoride, ion (KF ₂ ⁻)	1114	F ₃ S ₁ ⁺ (g)	Sulfur fluoride, ion (SF ₂ ⁺)	1170
F ₂ K ₂ (g)	Potassium fluoride ((KF) ₂)	1115	F ₃ S ₂ ⁻ (g)	Sulfur fluoride, ion (SF ₃ ⁻)	1171
F ₂ Li ₁ ⁻ (g)	Lithium fluoride, ion (LiF ₂ ⁻)	1116	F ₃ Si ₁ (g)	Trifluorosilyl (SiF ₃)	1172
F ₂ Li ₂ (g)	Lithium fluoride ((LiF) ₂)	1117	F ₃ Ti ₁ (cr)	Titanium fluoride (TiF ₃)	1173
F ₂ Mg ₁ (cr)	Magnesium fluoride (MgF ₂)	1118	F ₃ Ti ₁ (g)	Titanium fluoride (TiF ₃)	1174
F ₂ Mg ₁ (l)	Magnesium fluoride (MgF ₂)	1119	F ₃ Zr ₁ (cr)	Zirconium fluoride (ZrF ₃)	1175
F ₂ Mg ₁ (cr,l)	Magnesium fluoride (MgF ₂)	1120	F ₃ Zr ₁ (g)	Zirconium fluoride (ZrF ₃)	1176
F ₂ Mg ₁ (g)	Magnesium fluoride (MgF ₂)	1121	F ₄ H ₄ (g)	Hydrogen fluoride (H ₄ F ₄)	1177
F ₂ Mg ₁ ⁺ (g)	Magnesium fluoride, ion (MgF ₂ ⁺)	1122	F ₄ Mg ₂ (g)	Magnesium fluoride ((MgF ₂) ₂)	1178
F ₂ Mo ₁ (g)	Molybdenum fluoride (MoF ₂)	1123	F ₄ Mo ₁ (g)	Molybdenum fluoride (MoF ₄)	1179
F ₂ Ni ₁ (g)	Disfluoroamidogen (NF ₂)	1124	F ₄ Mo ₁ O ₁ (g)	Molybdenum fluoride oxide (MoF ₄ O)	1180
F ₂ N ₂ (g)	Nitrogen fluoride, cis (FNNF)	1125	F ₄ N ₂ (g)	Tetrafluorohydrazine (N ₂ F ₄)	1181
F ₂ N ₂ (g)	Nitrogen fluoride, trans (FNNF)	1126	F ₄ O ₁ W ₁ (cr)	Tungsten fluoride oxide (WF ₄ O)	1182
F ₂ Na ₁ ⁻ (g)	Sodium fluoride, ion (NaF ₂ ⁻)	1127	F ₄ O ₁ W ₁ (l)	Tungsten fluoride oxide (WF ₄ O)	1183
F ₂ Na ₂ (g)	Sodium fluoride ((NaF) ₂)	1128	F ₄ O ₁ W ₁ (cr,l)	Tungsten fluoride oxide (WF ₄ O)	1184
F ₂ O ₁ (g)	Oxygen fluoride (FOF)	1129	F ₄ O ₁ W ₁ (g)	Tungsten fluoride oxide (WF ₄ O)	1185
F ₂ O ₁ S ₁ (g)	Thionyl fluoride (OSF ₂)	1130	F ₄ Pb ₁ (g)	Lead fluoride (PbF ₄)	1186
F ₂ O ₁ Si ₁ (g)	Disfluoroosilane (OSiF ₂)	1131	F ₄ S ₁ (g)	Sulfur fluoride (SF ₄)	1187
F ₂ O ₁ Ti ₁ (g)	Titanium fluoride oxide (OTiF ₂)	1132	F ₄ S ₁ ⁺ (g)	Sulfur fluoride, ion (SF ₄ ⁺)	1188

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F ₄ Si ₁ (g)	Sulfur fluoride, ion (SF ₄)	1189	Fe ₂ O ₁₂ S ₃ (cr)	Iron sulfate (Fe ₂ (SO ₄) ₃)	1249
F ₄ Si ₁ (g)	Tetrafluorosilane (SiF ₄)	1190	Fe ₃ O ₄ (cr)	Iron oxide, magnetite (Fe ₃ O ₄)	1250
F ₄ Ti ₁ (cr)	Titanium fluoride (TiF ₄)	1191	Ga ₁ (ref)	Gallium (Ga)	1253
F ₄ Ti ₁ (g)	Titanium fluoride (TiF ₄)	1192	Ga ₁ (cr)	Gallium (Ga)	1254
F ₄ Zr ₁ (cr)	Zirconium fluoride (ZrF ₄)	1193	Ga ₁ (l)	Gallium (Ga)	1255
F ₄ Zr ₁ (g)	Zirconium fluoride (ZrF ₄)	1194	Ga ₁ (cr,l)	Gallium (Ga)	1256
F ₅ H ₅ (g)	Hydrogen fluoride (H ₅ F ₅)	1195	Ga ₁ (g)	Gallium (Ga)	1257
F ₅ I ₁ (g)	Iodine fluoride (IF ₅)	1196	Ga ₁ ⁺ (g)	Gallium, ion (Ga ⁺)	1258
F ₅ Mo ₁ (g)	Molybdenum fluoride (MoF ₅)	1197	Ga ₁ ⁻ (g)	Gallium, ion (Ga ⁻)	1259
F ₅ P ₁ (g)	Phosphorus fluoride (PF ₅)	1198	H ₁ (g)	Hydrogen (H)	1261
F ₅ S ₁ (g)	Sulfur fluoride (SF ₅)	1199	H ₁ ⁺ (g)	Hydrogen, ion (H ⁺)	1262
F ₅ S ₁ ⁺ (g)	Sulfur fluoride, ion (SF ₅ ⁺)	1200	H ₁ ⁻ (g)	Hydrogen, ion (H ⁻)	1263
F ₆ H ₆ (g)	Hydrogen fluoride (H ₆ F ₆)	1202	H ₁ Hg ₁ (g)	Mercury hydride (HgH)	1264
F ₆ Mo ₁ (l)	Molybdenum fluoride (MoF ₆)	1203	H ₁ I ₁ (g)	Hydrogen iodide (HI)	1265
F ₆ Mo ₁ (g)	Molybdenum fluoride (MoF ₆)	1204	H ₁ I ₁ Si ₁ (g)	Triiodosilane (SiHI ₃)	1266
F ₆ S ₁ (g)	Sulfur fluoride (SF ₆)	1205	H ₁ K ₁ (cr)	Potassium hydride (KH)	1267
F ₆ S ₁ ⁺ (g)	Sulfur fluoride, ion (SF ₆ ⁺)	1206	H ₁ K ₁ (g)	Potassium hydride (KH)	1268
F ₆ W ₁ (l)	Tungsten fluoride (WF ₆)	1207	H ₁ K ₁ O ₁ (cr)	Potassium hydroxide (KOH)	1269
F ₆ W ₁ (g)	Tungsten fluoride (WF ₆)	1208	H ₁ K ₁ O ₁ (l)	Potassium hydroxide (KOH)	1270
F ₇ H ₇ (g)	Hydrogen fluoride (H ₇ F ₇)	1209	H ₁ K ₁ O ₁ (cr,l)	Potassium hydroxide (KOH)	1271
F ₇ I ₁ (g)	Iodine fluoride (IF ₇)	1210	H ₁ K ₁ O ₁ (cr,l)	Potassium hydroxide (KOH)	1272
F ₁₀ Mo ₂ (g)	Molybdenum fluoride ((MoF ₅) ₂)	1211	H ₁ K ₁ O ₁ (g)	Potassium hydroxide (KOH)	1273
F ₁₀ S ₂ (g)	Sulfur fluoride (S ₂ F ₁₀)	1212	H ₁ K ₁ O ₁ ⁺ (g)	Potassium hydroxide, ion (KOH ⁺)	1274
F ₁₃ Mo ₃ (g)	Molybdenum fluoride ((MoF ₅) ₃)	1213	H ₁ Li ₁ (cr)	Lithium hydride (LiH)	1275
			H ₁ Li ₁ (l)	Lithium hydride (LiH)	1275
Fe _{0.947} O ₁ (cr)	Iron oxide, wüstite (Fe _{0.947} O)	1219	H ₁ Li ₁ (cr,l)	Lithium hydride (LiH)	1276
Fe _{0.877} S ₁ (cr)	Iron sulfide, pyrrhotite (Fe _{0.877} S)	1220	H ₁ Li ₁ (g)	Lithium hydride (LiH)	1277
Fe ₁ (ref)	Iron (Fe)	1221	H ₁ Li ₁ O ₁ (cr)	Lithium hydroxide (LiOH)	1278
Fe ₁ (cr)	Iron, alpha-delta (Fe)	1222	H ₁ Li ₁ O ₁ (l)	Lithium hydroxide (LiOH)	1279
Fe ₁ (cr)	Iron, gamma (Fe)	1223	H ₁ Li ₁ O ₁ (cr,l)	Lithium hydroxide (LiOH)	1280
Fe ₁ (l)	Iron (Fe)	1224	H ₁ Li ₁ O ₁ (g)	Lithium hydroxide (LiOH)	1281
Fe ₁ (cr,l)	Iron (Fe)	1225	H ₁ Li ₁ O ₁ ⁺ (g)	Lithium hydroxide, ion (LiOH ⁺)	1282
Fe ₁ (g)	Iron (Fe)	1226	H ₁ Mg ₁ (g)	Magnesium hydride (MgH)	1283
Fe ₁ ⁺ (g)	Iron, ion (Fe ⁺)	1227	H ₁ Mg ₁ O ₁ (g)	Magnesium hydroxide (MgOH)	1284
Fe ₁ ⁻ (g)	Iron, ion (Fe ⁻)	1228	H ₁ Mg ₁ O ₁ ⁺ (g)	Magnesium hydroxide, ion (MgOH ⁺)	1285
Fe ₁ H ₂ O ₂ (cr)	Iron hydroxide (Fe(OH) ₂)	1229	H ₁ N ₁ (g)	Imidogen (NH)	1286
Fe ₁ H ₂ O ₂ (g)	Iron hydroxide (Fe(OH) ₂)	1230	H ₁ N ₁ O ₁ (g)	Nitrosyl hydride (HNO)	1287
Fe ₁ H ₃ O ₁ (cr)	Iron hydroxide (Fe(OH) ₃)	1231	H ₁ N ₁ O ₂ (g)	Nitrous acid, cis (HONO)	1288
Fe ₁ I ₂ (cr)	Iron iodide (FeI ₂)	1232	H ₁ N ₁ O ₂ (g)	Nitrous acid, trans (HONO)	1289
Fe ₁ I ₂ (l)	Iron iodide (FeI ₂)	1233	H ₁ N ₁ O ₂ (g)	Nitric acid (HONO ₂)	1290
Fe ₁ I ₂ (cr,l)	Iron iodide (FeI ₂)	1234	H ₁ Na ₁ (cr)	Sodium hydride (NaH)	1291
Fe ₁ I ₂ (g)	Iron iodide (FeI ₂)	1235	H ₁ Na ₁ (g)	Sodium hydride (NaH)	1292
Fe ₁ O ₁ (cr)	Iron oxide (FeO)	1236	H ₁ Na ₁ O ₁ (cr)	Sodium hydroxide (NaOH)	1293
Fe ₁ O ₁ (l)	Iron oxide (FeO)	1237	H ₁ Na ₁ O ₁ (l)	Sodium hydroxide (NaOH)	1294
Fe ₁ O ₁ (cr,l)	Iron oxide (FeO)	1238	H ₁ Na ₁ O ₁ (cr,l)	Sodium hydroxide (NaOH)	1295
Fe ₁ O ₁ (g)	Iron oxide (FeO)	1239	H ₁ Na ₁ O ₁ (g)	Sodium hydroxide (NaOH)	1296
Fe ₁ O ₄ S ₁ (cr)	Iron sulfate (FeSO ₄)	1240	H ₁ Na ₁ O ₁ ⁺ (g)	Sodium hydroxide, ion (NaOH ⁺)	1297
Fe ₁ S ₁ (cr)	Iron sulfide, troilite (FeS)	1241	H ₁ O ₁ (g)	Hydroxyl (OH)	1298
Fe ₁ S ₁ (l)	Iron sulfide (FeS)	1242	H ₁ O ₁ ⁺ (g)	Hydroxyl, ion (OH ⁺)	1299
Fe ₁ S ₁ (cr,l)	Iron sulfide, troilite (FeS)	1243	H ₁ O ₁ ⁻ (g)	Hydroxyl, ion (OH ⁻)	1300
Fe ₁ S ₁ (g)	Iron sulfide (FeS)	1244	H ₁ O ₁ Sr ₁ (g)	Strontium hydroxide (SrOH)	1301
Fe ₁ S ₂ (cr)	Iron sulfide, marcasite (FeS ₂)	1245	H ₁ O ₁ Sr ₁ ⁺ (g)	Strontium hydroxide, ion (SrOH ⁺)	1302
Fe ₁ S ₂ (cr)	Iron sulfide, pyrite (FeS ₂)	1246	H ₁ O ₂ (g)	Hydroperoxo (HOO)	1303
Fe ₂ I ₄ (g)	Iron iodide ((FeI ₂) ₂)	1247	H ₁ P ₁ (g)	Phosphinidene (PH)	1304
Fe ₂ O ₁ (cr)	Iron oxide, hematite (Fe ₂ O ₃)	1248	H ₁ Pb ₁ (g)	Lead hydride (PbH)	1305

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H ₃ S ₁ (g)	Mercapto (HS)	1306	Hf ₁ (ref)	Hafnium (Hf)	1363
H ₃ Si ₁ (g)	Silylidyne (SiH)	1307	Hf ₁ (cr)	Hafnium, alpha (Hf)	1364
H ₃ Si ₁ ^{+(g)}	Silylidyne, ion (SiH ⁺)	1308	Hf ₁ (cr)	Hafnium, beta (Hf)	1365
H ₁ Zr ₁ (g)	Zirconium hydride (ZrH)	1309	Hf ₁ (l)	Hafnium (Hf)	1366
H ₂ (ref)	Hydrogen (H ₂)	1310	Hf ₁ (cr,l)	Hafnium (Hf)	1367
H ₂ ⁺ (g)	Hydrogen, ion (H ₂ ⁺)	1311	Hf ₁ (g)	Hafnium (Hf)	1368
H ₂ ⁻ (g)	Hydrogen, ion (H ₂ ⁻)	1312	Hf ₁ ⁺ (g)	Hafnium, ion (Hf ⁺)	1369
H ₂ I ₂ Si ₁ (g)	Diiodosilane (SiH ₂ I ₂)	1313	Hf ₁ ⁻ (g)	Hafnium, ion (Hf ⁻)	1370
H ₂ K ₂ O ₂ (g)	Potassium hydroxide ((KOH) ₂)	1314	Hg ₁ (ref)	Mercury (Hg)	1373
H ₂ Li ₂ O ₂ (g)	Lithium hydroxide ((LiOH) ₂)	1315	Hg ₁ (cr,l)	Mercury (Hg)	1374
H ₂ Mg ₁ (cr)	Magnesium hydride (MgH ₂)	1316	Hg ₁ (g)	Mercury (Hg)	1375
H ₂ Mg ₁ O ₂ (cr)	Magnesium hydroxide (Mg(OH) ₂)	1317	Hg ₁ ⁺ (g)	Mercury, ion (Hg ⁺)	1376
H ₂ Mg ₁ O ₂ (g)	Magnesium hydroxide (Mg(OH) ₂)	1318	Hg ₁ I ₁ (g)	Mercury iodide (HgI)	1377
H ₂ Mo ₁ O ₄ (g)	Molybdic acid (O ₂ Mo(OH) ₂)	1319	Hg ₁ I ₁ (cr)	Mercury iodide (HgI ₂)	1378
H ₂ N ₁ (g)	Amidogen (NH ₂)	1320	Hg ₁ I ₁ (l)	Mercury iodide (HgI ₂)	1379
H ₂ N ₂ (g)	Diazene, cis (HNNH)	1321	Hg ₁ I ₁ (cr,l)	Mercury iodide (HgI ₂)	1380
H ₂ Na ₂ O ₂ (g)	Sodium hydroxide ((NaOH) ₂)	1322	Hg ₁ I ₂ (g)	Mercury iodide (HgI ₂)	1381
H ₂ O ₁ (l)	Water (H ₂ O)	1323	Hg ₁ O ₁ (cr)	Mercury oxide (HgO)	1382
H ₂ O ₁ (g)	Water (H ₂ O)	1324	Hg ₁ O ₁ (g)	Mercury oxide (HgO)	1383
H ₂ O ₁ (l,g)	Water, 1 bar (H ₂ O)	1325	Hg ₂ I ₁ (cr)	Mercury iodide (Hg ₂ I ₂)	1384
H ₂ O ₁ (l,g)	Water, 10 bar (H ₂ O)	1326	Hg ₂ I ₁ (l)	Mercury iodide (Hg ₂ I ₂)	1385
H ₂ O ₁ (l,g)	Water, 100 bar (H ₂ O)	1327	Hg ₂ I ₁ (cr,l)	Mercury iodide (Hg ₂ I ₂)	1386
H ₂ O ₁ (fl)	Water, 500 bar (H ₂ O)	1328	I ₁ (g)	Iodine (I)	1387
H ₂ O ₁ (fl)	Water, 5000 bar (H ₂ O)	1329	I ₁ ⁺ (g)	Iodine, ion (I ⁺)	1388
H ₂ O ₂ (g)	Hydrogen peroxide (HOOH)	1330	I ₁ ⁻ (g)	Iodine, ion (I ⁻)	1389
H ₂ O ₂ Sr ₁ (cr)	Strontium hydroxide (Sr(OH) ₂)	1331	I ₁ K ₁ (cr)	Potassium iodide (KI)	1390
H ₂ O ₂ Si ₁ (l)	Strontium hydroxide (Sr(OH) ₂)	1332	I ₁ K ₁ (l)	Potassium iodide (KI)	1391
H ₂ O ₂ Si ₁ (cr,l)	Strontium hydroxide (Sr(OH) ₂)	1333	I ₁ K ₁ (cr,l)	Potassium iodide (KI)	1392
H ₂ O ₂ Si ₁ (g)	Strontium hydroxide (Sr(OH) ₂)	1334	I ₁ K ₁ (g)	Potassium iodide (KI)	1393
H ₂ O ₄ S ₁ (cr,l)	Sulfuric acid (O ₂ S(OH) ₂)	1335	I ₁ Li ₁ (cr)	Lithium iodide (LiI)	1394
H ₂ O ₄ S ₁ (g)	Sulfuric acid (O ₂ S(OH) ₂)	1336	I ₁ Li ₁ (l)	Lithium iodide (LiI)	1395
H ₂ O ₄ W ₁ (cr)	Tungstic acid (O ₂ W(OH) ₂)	1337	I ₁ Li ₁ (cr,l)	Lithium iodide (LiI)	1396
H ₂ O ₄ W ₁ (g)	Tungstic acid (O ₂ W(OH) ₂)	1338	I ₁ Li ₁ (g)	Lithium iodide (LiI)	1397
H ₂ P ₁ (g)	Phosphino (PH ₂)	1339	I ₁ Mg ₁ (g)	Magnesium iodide (MgI)	1398
H ₂ S ₁ (g)	Hydrogen sulfide (H ₂ S)	1340	I ₁ Mo ₁ (g)	Molybdenum iodide (MoI)	1399
H ₂ Ti ₁ (cr)	Titanium hydride (TiH ₂)	1341	I ₁ N ₁ O ₁ (g)	Nitrosyl iodide (ONI)	1400
H ₃ I ₁ Si ₁ (g)	Iodosilane (SiH ₃ I)	1342	I ₁ Na ₁ (cr)	Sodium iodide (NaI)	1401
H ₃ N ₁ (g)	Ammonia (NH ₃)	1343	I ₁ Na ₁ (l)	Sodium iodide (NaI)	1402
H ₃ O ₁ ^{+(g)}	Hydronium, ion (H ₃ O ⁺)	1344	I ₁ Na ₁ (cr,l)	Sodium iodide (NaI)	1403
H ₃ O ₄ P ₁ (cr)	Phosphoric acid (H ₃ PO ₄)	1345	I ₁ O ₁ (g)	Iodine oxide (IO)	1404
H ₃ O ₄ P ₁ (l)	Phosphoric acid (H ₃ PO ₄)	1346	I ₁ O ₂ (g)	Iodine oxide (OIO)	1405
H ₃ O ₄ P ₁ (cr,l)	Phosphoric acid (H ₃ PO ₄)	1347	I ₁ O ₂ (g)	Iodine oxide (IOO)	1406
H ₃ P ₁ (g)	Phosphine (PH ₃)	1348	I ₁ O ₃ (g)	Iodine oxide (IO ₃)	1407
H ₄ I ₁ N ₁ (cr)	Ammonium iodide (NH ₄ I)	1349	I ₁ Pb ₁ (g)	Lead iodide (PbI)	1408
H ₄ N ₂ (l)	Hydrazine (N ₂ H ₄)	1350	I ₁ Si ₁ (g)	Iodosilylidyne (SiI)	1409
H ₄ N ₂ (g)	Hydrazine (N ₂ H ₄)	1351	I ₁ Si ₁ (l)	Strontium iodide (SrI)	1410
H ₄ O ₃ S ₁ (cr,l)	Sulfuric acid, monohydrate (H ₂ SO ₄ ·H ₂ O)	1352	I ₁ Ti ₁ (g)	Titanium iodide (TiI)	1411
H ₄ Si ₁ (g)	Silane (SiH ₄)	1353	I ₁ Zr ₁ (g)	Zirconium iodide (ZrI)	1412
H ₆ O ₈ S ₁ (cr,l)	Sulfuric acid, dihydrate (H ₂ SO ₄ ·2H ₂ O)	1354	I ₂ (ref)	Iodine (I ₂)	1413
H ₈ O ₇ S ₁ (cr,l)	Sulfuric acid, trihydrate (H ₂ SO ₄ ·3H ₂ O)	1355	I ₂ (cr)	Iodine (I ₂)	1414
H ₁₀ O ₈ S ₁ (cr,l)	Sulfuric acid, tetrahydrate (H ₂ SO ₄ ·4H ₂ O)	1356	I ₂ (l)	Iodine (I ₂)	1415
H ₁₃ O _{10.5} S ₁ (cr,l)	Sulfuric acid, hemihexahydrate (H ₂ SO ₄ ·6.5H ₂ O)	1357	I ₂ (cr,l)	Iodine (I ₂)	1416
He ₁ (ref)	Helium (He)	1361	I ₂ (g)	Iodine (I ₂)	1417
He ₁ ⁺ (g)	Helium, ion (He ⁺)	1362			

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I ₂ K ₂ (g)	Potassium iodide ((KI) ₂)	1418	K ₂ (g)	Potassium (K ₂)	1475
I ₂ Li ₂ (g)	Lithium iodide ((LiI) ₂)	1419	K ₂ O ₁ (cr)	Potassium oxide (K ₂ O)	1476
I ₂ Mg ₁ (cr)	Magnesium iodide (MgI ₂)	1420	K ₂ O ₂ (cr)	Potassium peroxide (K ₂ O ₂)	1477
I ₂ Mg ₁ (l)	Magnesium iodide (MgI ₂)	1421	K ₂ O ₃ Si ₁ (cr)	Potassium silicate (K ₂ SiO ₃)	1478
I ₂ Mg ₁ (cr,l)	Magnesium iodide (MgI ₂)	1422	K ₂ O ₃ Si ₁ (l)	Potassium silicate (K ₂ SiO ₃)	1479
I ₂ Mg ₁ (g)	Magnesium iodide (MgI ₂)	1423	K ₂ O ₃ Si ₁ (cr,l)	Potassium silicate (K ₂ SiO ₃)	1480
I ₂ Mo ₁ (cr)	Molybdenum iodide, alpha (MoI ₂)	1424	K ₂ O ₄ S ₁ (cr)	Potassium sulfate, alpha (K ₂ SO ₄)	1481
I ₂ Mo ₁ (g)	Molybdenum iodide (MoI ₂)	1425	K ₂ O ₄ S ₁ (cr)	Potassium sulfate, beta (K ₂ SO ₄)	1482
I ₂ O ₁ (g)	Iodine oxide (IOI)	1426	K ₂ O ₄ S ₁ (l)	Potassium sulfate (K ₂ SO ₄)	1483
I ₂ O ₁ (g)	Iodine oxide (IIO)	1427	K ₂ O ₄ S ₁ (cr,l)	Potassium sulfate (K ₂ SO ₄)	1484
I ₂ Pb ₁ (cr)	Lead iodide (PbI ₂)	1428	K ₂ O ₄ S ₁ (g)	Potassium sulfate (K ₂ SO ₄)	1485
I ₂ Pb ₁ (l)	Lead iodide (PbI ₂)	1429	K ₂ S ₁ (cr)	Potassium sulfide (K ₂ S)	1486
I ₂ Pb ₁ (cr,l)	Lead iodide (PbI ₂)	1430	K ₂ S ₁ (l)	Potassium sulfide (K ₂ S)	1487
I ₂ Pb ₁ (g)	Lead iodide (PbI ₂)	1431	K ₂ S ₁ (cr,l)	Potassium sulfide (K ₂ S)	1488
I ₂ Si ₁ (g)	Diiodosilylene (SiI ₂)	1432			
I ₂ Sr ₁ (cr)	Strontium iodide (SrI ₂)	1433	Kr ₁ (ref)	Krypton (Kr)	1491
I ₂ Sr ₁ (l)	Strontium iodide (SrI ₂)	1434	Kr ₁ (g)	Krypton, ion (Kr ⁺)	1492
I ₂ Sr ₁ (cr,l)	Strontium iodide (SrI ₂)	1435			
I ₂ Sr ₁ (g)	Strontium iodide (SrI ₂)	1436	Li ₁ (ref)	Lithium (Li)	1493
I ₂ Ti ₁ (cr)	Titanium iodide (TiI ₂)	1437	Li ₁ (cr)	Lithium (Li)	1494
I ₂ Ti ₁ (g)	Titanium iodide (TiI ₂)	1438	Li ₁ (l)	Lithium (Li)	1495
I ₂ Zr ₁ (cr)	Zirconium iodide (ZrI ₂)	1439	Li ₁ (cr,l)	Lithium (Li)	1496
I ₂ Zr ₁ (l)	Zirconium iodide (ZrI ₂)	1440	Li ₁ (g)	Lithium (Li)	1497
I ₂ Zr ₁ (cr,l)	Zirconium iodide (ZrI ₂)	1441	Li ₁ ⁺ (g)	Lithium, ion (Li ⁺)	1498
I ₂ Zr ₁ (g)	Zirconium iodide (ZrI ₂)	1442	Li ₁ ⁻ (g)	Lithium, ion (Li ⁻)	1499
I ₃ Mo ₁ (cr)	Molybdenum iodide (MoI ₃)	1443	Li ₁ N ₁ (g)	Lithium nitride (LiN)	1500
I ₃ Mo ₁ (g)	Molybdenum iodide (MoI ₃)	1444	Li ₁ N ₁ O ₁ (g)	Lithium oxynitride (LiON)	1501
I ₃ Si ₁ (g)	Triiodosilyl (SiI ₃)	1445	Li ₁ Na ₁ O ₁ (g)	Lithium sodium oxide (LiONa)	1502
I ₃ Ti ₁ (cr)	Titanium iodide (TiI ₃)	1446	Li ₁ O ₁ (g)	Lithium oxide (LiO)	1503
I ₃ Ti ₁ (g)	Titanium iodide (TiI ₃)	1447	Li ₁ O ₁ ⁻ (g)	Lithium oxide, ion (LiO ⁻)	1504
I ₂ Zr ₁ (cr)	Zirconium iodide (ZrI ₃)	1448	Li ₂ (g)	Lithium (Li ₂)	1505
I ₂ Zr ₁ (g)	Zirconium iodide (ZrI ₃)	1449	Li ₂ O ₁ (cr)	Lithium oxide (Li ₂ O)	1506
I ₄ Mo ₁ (cr)	Molybdenum iodide (MoI ₄)	1450	Li ₂ O ₁ (l)	Lithium oxide (Li ₂ O)	1507
I ₄ Mo ₁ (g)	Molybdenum iodide (MoI ₄)	1451	Li ₂ O ₁ (cr,l)	Lithium oxide (Li ₂ O)	1508
I ₄ Pb ₁ (g)	Lead iodide (PbI ₄)	1452	Li ₂ O ₁ (g)	Lithium oxide (Li ₂ O)	1509
I ₄ Si ₁ (cr)	Tetraiodosilane (SiI ₄)	1453	Li ₂ O ₂ (cr)	Lithium peroxide (Li ₂ O ₂)	1510
I ₄ Si ₁ (l)	Tetraiodosilane (SiI ₄)	1454	Li ₂ O ₂ (g)	Lithium oxide ((LiO) ₂)	1511
I ₄ Si ₁ (cr,l)	Tetraiodosilane (SiI ₄)	1455	Li ₂ O ₃ Si ₁ (cr)	Lithium silicate (Li ₂ SiO ₃)	1512
I ₄ Si ₁ (g)	Tetraiodosilane (SiI ₄)	1456	Li ₂ O ₃ Si ₁ (l)	Lithium silicate (Li ₂ SiO ₃)	1513
I ₄ Ti ₁ (cr)	Titanium iodide (TiI ₄)	1457	Li ₂ O ₃ Si ₁ (cr,l)	Lithium silicate (Li ₂ SiO ₃)	1514
I ₄ Ti ₁ (l)	Titanium iodide (TiI ₄)	1458	Li ₂ O ₃ Ti ₁ (cr)	Lithium titanium oxide (Li ₂ TiO ₃)	1515
I ₄ Ti ₁ (cr,l)	Titanium iodide (TiI ₄)	1459	Li ₂ O ₃ Ti ₁ (l)	Lithium titanium oxide (Li ₂ TiO ₃)	1516
I ₄ Ti ₁ (g)	Titanium iodide (TiI ₄)	1460	Li ₂ O ₃ Ti ₁ (cr,l)	Lithium titanium oxide (Li ₂ TiO ₃)	1517
I ₂ Zr ₁ (cr)	Zirconium iodide (ZrI ₄)	1461	Li ₂ O ₄ S ₁ (cr)	Lithium sulfate, alpha (Li ₂ SO ₄)	1518
I ₂ Zr ₁ (g)	Zirconium iodide (ZrI ₄)	1462	Li ₂ O ₄ S ₁ (cr)	Lithium sulfate, beta (Li ₂ SO ₄)	1519
		1463	Li ₂ O ₄ S ₁ (l)	Lithium sulfate (Li ₂ SO ₄)	1520
K ₁ (ref)	Potassium (K)	1465	Li ₂ O ₄ S ₁ (cr,l)	Lithium sulfate (Li ₂ SO ₄)	1521
K ₁ (cr)	Potassium (K)	1466	Li ₂ O ₄ S ₁ (g)	Lithium sulfate (Li ₂ SO ₄)	1522
K ₁ (l)	Potassium (K)	1467	Li ₂ O ₃ Si ₂ (cr)	Lithium silicate (Li ₂ Si ₂ O ₅)	1523
K ₁ (cr,l)	Potassium (K)	1468	Li ₂ O ₃ Si ₂ (l)	Lithium silicate (Li ₂ Si ₂ O ₅)	1524
K ₁ (g)	Potassium (K)	1469	Li ₂ O ₃ Si ₂ (cr,l)	Lithium silicate (Li ₂ Si ₂ O ₅)	1525
K ₁ ⁺ (g)	Potassium, ion (K ⁺)	1470	Li ₃ N ₁ (cr)	Lithium nitride (Li ₃ N)	1526
K ₁ ⁻ (g)	Potassium, ion (K ⁻)	1471			
K ₁ O ₁ (g)	Potassium oxide (KO)	1472	Mg ₁ (ref)	Magnesium (Mg)	1529
K ₁ O ₁ ⁻ (g)	Potassium oxide, ion (KO ⁻)	1473	Mg ₁ (cr)	Magnesium (Mg)	1530
K ₁ O ₂ (cr)	Potassium superoxide (KO ₂)	1474	Mg ₁ (l)	Magnesium (Mg)	1531

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Mg ₁ (cr,l)	Magnesium (Mg)	1532	Mo ₁ O _{2.875} (cr)	Molybdenum oxide (MoO _{2.875})	1588
Mg ₁ (g)	Magnesium (Mg)	1533	Mo ₁ O _{2.889} (cr)	Molybdenum oxide (MoO _{2.889})	1589
Mg ₁ ^{+(g)}	Magnesium, ion (Mg ⁺)	1534	Mo ₁ O ₃ (cr)	Molybdenum oxide (MoO ₃)	1590
Mg ₁ N ₁ (g)	Magnesium nitride (MgN)	1535	Mo ₁ O ₃ (l)	Molybdenum oxide (MoO ₃)	1591
Mg ₁ O ₁ (cr)	Magnesium oxide (MgO)	1536	Mo ₁ O ₃ (cr,l)	Molybdenum oxide (MoO ₃)	1592
Mg ₁ O ₁ (l)	Magnesium oxide (MgO)	1537	Mo ₁ O ₃ (g)	Molybdenum oxide (MoO ₃)	1593
Mg ₁ O ₁ (cr,l)	Magnesium oxide (MgO)	1538	Mo ₁ S ₂ (cr)	Molybdenum sulfide (MoS ₂)	1594
Mg ₁ O ₁ (g)	Magnesium oxide (MgO)	1539	Mo ₂ S ₃ (cr)	Molybdenum sulfide (Mo ₂ S ₃)	1595
Mg ₁ O ₃ Si ₁ (cr)	Magnesium silicate (MgSiO ₃)	1540	Mo ₂ S ₃ (l)	Molybdenum sulfide (Mo ₂ S ₃)	1596
Mg ₁ O ₃ Si ₁ (l)	Magnesium silicate (MgSiO ₃)	1541	Mo ₂ S ₃ (cr,l)	Molybdenum sulfide (Mo ₂ S ₃)	1597
Mg ₁ O ₃ Si ₁ (cr,l)	Magnesium silicate (MgSiO ₃)	1542			
Mg ₁ O ₃ Ti ₁ (cr)	Magnesium titanium oxide (MgTiO ₃)	1543	N _{0.465} V ₁ (cr)	Vanadium nitride (VN _{0.465})	1599
Mg ₁ O ₃ Ti ₁ (l)	Magnesium titanium oxide (MgTiO ₃)	1544	N ₁ (g)	Nitrogen (N)	1600
Mg ₁ O ₃ Ti ₁ (cr,l)	Magnesium titanium oxide (MgTiO ₃)	1545	N ₁ ⁺ (g)	Nitrogen, ion (N ⁺)	1601
Mg ₁ O ₄ S ₁ (cr)	Magnesium sulfate (MgSO ₄)	1546	N ₁ ⁻ (g)	Nitrogen, ion (N ⁻)	1602
Mg ₁ O ₄ S ₁ (l)	Magnesium sulfate (MgSO ₄)	1547	N ₁ O ₁ (g)	Nitrogen oxide (NO)	1603
Mg ₁ O ₄ S ₁ (cr,l)	Magnesium sulfate (MgSO ₄)	1548	N ₁ O ₁ ⁺ (g)	Nitrogen oxide, ion (NO ⁺)	1604
Mg ₁ O ₄ W ₁ (cr)	Magnesium tungsten oxide (MgWO ₄)	1549	N ₁ O ₂ (g)	Nitrogen oxide (NO ₂)	1605
Mg ₁ O ₅ Ti ₂ (cr)	Magnesium titanium oxide (MgTi ₂ O ₅)	1550	N ₁ O ₂ ⁻ (g)	Nitrogen oxide, ion (ONO ⁻)	1606
Mg ₁ O ₅ Ti ₂ (l)	Magnesium titanium oxide (MgTi ₂ O ₅)	1551	N ₁ O ₃ (g)	Nitrogen oxide (NO ₃)	1607
Mg ₁ O ₅ Ti ₂ (cr,l)	Magnesium titanium oxide (MgTi ₂ O ₅)	1552	N ₁ P ₁ (g)	Phosphorus nitride (PN)	1608
Mg ₁ S ₁ (cr)	Magnesium sulfide (MgS)	1553	N ₁ S ₁ (g)	Nitrogen sulfide (NS)	1609
Mg ₁ S ₁ (g)	Magnesium sulfide (MgS)	1554	N ₁ S ₁ (g)	Silicon nitride (Si ₃ N ₄)	1610
Mg ₂ (g)	Magnesium (Mg ₂)	1555	N ₁ Si ₂ (g)	Silicon nitride (Si ₂ N ₃)	1611
Mg ₂ O ₄ Si ₁ (cr)	Magnesium silicate (Mg ₂ SiO ₄)	1556	N ₁ Ti ₁ (cr)	Titanium nitride (TiN)	1612
Mg ₂ O ₄ Si ₁ (l)	Magnesium silicate (Mg ₂ SiO ₄)	1557	N ₁ Ti ₁ (l)	Titanium nitride (TiN)	1613
Mg ₂ O ₅ Si ₁ (cr,l)	Magnesium silicate (Mg ₂ SiO ₄)	1558	N ₁ Ti ₁ (cr,l)	Titanium nitride (TiN)	1614
Mg ₂ O ₄ Ti ₁ (cr)	Magnesium titanium oxide (Mg ₂ TiO ₄)	1559	N ₁ V ₁ (cr)	Vanadium nitride (VN)	1615
Mg ₂ O ₄ Ti ₁ (l)	Magnesium titanium oxide (Mg ₂ TiO ₄)	1560	N ₁ V ₁ (g)	Vanadium nitride (VN)	1616
Mg ₂ O ₄ Ti ₁ (cr,l)	Magnesium titanium oxide (Mg ₂ TiO ₄)	1561	N ₁ Zr ₁ (cr)	Zirconium nitride (ZrN)	1617
Mg ₂ Si ₁ (cr)	Magnesium silicide (Mg ₂ Si)	1562	N ₁ Zr ₁ (l)	Zirconium nitride (ZrN)	1618
Mg ₂ Si ₁ (l)	Magnesium silicide (Mg ₂ Si)	1563	N ₁ Zr ₁ (cr,l)	Zirconium nitride (ZrN)	1619
Mg ₂ Si ₁ (cr,l)	Magnesium silicide (Mg ₂ Si)	1564	N ₁ Zr ₁ (g)	Zirconium nitride (ZrN)	1620
Mg ₃ N ₂ (cr)	Magnesium nitride (Mg ₃ N ₂)	1565	N ₂ (ref)	Nitrogen (N ₂)	1621
Mg ₃ O ₈ P ₂ (cr)	Magnesium phosphate (Mg ₃ P ₂ O ₈)	1566	N ₂ ⁺ (g)	Nitrogen, ion (N ₂ ⁺)	1622
Mg ₃ O ₈ P ₂ (l)	Magnesium phosphate (Mg ₃ P ₂ O ₈)	1567	N ₂ ⁻ (g)	Nitrogen, ion (N ₂ ⁻)	1623
Mg ₃ O ₈ P ₂ (cr,l)	Magnesium phosphate (Mg ₃ P ₂ O ₈)	1568	N ₂ O ₁ (g)	Nitrogen oxide (N ₂ O)	1624
			N ₂ O ₁ ⁺ (g)	Nitrogen oxide, ion (N ₂ O ⁺)	1625
Mn ₁ (ref)	Manganese (Mn)	1571	N ₂ O ₄ (g)	Nitrogen oxide (N ₂ O ₄)	1626
Mn ₁ (cr)	Manganese (Mn)	1572	N ₂ O ₄ (cr)	Nitrogen oxide (N ₂ O ₄)	1627
Mn ₁ (l)	Manganese (Mn)	1573	N ₂ O ₄ (l)	Nitrogen oxide (N ₂ O ₄)	1628
Mn ₁ (cr,l)	Manganese (Mn)	1574	N ₂ O ₄ (cr,l)	Nitrogen oxide (N ₂ O ₄)	1629
Mn ₁ (g)	Manganese (Mn)	1575	N ₂ O ₄ (g)	Nitrogen oxide (N ₂ O ₄)	1630
Mn ₁ ^{+(g)}	Manganese, ion (Mn ⁺)	1576	N ₂ O ₅ (g)	Nitrogen oxide (N ₂ O ₅)	1631
			N ₃ (g)	Azide (N ₃)	1632
Mo ₁ (ref)	Molybdenum (Mo)	1577	N ₄ Si ₃ (cr)	Silicon nitride, alpha (Si ₃ N ₄)	1633
Mo ₁ (cr)	Molybdenum (Mo)	1578	N ₅ P ₃ (cr)	Phosphorus nitride (P ₃ N ₅)	1634
Mo ₁ (l)	Molybdenum (Mo)	1579			
Mo ₁ (cr,l)	Molybdenum (Mo)	1580	Na ₁ (ref)	Sodium (Na)	1637
Mo ₁ (g)	Molybdenum (Mo)	1581	Na ₁ (cr)	Sodium (Na)	1638
Mo ₁ ^{+(g)}	Molybdenum, ion (Mo ⁺)	1582	Na ₁ (l)	Sodium (Na)	1639
Mo ₁ ⁻ (g)	Molybdenum, ion (Mo ⁻)	1583	Na ₁ (cr,l)	Sodium (Na)	1640
Mo ₁ O ₁ (g)	Molybdenum oxide (MoO)	1584	Na ₁ (g)	Sodium (Na)	1641
Mo ₁ O ₂ (cr)	Molybdenum oxide (MoO ₂)	1585	Na ₁ ⁺ (g)	Sodium, ion (Na ⁺)	1642
Mo ₁ O ₂ (g)	Molybdenum oxide (MoO ₂)	1586	Na ₁ ⁻ (g)	Sodium, ion (Na ⁻)	1643
Mo ₁ O _{2.750} (cr)	Molybdenum oxide (MoO _{2.750})	1587	Na ₁ O ₁ (g)	Sodium oxide (NaO)	1644

Formula	Table Title	Page	Formula	Table Title	Page
Na ₁ O ⁻ (g)	Sodium oxide, ion (NaO ⁻)	1645	Ni ⁺ (g)	Nickel, ion (Ni ⁺)	1702
Na ₁ O ₂ (cr)	Sodium superoxide (NaO ₂)	1646	Ni ⁻ (g)	Nickel, ion (Ni ⁻)	1703
Na ₂ (g)	Sodium (Na ₂)	1647	Ni ₁ S ₁ (cr)	Nickel sulfide (NiS)	1704
Na ₂ O ₁ (cr)	Sodium oxide (Na ₂ O)	1648	Ni ₁ S ₁ (l)	Nickel sulfide (NiS)	1705
Na ₂ O ₁ (l)	Sodium oxide (Na ₂ O)	1649	Ni ₁ S ₁ (cr,l)	Nickel sulfide (NiS)	1706
Na ₂ O ₁ (cr,l)	Sodium oxide (Na ₂ O)	1650	Ni ₁ S ₁ (g)	Nickel sulfide (NiS)	1707
Na ₂ O ₂ (cr)	Sodium peroxide (Na ₂ O ₂)	1651	Ni ₁ S ₂ (cr)	Nickel sulfide (NiS ₂)	1708
Na ₂ O ₃ Si ₁ (cr)	Sodium silicate (Na ₂ SiO ₃)	1652	Ni ₁ S ₂ (l)	Nickel sulfide (NiS ₂)	1709
Na ₂ O ₃ Si ₁ (l)	Sodium silicate (Na ₂ SiO ₃)	1653	Ni ₁ S ₂ (cr,l)	Nickel sulfide (NiS ₂)	1710
Na ₂ O ₃ Si ₁ (cr,l)	Sodium silicate (Na ₂ SiO ₃)	1654	Ni ₁ S ₂ (cr)	Nickel sulfide (NiS ₂)	1711
Na ₂ O ₄ S ₁ (cr)	Sodium sulfate, delta (Na ₂ SO ₄)	1655	Ni ₃ S ₂ (l)	Nickel sulfide (Ni ₃ S ₂)	1712
Na ₂ O ₄ S ₁ (cr)	Sodium sulfate, I (Na ₂ SO ₄)	1656	Ni ₃ S ₂ (cr,l)	Nickel sulfide (Ni ₃ S ₂)	1713
Na ₂ O ₄ S ₁ (cr)	Sodium sulfate, III (Na ₂ SO ₄)	1657	Ni ₃ S ₄ (cr)	Nickel sulfide (Ni ₃ S ₄)	1714
Na ₂ O ₄ S ₁ (cr)	Sodium sulfate, IV (Na ₂ SO ₄)	1658	O ₁ (g)	Oxygen (O)	1717
Na ₂ O ₄ S ₁ (cr)	Sodium sulfate, V (Na ₂ SO ₄)	1659	O ₁ ⁺ (g)	Oxygen, ion (O ⁺)	1718
Na ₂ O ₄ S ₁ (l)	Sodium sulfate (Na ₂ SO ₄)	1660	O ₁ ⁻ (g)	Oxygen, ion (O ⁻)	1719
Na ₂ O ₄ S ₁ (cr,l)	Sodium sulfate (Na ₂ SO ₄)	1661	O ₁ P ₁ (g)	Phosphorus oxide (PO)	1720
Na ₂ O ₄ S ₁ (g)	Sodium sulfate (Na ₂ SO ₄)	1662	O ₁ Pb ₁ (cr)	Lead oxide, red (PbO)	1721
Na ₂ O ₄ W ₁ (cr)	Sodium tungsten oxide (Na ₂ WO ₄)	1663	O ₁ Pb ₁ (cr)	Lead oxide, yellow (PbO)	1722
Na ₂ O ₅ Si ₂ (cr)	Sodium silicate (Na ₂ Si ₂ O ₅)	1664	O ₁ Pb ₁ (l)	Lead oxide (PbO)	1723
Na ₂ O ₅ Si ₂ (l)	Sodium silicate (Na ₂ Si ₂ O ₅)	1665	O ₁ Pb ₁ (cr,l)	Lead oxide (PbO)	1724
Na ₂ O ₅ Si ₂ (cr,l)	Sodium silicate (Na ₂ Si ₂ O ₅)	1666	O ₁ Pb ₁ (g)	Lead oxide (PbO)	1725
Na ₂ S ₁ (cr)	Sodium sulfide (Na ₂ S)	1667	O ₁ S ₁ (g)	Sulfur oxide (SO)	1726
Na ₂ S ₁ (l)	Sodium sulfide (Na ₂ S)	1668	O ₁ S ₂ (g)	Sulfur oxide (SSO)	1727
Na ₂ S ₂ (cr,l)	Sodium sulfide, beta (Na ₂ S ₂)	1670	O ₁ Si ₁ (g)	Silicon oxide (SiO)	1728
Na ₂ S ₂ (l)	Sodium sulfide (Na ₂ S ₂)	1671	O ₁ Si ₁ (cr)	Strontium oxide (SrO)	1729
Na ₂ S ₂ (cr,l)	Sodium sulfide (Na ₂ S ₂)	1672	O ₁ Si ₁ (l)	Strontium oxide (SrO)	1730
Nb ₁ (ref)	Niobium (Nb)	1675	O ₁ Si ₁ (cr,l)	Strontium oxide (SrO)	1731
Nb ₁ (cr)	Niobium (Nb)	1676	O ₁ Ta ₁ (g)	Tantalum oxide (TaO)	1732
Nb ₁ (l)	Niobium (Nb)	1677	O ₁ Ti ₁ (cr)	Titanium oxide, alpha (TiO)	1733
Nb ₁ (cr,l)	Niobium (Nb)	1678	O ₁ Ti ₁ (cr)	Titanium oxide, beta (TiO)	1734
Nb ₁ (g)	Niobium (Nb)	1679	O ₁ Ti ₁ (l)	Titanium oxide (TiO)	1735
Nb ₁ ⁺ (g)	Niobium, ion (Nb ⁺)	1680	O ₁ Ti ₁ (cr,l)	Titanium oxide (TiO)	1736
Nb ₁ ⁻ (g)	Niobium, ion (Nb ⁻)	1681	O ₁ Ti ₁ (g)	Titanium oxide (TiO)	1737
Nb ₁ O ₁ (cr)	Niobium oxide (NbO)	1682	O ₁ V ₁ (cr)	Vanadium oxide (VO)	1738
Nb ₁ O ₁ (l)	Niobium oxide (NbO)	1683	O ₁ V ₁ (l)	Vanadium oxide (VO)	1739
Nb ₁ O ₁ (cr,l)	Niobium oxide (NbO)	1684	O ₁ V ₁ (cr,l)	Vanadium oxide (VO)	1740
Nb ₁ O ₁ (g)	Niobium oxide (NbO)	1685	O ₁ V ₁ (g)	Vanadium oxide (VO)	1741
Nb ₁ O ₂ (cr)	Niobium oxide (NbO ₂)	1686	O ₁ W ₁ (g)	Tungsten oxide (WO)	1742
Nb ₁ O ₂ (l)	Niobium oxide (NbO ₂)	1687	O ₁ Zr ₁ (g)	Zirconium oxide (ZrO)	1743
Nb ₁ O ₂ (cr,l)	Niobium oxide (NbO ₂)	1688	O ₂ (ref)	Oxygen (O ₂)	1744
Nb ₁ O ₃ (g)	Niobium oxide (NbO ₃)	1689	O ₂ ⁺ (g)	Oxygen, ion (O ⁺)	1745
Nb ₂ O ₅ (cr)	Niobium oxide (Nb ₂ O ₅)	1690	O ₂ ⁻ (g)	Oxygen, ion (O ⁻)	1746
Nb ₂ O ₅ (l)	Niobium oxide (Nb ₂ O ₅)	1691	O ₂ P ₁ (g)	Phosphorus oxide (PO ₂)	1747
Nb ₂ O ₅ (cr,l)	Niobium oxide (Nb ₂ O ₅)	1692	O ₂ Pb ₁ (cr)	Lead oxide (PbO ₂)	1748
Ne ₁ (ref)	Neon (Ne)	1695	O ₂ S ₁ (g)	Sulfur dioxide (SO ₂)	1749
Ne ₁ ⁺ (g)	Neon, ion (Ne ⁺)	1696	O ₂ Si ₁ (cr)	Silicon oxide, cristobalite, high (SiO ₂)	1750
Ni ₁ (ref)	Nickel (Ni)	1697	O ₂ Si ₁ (l)	Silicon oxide (SiO ₂)	1751
Ni ₁ (cr)	Nickel (Ni)	1698	O ₂ Si ₁ (cr,l)	Silicon oxide, cristobalite, low (SiO ₂)	1752
Ni ₁ (l)	Nickel (Ni)	1699	O ₂ Si ₁ (g)	Silicon oxide (SiO ₂)	1753
Ni ₁ (cr,l)	Nickel (Ni)	1700	O ₂ Ta ₁ (g)	Tantalum oxide (TaO ₂)	1754
Ni ₁ (g)	Nickel (Ni)	1701	O ₂ Ti ₁ (cr)	Titanium oxide, anatase (TiO ₂)	1755

Formula	Table Title	Page	Formula	Table Title	Page
O ₂ Ti ₁ (cr)	Titanium oxide, rutile (TiO ₂)	1759	P ₁ (cr)	Phosphorus, black (P)	1818
O ₂ Ti ₁ (l)	Titanium oxide (TiO ₂)	1760	P ₁ (cr)	Phosphorus, red, IV (P)	1819
O ₂ Ti ₁ (cr,l)	Titanium oxide (TiO ₂)	1761	P ₁ (cr)	Phosphorus, red, V (P)	1820
O ₂ Ti ₁ (g)	Titanium oxide (TiO ₂)	1762	P ₁ (cr)	Phosphorus, white (P)	1821
O ₂ V ₁ (g)	Vanadium oxide (VO ₂)	1763	P ₁ (l)	Phosphorus (P)	1822
O ₂ W ₁ (cr)	Tungsten oxide (WO ₂)	1764	P ₁ (cr,l)	Phosphorus (P)	1823
O ₂ W ₁ (g)	Tungsten oxide (WO ₂)	1765	P ₁ (g)	Phosphorus (P)	1824
O _{2,72} W ₁ (cr)	Tungsten oxide (WO _{2,72})	1766	P ₁ [†] (g)	Phosphorus, ion (P ⁺)	1825
O _{2,90} W ₁ (cr)	Tungsten oxide (WO _{2,90})	1767	P ₁ [−] (g)	Phosphorus, ion (P [−])	1826
O _{2,96} W ₁ (cr)	Tungsten oxide (WO _{2,96})	1768	P ₁ Si ₁ (g)	Phosphorus sulfide (PS)	1827
O ₂ Zr ₁ (cr)	Zirconium oxide (ZrO ₂)	1769	P ₂ (g)	Phosphorus (P ₂)	1828
O ₂ Zr ₁ (l)	Zirconium oxide (ZrO ₂)	1770	P ₄ (g)	Phosphorus (P ₄)	1829
O ₂ Zr ₁ (cr,l)	Zirconium oxide (ZrO ₂)	1771	P ₄ S ₁ (cr)	Phosphorus sulfide (P ₄ S ₃)	1830
O ₂ Zr ₁ (g)	Zirconium oxide (ZrO ₂)	1772	P ₄ S ₁ (l)	Phosphorus sulfide (P ₄ S ₃)	1831
O ₃ (g)	Ozone (O ₃)	1773	P ₄ S ₃ (cr,l)	Phosphorus sulfide (P ₄ S ₃)	1832
O ₃ Pb ₁ Si ₁ (cr)	Lead silicate (PbSiO ₃)	1774	P ₄ S ₃ (g)	Phosphorus sulfide (P ₄ S ₃)	1833
O ₃ S ₁ (g)	Sulfur trioxide (SO ₃)	1775			
O ₃ Ti ₂ (cr)	Titanium oxide (Ti ₂ O ₃)	1776	Pb ₁ (ref)	Lead (Pb)	1835
O ₃ Ti ₂ (l)	Titanium oxide (Ti ₂ O ₃)	1777	Pb ₁ (cr)	Lead (Pb)	1836
O ₃ Ti ₂ (cr,l)	Titanium oxide (Ti ₂ O ₃)	1778	Pb ₁ (l)	Lead (Pb)	1837
O ₃ V ₂ (cr)	Vanadium oxide (V ₂ O ₃)	1779	Pb ₁ (cr,l)	Lead (Pb)	1838
O ₃ V ₂ (l)	Vanadium oxide (V ₂ O ₃)	1780	Pb ₁ (g)	Lead (Pb)	1839
O ₃ V ₂ (cr,l)	Vanadium oxide (V ₂ O ₃)	1781	Pb ₁ [†] (g)	Lead, ion (Pb ⁺)	1840
O ₃ W ₁ (cr)	Tungsten oxide (WO ₃)	1782	Pb ₁ [−] (g)	Lead, ion (Pb [−])	1841
O ₃ W ₁ (l)	Tungsten oxide (WO ₃)	1783	Pb ₁ Si ₁ (cr)	Lead sulfide (PbS)	1842
O ₃ W ₁ (cr,l)	Tungsten oxide (WO ₃)	1784	Pb ₁ Si ₁ (l)	Lead sulfide (PbS)	1843
O ₃ W ₁ (g)	Tungsten oxide (WO ₃)	1785	Pb ₁ Si ₁ (cr,l)	Lead sulfide (PbS)	1844
O ₄ Pb ₂ Si ₁ (cr)	Lead silicate (Pb ₂ SiO ₄)	1786	Pb ₁ Si ₁ (g)	Lead sulfide (PbS)	1845
O ₄ Pb ₃ (cr)	Lead oxide (Pb ₃ O ₄)	1787	Pb ₂ (g)	Lead (Pb ₂)	1846
O ₄ S ₁ Zn ₁ (cr)	Zinc sulfate (ZnSO ₄)	1788			
O ₄ Si ₁ Zr ₁ (cr)	Zirconium silicate (ZrSiO ₄)	1789	Rb ₁ (ref)	Rubidium (Rb)	1849
O ₄ V ₂ (cr)	Vanadium oxide (V ₂ O ₄)	1790	Rb ₁ (cr)	Rubidium (Rb)	1850
O ₄ V ₂ (l)	Vanadium oxide (V ₂ O ₄)	1791	Rb ₁ (l)	Rubidium (Rb)	1851
O ₄ V ₂ (cr,l)	Vanadium oxide (V ₂ O ₄)	1792	Rb ₁ (cr,l)	Rubidium (Rb)	1852
O ₅ Ta ₂ (cr)	Tantalum oxide (Ta ₂ O ₅)	1793	Rb ₁ (g)	Rubidium (Rb)	1853
O ₅ Ta ₂ (l)	Tantalum oxide (Ta ₂ O ₅)	1794	Rb ₁ [†] (g)	Rubidium, ion (Rb ⁺)	1854
O ₅ Ta ₂ (cr,l)	Tantalum oxide (Ta ₂ O ₅)	1795	Rb ₁ [−] (g)	Rubidium, ion (Rb [−])	1855
O ₅ Ti ₃ (cr)	Titanium oxide, alpha (Ti ₃ O ₅)	1796	Rb ₂ (g)	Rubidium (Rb ₂)	1856
O ₅ Ti ₃ (cr)	Titanium oxide, beta (Ti ₃ O ₅)	1797			
O ₅ Ti ₃ (l)	Titanium oxide (Ti ₃ O ₅)	1798	Rn ₁ (ref)	Radon (Rn)	1857
O ₅ Ti ₃ (cr,l)	Titanium oxide (Ti ₃ O ₅)	1799	Rn ₁ [†] (g)	Radon, ion (Rn ⁺)	1858
O ₅ V ₂ (cr)	Vanadium oxide (V ₂ O ₅)	1800			
O ₅ V ₂ (l)	Vanadium oxide (V ₂ O ₅)	1801	S ₁ (ref)	Sulfur (S)	1859
O ₅ V ₂ (cr,l)	Vanadium oxide (V ₂ O ₅)	1802	S ₁ (cr)	Sulfur, monoclinic (S)	1860
O ₆ P ₄ (g)	Phosphorus oxide ((P ₂ O ₅) ₂)	1803	S ₁ (cr)	Sulfur, orthorhombic (S)	1861
O ₆ W ₂ (g)	Tungsten oxide ((WO ₃) ₂)	1804	S ₁ (l)	Sulfur (S)	1862
O ₇ Ti ₄ (cr)	Titanium oxide (Ti ₄ O ₇)	1805	S ₁ (cr,l)	Sulfur (S)	1863
O ₇ Ti ₄ (l)	Titanium oxide (Ti ₄ O ₇)	1806	S ₁ (g)	Sulfur (S)	1864
O ₇ Ti ₄ (cr,l)	Titanium oxide (Ti ₄ O ₇)	1807	S ₁ [†] (g)	Sulfur, ion (S ⁺)	1865
O ₈ W ₃ (g)	Tungsten oxide (W ₃ O ₈)	1808	S ₁ [−] (g)	Sulfur, ion (S [−])	1866
O ₉ W ₃ (g)	Tungsten oxide ((WO ₃) ₃)	1809	S ₁ Si ₁ (g)	Silicon sulfide (SiS)	1867
O ₁₀ P ₄ (cr)	Phosphorus oxide ((P ₂ O ₅) ₂)	1810	S ₁ Si ₁ (cr)	Strontium sulfide (SrS)	1868
O ₁₀ P ₄ (g)	Phosphorus oxide ((P ₂ O ₅) ₂)	1811	S ₁ Si ₁ (g)	Strontium sulfide (SrS)	1869
O ₁₂ W ₄ (g)	Tungsten oxide ((WO ₃) ₄)	1812	S ₂ (g)	Sulfur (S ₂)	1870
P ₁ (ref)	Phosphorus (P)	1817	S ₂ Si ₁ (cr)	Silicon sulfide (SiS ₂)	1871
			S ₂ Si ₁ (l)	Silicon sulfide (SiS ₂)	1872

Formula	Table Title	Page	Formula	Table Title	Page
S ₂ Si ₁ (cr,l)	Silicon sulfide (SiS ₂)	1873	Ti ₁ (g)	Titanium (Ti)	1912
S ₃ (g)	Sulfur (S ₃)	1874	Ti ₁ ^{+(g)}	Titanium, ion (Ti ⁺)	1913
S ₄ (g)	Sulfur (S ₄)	1875	Ti ₁ ⁻ (g)	Titanium, ion (Ti ⁻)	1914
S ₅ (g)	Sulfur (S ₅)	1876			
S ₆ (g)	Sulfur (S ₆)	1877	V ₁ (ref)	Vanadium (V)	1917
S ₇ (g)	Sulfur (S ₇)	1878	V ₁ (cr)	Vanadium (V)	1918
S ₈ (g)	Sulfur (S ₈)	1879	V ₁ (l)	Vanadium (V)	1919
			V ₁ (cr,l)	Vanadium (V)	1920
Si ₁ (ref)	Silicon (Si)	1881	V ₁ (g)	Vanadium (V)	1921
Si ₁ (cr)	Silicon (Si)	1882	V ₁ ⁺ (g)	Vanadium, ion (V ⁺)	1922
Si ₁ (l)	Silicon (Si)	1883	V ₁ ⁻ (g)	Vanadium, ion (V ⁻)	1923
Si ₁ (cr,l)	Silicon (Si)	1884			
Si ₁ (g)	Silicon (Si)	1885	W ₁ (ref)	Tungsten (W)	1925
Si ₁ ⁺ (g)	Silicon, ion (Si ⁺)	1886	W ₁ (cr)	Tungsten (W)	1926
Si ₁ ⁻ (g)	Silicon, ion (Si ⁻)	1887	W ₁ (l)	Tungsten (W)	1927
Si ₂ (g)	Silicon (Si ₂)	1888	W ₁ (cr,l)	Tungsten (W)	1928
Si ₃ (g)	Silicon (Si ₃)	1889	W ₁ (g)	Tungsten (W)	1929
			W ₁ ⁺ (g)	Tungsten, ion (W ⁺)	1930
			W ₁ ⁻ (g)	Tungsten, ion (W ⁻)	1931
Sr ₁ (ref)	Strontium (Sr)	1891			
Sr ₁ (cr)	Strontium, alpha (Sr)	1892			
Sr ₁ (cr)	Strontium, beta (Sr)	1893	Xe ₁ (ref)	Xenon (Xe)	1933
Sr ₁ (l)	Strontium (Sr)	1894	Xe ₁ ⁺ (g)	Xenon, ion (Xe ⁺)	1934
Sr ₁ (cr,l)	Strontium (Sr)	1895			
Sr ₁ (g)	Strontium (Sr)	1896	Zn ₁ (ref)	Zinc (Zn)	1935
Sr ₁ ⁺ (g)	Strontium, ion (Sr ⁺)	1897	Zn ₁ (cr)	Zinc (Zn)	1936
			Zn ₁ (l)	Zinc (Zn)	1937
Ta ₁ (ref)	Tantalum (Ta)	1899	Zn ₁ (cr,l)	Zinc (Zn)	1938
Ta ₁ (cr)	Tantalum (Ta)	1900	Zn ₁ (g)	Zinc (Zn)	1939
Ta ₁ (l)	Tantalum (Ta)	1901	Zn ₁ ⁺ (g)	Zinc, ion (Zn ⁺)	1940
Ta ₁ (cr,l)	Tantalum (Ta)	1902	Zn ₁ ⁻ (g)	Zinc, ion (Zn ⁻)	1941
Ta ₁ (g)	Tantalum (Ta)	1903			
Ta ₁ ⁺ (g)	Tantalum, ion (Ta ⁺)	1904	Zr ₁ (ref)	Zirconium (Zr)	1943
Ta ₁ ⁻ (g)	Tantalum, ion (Ta ⁻)	1905	Zr ₁ (cr)	Zirconium, alpha (Zr)	1944
			Zr ₁ (cr)	Zirconium, beta (Zr)	1945
Ti ₁ (ref)	Titanium (Ti)	1907	Zr ₁ (l)	Zirconium (Zr)	1946
Ti ₁ (cr)	Titanium, alpha (Ti)	1908	Zr ₁ (cr,l)	Zirconium (Zr)	1947
Ti ₁ (cr)	Titanium, beta (Ti)	1909	Zr ₁ (g)	Zirconium (Zr)	1948
Ti ₁ (l)	Titanium (Ti)	1910	Zr ₁ ⁺ (g)	Zirconium, ion (Zr ⁺)	1949
Ti ₁ (cr,l)	Titanium (Ti)	1911	Zr ₁ ⁻ (g)	Zirconium, ion (Zr ⁻)	1950

10.4 Chemical Name Index

Table Title	Formula	Page	Table Title	Formula	Page
2-Butynedinitrile (C_4N_2)	$C_4N_2(g)$	693	Aluminum iodide (AlI_3)	$Al_1I_3(l)$	123
Aluminum (Al)	$Al_1(ref)$	59	Aluminum iodide (AlI_3)	$Al_1I_3(cr,l)$	124
Aluminum (Al)	$Al_1(cr)$	60	Aluminum iodide (AlI_3)	$Al_1I_3(g)$	125
Aluminum (Al)	$Al_1(l)$	61	Aluminum, ion (Al^{+})	$Al_1^{+}(g)$	64
Aluminum (Al)	$Al_1(cr,l)$	62	Aluminum, ion (Al^{-})	$Al_1^{-}(g)$	65
Aluminum (Al)	$Al_1(g)$	63	Aluminum nitride (AlN)	$Al_1N_1(cr)$	129
Aluminum (Al_2)	$Al_2(g)$	138	Aluminum nitride (AlN)	$Al_1N_1(g)$	130
Aluminum borate ($AlBO_2$)	$Al_1B_1O_2(g)$	66	Aluminum oxide ((AlO_2) ₂)	$Al_2O_2(g)$	152
Aluminum bromide (($AlBr_3$) ₂)	$Al_2Br_6(g)$	142	Aluminum oxide (Al_2O)	$Al_2O_1(g)$	150
Aluminum bromide ($AlBr$)	$Al_1Br_1(g)$	67	Aluminum oxide (Al_2O_1)	$Al_2O_3(cr,l)$	159
Aluminum bromide ($AlBr_3$)	$Al_1Br_3(cr)$	68	Aluminum oxide (Al_2O_3)	$Al_2O_3(l)$	158
Aluminum bromide ($AlBr_3$)	$Al_1Br_3(l)$	69	Aluminum oxide (AlO)	$Al_1O_1(g)$	132
Aluminum bromide ($AlBr_3$)	$Al_1Br_3(cr,l)$	70	Aluminum oxide (AlO_2)	$Al_1O_2(g)$	135
Aluminum bromide ($AlBr_3$)	$Al_1Br_3(g)$	71	Aluminum oxide, alpha (Al_2O_1)	$Al_2O_3(cr)$	154
Aluminum carbide (Al_4C_3)	$C_3Al_4(cr)$	687	Aluminum oxide, delta (Al_2O_3)	$Al_2O_3(cr)$	155
Aluminum carbide (AlC)	$C_1Al_1(g)$	554	Aluminum oxide, gamma (Al_2O_3)	$Al_2O_3(cr)$	156
Aluminum chloride (($AlCl_3$) ₂)	$Al_2Cl_6(g)$	143	Aluminum oxide, ion (Al_2O^{+})	$Al_2O_1^{+}(g)$	151
Aluminum chloride ($AlCl$)	$Al_1Cl_1(g)$	72	Aluminum oxide, ion ($Al_2O_2^{+}$)	$Al_2O_2^{+}(g)$	153
Aluminum chloride ($AlCl_3$)	$Al_1Cl_3(g)$	79	Aluminum oxide, ion (AlO^{+})	$Al_1O_1^{+}(g)$	133
Aluminum chloride ($AlCl_3$)	$Al_1Cl_3(cr)$	83	Aluminum oxide, ion (AlO^-)	$Al_1O_1^-(g)$	134
Aluminum chloride ($AlCl_3$)	$Al_1Cl_3(l)$	84	Aluminum oxide, ion (AlO_2^-)	$Al_1O_2^-(g)$	136
Aluminum chloride ($AlCl_3$)	$Al_1Cl_3(cr,l)$	85	Aluminum oxide, kappa (Al_2O_3)	$Al_2O_3(cr)$	157
Aluminum chloride ($AlCl_3$)	$Al_1Cl_3(g)$	86	Aluminum silicate, andalusite (Al_2SiO_5)	$Al_2O_3Si_1(cr)$	160
Aluminum chloride fluoride ($AlClF$)	$Al_1Cl_1F_1(g)$	74	Aluminum silicate, kyanite (Al_2SiO_5)	$Al_2O_3Si_1(cr)$	161
Aluminum chloride fluoride ($AlClF_2$)	$Al_1Cl_1F_2(g)$	76	Aluminum silicate, mullite ($Al_6Si_2O_{11}$)	$Al_6O_{13}Si_2(cr)$	170
Aluminum chloride fluoride ($AlCl_2F$)	$Al_1Cl_2F_1(g)$	82	Aluminum silicate, sillimanite (Al_2SiO_5)	$Al_2O_3Si_1(cr)$	162
Aluminum chloride fluoride, ion ($AlClF^+$)	$Al_1Cl_1F_1^{+}(g)$	75	Aluminum sulfide (Al_2S_1)	$Al_2S_1(cr)$	163
Aluminum chloride, ion ($AlCl_2^-$)	$Al_1Cl_2^-(g)$	73	Aluminum sulfide (AIS)	$Al_1S_1(g)$	137
Aluminum chloride, ion ($AlCl_1^{\pm}$)	$Al_1Cl_1^{\pm}(g)$	80	Amidogen (NH_2)	$H_2N_1(g)$	1320
Aluminum chloride, ion ($AlCl_2^-$)	$Al_1Cl_2^-(g)$	81	Amidogen-d ₂ (ND_2)	$D_2N_1(g)$	1043
Aluminum chloride oxide ($OAICl$)	$Al_1Cl_1O_1(cr)$	77	Ammonia (NH_3)	$H_3N_1(g)$	1343
Aluminum chloride oxide ($OAICl$)	$Al_1Cl_1O_1(g)$	78	Ammonia-d ₃ (ND_3)	$D_3N_1(g)$	1047
Aluminum fluoride ((AlF_3) ₂)	$Al_2F_6(g)$	145	Ammonium bromide (NH_4Br)	$Br_1H_4N_1(cr)$	440
Aluminum fluoride (AlF)	$Al_1F_1(g)$	91	Ammonium chloride (NH_4Cl)	$Cl_1H_4N_1(cr)$	765
Aluminum fluoride (AlF_2)	$Al_1F_2(g)$	94	Ammonium iodide (NH_4I)	$H_4I_1N_1(cr)$	1349
Aluminum fluoride (AlF_3)	$Al_1F_3(cr)$	99	Ammonium perchlorate (NH_4ClO_4)	$Cl_1H_4N_1O_4(cr)$	766
Aluminum fluoride (AlF_4)	$Al_1F_4(l)$	100	Argon (Ar)	$Ar_1(ref)$	175
Aluminum fluoride (AlF_4)	$Al_1F_4(cr,l)$	101	Argon, ion (Ar^+)	$Ar_1^{+}(g)$	176
Aluminum fluoride (AlF_3)	$Al_1F_3(g)$	102	Azide (N_3)	$N_3(g)$	1632
Aluminum fluoride, ion (AlF^+)	$Al_1F_1^{+}(g)$	92	Barium (Ba)	$Ba_1(g)$	323
Aluminum fluoride, ion (AlF_2^{\pm})	$Al_1F_2^{\pm}(g)$	95	Barium (Ba)	$Ba_1(cr,l)$	322
Aluminum fluoride, ion (AlF_2^-)	$Al_1F_2^-(g)$	96	Barium (Ba)	$Ba_1(l)$	321
Aluminum fluoride oxide ($OAIF$)	$Al_1F_1O_1(g)$	93	Barium (Ba)	$Ba_1(cr)$	320
Aluminum fluoride oxide ($OAIF_2$)	$Al_1F_2O_1(g)$	97	Barium (Ba)	$Ba_1(ref)$	319
Aluminum fluoride oxide, ion ($OAIF_2^-$)	$Al_1F_2O_1^-(g)$	98	Barium bromide ($BaBr$)	$Ba_1Br_1(g)$	325
Aluminum hydride (AlH)	$Al_1H_1(g)$	114	Barium bromide ($BaBr_2$)	$Ba_1Br_2(g)$	329
Aluminum hydride oxide ($OAIH$)	$Al_1H_1O_1(g)$	115	Barium bromide ($BaBr_2$)	$Ba_1Br_2(cr,l)$	328
Aluminum hydroxide ($AlOH$)	$Al_1H_1O_1(g)$	116	Barium bromide ($BaBr_2$)	$Ba_1Br_2(l)$	327
Aluminum hydroxide, ion ($AlOH^+$)	$Al_1H_1O_1^{+}(g)$	117	Barium bromide ($BaBr_2$)	$Ba_1Br_2(cr)$	326
Aluminum hydroxide, ion ($AlOH^-$)	$Al_1H_1O_1^-(g)$	118	Barium chloride ($BaCl$)	$Ba_1Cl_1(g)$	330
Aluminum hydroxide oxide ($OAIOH$)	$Al_1H_1O_2(g)$	119	Barium chloride ($BaCl_2$)	$Ba_1Cl_2(g)$	334
Aluminum iodide ((AlI_3) ₂)	$Al_2I_6(g)$	146	Barium chloride ($BaCl_2$)	$Ba_1Cl_2(cr,l)$	333
Aluminum iodide (AlI)	$Al_1I_1(g)$	121	Barium chloride ($BaCl_2$)	$Ba_1Cl_2(l)$	332
Aluminum iodide (AlI_3)	$Al_1I_1(cr)$	122	Barium chloride ($BaCl_2$)	$Ba_1Cl_2(l)$	332

Table Title	Formula	Page	Table Title	Formula	Page
Barium chloride (BaCl ₂)	Ba ₁ Cl ₂ (cr)	331	Beryllium fluoride (BeF)	Be ₁ F ₁ (g)	378
Barium fluoride (BaF)	Ba ₁ F ₁ (g)	335	Beryllium fluoride (BeF ₂)	Be ₁ F ₂ (g)	382
Barium fluoride (BaF ₂)	Ba ₁ F ₂ (g)	340	Beryllium fluoride (BeF ₂)	Be ₁ F ₂ (cr,l)	381
Barium fluoride (BaF ₂)	Ba ₁ F ₂ (cr,l)	339	Beryllium fluoride (BeF ₂)	Be ₁ F ₂ (l)	380
Barium fluoride (BaF ₂)	Ba ₁ F ₂ (l)	338	Beryllium fluoride (BeF ₂)	Be ₁ F ₂ (cr)	379
Barium fluoride (BaF ₂)	Ba ₁ F ₂ (cr)	337	Beryllium fluoride oxide (O(BeF ₂) ₂)	Be ₂ F ₂ O ₁ (g)	417
Barium fluoride, ion (BaF ⁺)	Ba ₁ F ₁ ⁺ (g)	336	Beryllium hydride (BeH)	Be ₁ H ₁ (g)	390
Barium hydroxide (Ba(OH) ₂)	Ba ₁ H ₂ O ₂ (g)	346	Beryllium hydride (BeH ₂)	Be ₁ H ₂ (g)	394
Barium hydroxide (Ba(OH) ₂)	Ba ₁ H ₂ O ₂ (cr,l)	345	Beryllium hydride, ion (BeH ⁺)	Be ₁ H ₁ ⁺ (g)	391
Barium hydroxide (Ba(OH) ₂)	Ba ₁ H ₂ O ₂ (l)	344	Beryllium hydroxide (Be(OH) ₂)	Be ₁ H ₂ O ₂ (g)	397
Barium hydroxide (BaOH)	Ba ₁ H ₁ O ₁ (g)	341	Beryllium hydroxide (BeOH)	Be ₁ H ₁ O ₁ (g)	392
Barium hydroxide, alpha (Ba(OH) ₂)	Ba ₁ H ₂ O ₂ (cr)	343	Beryllium hydroxide, alpha (Be(OH) ₂)	Be ₁ H ₂ O ₂ (cr)	395
Barium hydroxide, ion (BaOH ⁺)	Ba ₁ H ₁ O ₁ ⁺ (g)	342	Beryllium hydroxide, beta (Be(OH) ₂)	Be ₁ H ₂ O ₂ (cr)	396
Barium iodide (BaI)	Ba ₁ I ₁ (g)	347	Beryllium hydroxide, ion (BeOH ⁺)	Be ₁ H ₁ O ₁ ⁺ (g)	393
Barium iodide (BaI ₂)	Ba ₁ I ₂ (g)	351	Beryllium iodide (BeI)	Be ₁ I ₁ (g)	398
Barium iodide (BaI ₂)	Ba ₁ I ₂ (cr,l)	350	Beryllium iodide (BeI ₂)	Be ₁ I ₂ (g)	402
Barium iodide (BaI ₂)	Ba ₁ I ₂ (l)	349	Beryllium iodide (BeI ₂)	Be ₁ I ₂ (cr,l)	401
Barium iodide (BaI ₂)	Ba ₁ I ₂ (cr)	348	Beryllium iodide (BeI ₂)	Be ₁ I ₂ (l)	400
Barium, ion (Ba ⁺)	Ba ₁ ^{+(g)}	324	Beryllium iodide (BeI ₂)	Be ₁ I ₂ (cr)	399
Barium oxide (BaO)	Ba ₁ O ₁ (g)	355	Beryllium, ion (Be ⁺)	Be ₁ ^{+(g)}	366
Barium oxide (BaO)	Ba ₁ O ₁ (cr,l)	354	Beryllium nitride (Be ₁ N ₂)	Be ₁ N ₂ (cr,l)	423
Barium oxide (BaO)	Ba ₁ O ₁ (l)	353	Beryllium nitride (Be ₁ N ₂)	Be ₁ N ₂ (l)	422
Barium oxide (BaO)	Ba ₁ O ₁ (cr)	352	Beryllium nitride (BeN)	Be ₁ N ₁ (g)	403
Barium sulfide (BaS)	Ba ₁ S ₁ (g)	357	Beryllium nitride, alpha (Be ₁ N ₂)	Be ₁ N ₂ (cr)	421
Barium sulfide (BaS)	Ba ₁ S ₁ (cr)	356	Beryllium oxide ((BeO) ₂)	Be ₂ O ₂ (g)	419
Beryllium (Be)	Be ₁ (ref)	361	Beryllium oxide ((BeO) ₃)	Be ₃ O ₃ (g)	424
Beryllium (Be)	Be ₁ (cr)	362	Beryllium oxide ((BeO) ₄)	Be ₄ O ₄ (g)	425
Beryllium (Be)	Be ₁ (l)	363	Beryllium oxide ((BeO) ₅)	Be ₅ O ₅ (g)	426
Beryllium (Be)	Be ₁ (cr,l)	364	Beryllium oxide ((BeO) ₆)	Be ₆ O ₆ (g)	427
Beryllium (Be)	Be ₁ (g)	365	Beryllium oxide (Be ₂ O)	Be ₂ O ₁ (g)	418
Beryllium (Be ₂)	Be ₂ (g)	415	Beryllium oxide (BeO)	Be ₁ O ₁ (g)	408
Beryllium aluminum oxide (BeAl ₂ O ₄)	Al ₂ Be ₁ O ₄ (cr)	139	Beryllium oxide (BeO)	Be ₁ O ₁ (cr,l)	407
Beryllium aluminum oxide (BeAl ₂ O ₄)	Al ₂ Be ₁ O ₄ (cr,l)	141	Beryllium oxide (BeO)	Be ₁ O ₁ (l)	406
Beryllium aluminum oxide (BeAl ₂ O ₄)	Al ₂ Be ₁ O ₄ (l)	140	Beryllium oxide, alpha (BeO)	Be ₁ O ₁ (cr)	404
Beryllium aluminum oxide (BeAl ₆ O ₁₀)	Al ₆ Be ₁ O ₁₀ (l)	168	Beryllium oxide, beta (BeO)	Be ₁ O ₁ (cr)	405
Beryllium aluminum oxide (BeAl ₆ O ₁₀)	Al ₆ Be ₁ O ₁₀ (cr)	167	Beryllium silicate (Be ₂ SiO ₄)	Be ₂ O ₄ Si ₁ (cr)	420
Beryllium aluminum oxide (BeAl ₆ O ₁₀)	Al ₆ Be ₁ O ₁₀ (cr,l)	169	Beryllium sulfate, alpha (BeSO ₄)	Be ₁ O ₄ S ₁ (cr)	409
Beryllium borate (Be(BO ₂) ₂)	B ₂ Be ₁ O ₄ (g)	260	Beryllium sulfate, beta (BeSO ₄)	Be ₁ O ₄ S ₁ (cr)	410
Beryllium borate (Be ₂ B ₆ O ₆)	B ₂ Be ₁ O ₆ (cr)	261	Beryllium sulfate, gamma (BeSO ₄)	Be ₁ O ₄ S ₁ (cr)	411
Beryllium borate (BeBO ₂)	B ₁ Be ₁ O ₂ (g)	184	Beryllium sulfide (BeS)	Be ₁ S ₁ (g)	414
Beryllium bromide (BeBr)	Be ₁ Br ₁ (g)	367	Beryllium sulfide (BeS)	Be ₁ S ₁ (cr)	413
Beryllium bromide (BeBr ₂)	Be ₁ Br ₂ (cr)	368	Beryllium tungsten oxide (BeWO ₄)	Be ₁ O ₄ W ₁ (cr)	412
Beryllium bromide (BeBr ₂)	Be ₁ Br ₂ (g)	369	Borane (BH)	B ₁ H ₁ (g)	221
Beryllium carbide (Be ₂ C)	C ₁ Be ₂ (cr,l)	561	Borane (BH ₂)	B ₁ H ₂ (g)	229
Beryllium carbide (Be ₂ C)	C ₁ Be ₂ (l)	560	Borane (BH ₃)	B ₁ H ₃ (g)	231
Beryllium carbide (Be ₂ C)	C ₁ Be ₂ (cr)	559	Borazine (B ₃ H ₅ N ₃)	B ₃ H ₅ N ₃ (g)	290
Beryllium carbide (BeC ₂)	C ₂ Be ₁ (g)	663	Boric acid ((HBO ₂) ₃)	B ₃ H ₆ O ₆ (g)	289
Beryllium chloride ((BeCl ₂) ₂)	Be ₂ Cl ₄ (g)	416	Boric acid (H ₃ BO ₄)	B ₁ H ₃ O ₃ (cr)	232
Beryllium chloride (BeCl)	Be ₁ Cl ₁ (g)	370	Boric acid (H ₃ BO ₄)	B ₁ H ₃ O ₃ (g)	233
Beryllium chloride (BeCl ₂)	Be ₁ Cl ₂ (l)	375	Boric acid (HBO ₂)	B ₁ H ₁ O ₂ (g)	226
Beryllium chloride (BeCl ₂)	Be ₁ Cl ₂ (g)	377	Boric acid (HBO ₂)	B ₁ H ₁ O ₂ (cr)	225
Beryllium chloride (BeCl ₂)	Be ₁ Cl ₂ (cr,l)	376	Boron (B)	B ₁ (ref)	177
Beryllium chloride, alpha (BeCl ₂)	Be ₁ Cl ₂ (cr)	373	Boron (B)	B ₁ (l)	179
Beryllium chloride, beta (BeCl ₂)	Be ₁ Cl ₂ (cr)	374	Boron (B)	B ₁ (cr,l)	180
Beryllium chloride fluoride (BeClF)	Be ₁ Cl ₁ F ₁ (g)	372	Boron (B)	B ₁ (g)	181
Beryllium chloride, ion (BeCl ⁺)	Be ₁ Cl ₁ ⁺ (g)	371	Boron (B ₂)	B ₂ (g)	259

Table Title	Formula	Page	Table Title	Formula	Page
Boron, beta-rhombohedral (B)	B ₁ (cr)	178	Calcium (Ca)	Ca ₁ (ref)	703
Boron bromide oxide (OBBr)	B ₁ Br ₁ O ₁ (g)	190	Calcium (Ca)	Ca ₁ (l)	706
Boron carbide (B ₄ C)	C ₁ B ₄ (cr)	556	Calcium (Ca)	Ca ₁ (cr,l)	707
Boron carbide (B ₄ C)	C ₁ B ₄ (l)	557	Calcium (Ca)	Ca ₁ (g)	708
Boron carbide (B ₄ C)	C ₁ B ₄ (cr,l)	558	Calcium (Ca ₂)	Ca ₂ (g)	735
Boron carbide (BC)	C ₁ B ₁ (g)	555	Calcium, alpha (Ca)	Ca ₁ (cr)	704
Boron chloride oxide (OBCl)	B ₁ Cl ₁ O ₁ (g)	201	Calcium, beta (Ca)	Ca ₁ (cr)	705
Boron fluoride oxide (OBF)	B ₁ F ₁ O ₁ (g)	209	Calcium bromide (CaBr)	Br ₁ Ca ₁ (g)	432
Boron fluoride oxide (OBF ₂)	B ₁ F ₂ O ₁ (g)	215	Calcium bromide (CaBr ₂)	Br ₂ Ca ₁ (g)	476
Boron hydride oxide (HBO)	B ₁ H ₁ O ₁ (g)	222	Calcium bromide (CaBr ₂)	Br ₂ Ca ₁ (cr,l)	475
Boron hydride oxide, ion (HBO ⁺)	B ₁ H ₁ O ₁ ⁺ (g)	223	Calcium bromide (CaBr ₂)	Br ₂ Ca ₁ (l)	474
Boron hydride oxide, ion (HBO ⁻)	B ₁ H ₁ O ₁ ⁻ (g)	224	Calcium bromide (CaBr ₂)	Br ₂ Ca ₁ (cr)	473
Boron hydride sulfide (HBS)	B ₁ H ₁ S ₁ (g)	227	Calcium chloride (CaCl)	Ca ₁ Cl ₁ (g)	710
Boron hydride sulfide, ion (HBS ⁺)	B ₁ H ₁ S ₁ ⁺ (g)	228	Calcium chloride (CaCl ₂)	Ca ₁ Cl ₂ (cr)	711
Boron, ion (B ⁺)	B ₁ ^{+(g)}	182	Calcium chloride (CaCl ₂)	Ca ₁ Cl ₂ (l)	712
Boron, ion (B ⁻)	B ₁ ⁻ (g)	183	Calcium chloride (CaCl ₂)	Ca ₁ Cl ₂ (cr,l)	713
Boron nitride (BN)	B ₁ N ₁ (g)	249	Calcium chloride (CaCl ₂)	Ca ₁ Cl ₂ (g)	714
Boron nitride (BN)	B ₁ N ₁ (cr)	248	Calcium fluoride (CaF)	Ca ₁ F ₁ (g)	715
Boron oxide ((BO) ₂)	B ₂ O ₂ (g)	270	Calcium fluoride (CaF ₂)	Ca ₁ F ₂ (g)	719
Boron oxide (B ₂ O)	B ₂ O ₁ (g)	269	Calcium fluoride (CaF ₂)	Ca ₁ F ₂ (cr)	716
Boron oxide (B ₂ O ₃)	B ₂ O ₃ (g)	274	Calcium fluoride (CaF ₂)	Ca ₁ F ₂ (l)	717
Boron oxide (B ₂ O ₁)	B ₂ O ₁ (cr,l)	273	Calcium fluoride (CaF ₂)	Ca ₁ F ₂ (cr,l)	718
Boron oxide (B ₂ O ₃)	B ₂ O ₃ (l)	272	Calcium hydroxide (Ca(OH) ₂)	Ca ₁ H ₂ O ₂ (g)	723
Boron oxide (B ₂ O ₃)	B ₂ O ₃ (cr)	271	Calcium hydroxide (Ca(OH) ₂)	Ca ₁ H ₂ O ₂ (cr)	722
Boron oxide (BO)	B ₁ O ₁ (g)	254	Calcium hydroxide (CaOH)	Ca ₁ H ₁ O ₁ (g)	720
Boron oxide (BO ₂)	B ₁ O ₂ (g)	255	Calcium hydroxide, ion (CaOH ⁺)	Ca ₁ H ₁ O ₁ ⁺ (g)	721
Boron oxide, ion (BO ₂ ⁻)	B ₁ O ₂ ⁻ (g)	256	Calcium iodide (CaI)	Ca ₁ I ₁ (g)	724
Boron sulfide (BS)	B ₁ S ₁ (g)	257	Calcium iodide (CaI ₂)	Ca ₁ I ₂ (g)	728
Boroxin (B ₁ H ₃ O ₃)	B ₃ H ₃ O ₁ (cr)	287	Calcium iodide (CaI ₂)	Ca ₁ I ₂ (cr,l)	727
Boroxin (B ₃ H ₃ O ₃)	B ₃ H ₃ O ₁ (g)	288	Calcium iodide (CaI ₂)	Ca ₁ I ₂ (l)	726
Bromine (Br)	Br ₁ (g)	429	Calcium iodide (CaI ₂)	Ca ₁ I ₂ (cr)	725
Bromine (Br ₂)	Br ₂ (ref)	470	Calcium, ion (Ca ⁺)	Ca ₁ ^{+(g)}	709
Bromine (Br ₂)	Br ₂ (cr,l)	471	Calcium oxide (CaO)	Ca ₁ O ₁ (l)	730
Bromine (Br ₂)	Br ₂ (g)	472	Calcium oxide (CaO)	Ca ₁ O ₁ (cr)	729
Bromine chloride (BrCl)	Br ₁ Cl ₁ (g)	433	Calcium oxide (CaO)	Ca ₁ O ₁ (cr,l)	731
Bromine fluoride (BrF)	Br ₁ F ₁ (g)	434	Calcium oxide (CaO)	Ca ₁ O ₁ (g)	732
Bromine fluoride (BrF ₃)	Br ₁ F ₃ (g)	435	Calcium sulfide (CaS)	Ca ₁ S ₁ (cr)	733
Bromine fluoride (BrF ₅)	Br ₁ F ₅ (g)	436	Calcium sulfide (CaS)	Ca ₁ S ₁ (g)	734
Bromine, ion (Br ⁺)	Br ₁ ^{+(g)}	430	Carbon (C)	C ₁ (g)	551
Bromine, ion (Br ⁻)	Br ₁ ⁻ (g)	431	Carbon (C)	C ₁ (ref)	550
Bromine oxide (BrBrO)	Br ₂ O ₁ (g)	498	Carbon (C ₂)	C ₂ (g)	661
Bromine oxide (BrO)	Br ₁ O ₁ (g)	459	Carbon (C ₃)	C ₃ (g)	686
Bromine oxide (BrO ₁)	Br ₁ O ₁ (g)	462	Carbon (C ₄)	C ₄ (g)	691
Bromine oxide (BrOBr)	Br ₂ O ₁ (g)	497	Carbon (C ₅)	C ₅ (g)	696
Bromine oxide (BrOO)	Br ₁ O ₂ (g)	461	Carbon dioxide (CO ₂)	C ₁ O ₂ (g)	643
Bromine oxide (OBrO)	Br ₁ O ₂ (g)	460	Carbon dioxide, ion (CO ₂ ⁻)	C ₁ O ₂ ⁻ (g)	644
Bromoborane (BBr)	B ₁ Br ₁ (g)	185	Carbon disulfide (CS ₂)	C ₁ S ₂ (g)	647
Bromochloroborane (BBrCl)	B ₁ Br ₁ Cl ₁ (g)	186	Carbon, ion (C ⁺)	C ₁ ^{+(g)}	552
Bromodichloroborane (BBrCl ₂)	B ₁ Br ₁ Cl ₂ (g)	187	Carbon, ion (C ⁻)	C ₁ ⁻ (g)	553
Bromodifluoroborane (BBrF ₂)	B ₁ Br ₁ F ₂ (g)	189	Carbon, ion (C ₂ ⁻)	C ₂ ⁻ (g)	662
Bromofluoroborane (BBrF)	B ₁ Br ₁ F ₁ (g)	188	Carbon monoxide (CO)	C ₁ O ₁ (g)	641
Bromoimidogen (NbR)	Br ₁ N ₁ (g)	453	Carbon oxide sulfide (COS)	C ₁ O ₁ S ₁ (g)	642
Bromomethylidyne (CBR)	C ₁ Br ₁ (g)	562	Carbon phosphide (CP)	C ₁ P ₁ (g)	645
Bromosilane (SiH ₃ Br)	Br ₁ H ₃ Si ₁ (g)	439	Carbon suboxide (C ₂ O ₂)	C ₂ O ₂ (g)	690
Bromosilylidyne (SiBr)	Br ₁ Si ₁ (g)	465	Carbon sulfide (CS)	C ₁ S ₁ (g)	646
Bromotrifluoromethane (CBrF ₃)	C ₁ Br ₁ F ₃ (g)	563	Carbonic chloride fluoride (COClF)	C ₁ Cl ₁ F ₁ O ₁ (g)	567

Table Title	Formula	Page	Table Title	Formula	Page
Carbonic dichloride (COCl_2)	$\text{C}_1\text{Cl}_2\text{O}_1(\text{g})$	573	Chloroborane, ion (BCl^+)	$\text{B}_1\text{Cl}_1^+(\text{g})$	198
Carbonic difluoride (COF_2)	$\text{C}_1\text{F}_2\text{O}_1(\text{g})$	584	Chlorodifluoroborane (BClF_2)	$\text{B}_1\text{Cl}_1\text{F}_2(\text{g})$	200
Carbonyl chloride (COCl)	$\text{C}_1\text{Cl}_1\text{O}_1(\text{g})$	570	Chlorodifluoromethane (CHClF_2)	$\text{C}_1\text{H}_1\text{Cl}_1\text{F}_2(\text{g})$	594
Carbonyl fluoride (COF)	$\text{C}_1\text{F}_1\text{O}_1(\text{g})$	581	Chloroethyne (C_2HCl)	$\text{C}_2\text{H}_1\text{Cl}_1(\text{g})$	673
CCO radical (C_2O)	$\text{C}_2\text{O}_1(\text{g})$	684	Chlorofluoroborane (BClF)	$\text{B}_1\text{Cl}_1\text{F}_1(\text{g})$	199
Cesium (Cs)	$\text{Cs}_1(\text{g})$	981	Chlorofluoromethane (CH_2ClF)	$\text{C}_1\text{H}_2\text{Cl}_1\text{F}_1(\text{g})$	606
Cesium (Cs)	$\text{Cs}_1(\text{cr},\text{l})$	980	Chloromethane (CH_3Cl)	$\text{C}_1\text{H}_3\text{Cl}_1(\text{g})$	611
Cesium (Cs)	$\text{Cs}_1(\text{l})$	979	Chloromethylene (CHCl)	$\text{C}_1\text{H}_1\text{Cl}_1(\text{g})$	593
Cesium (Cs)	$\text{Cs}_1(\text{cr})$	978	Chloromethylidyne (CCl)	$\text{C}_1\text{Cl}_1(\text{g})$	566
Cesium (Cs)	$\text{Cs}_1(\text{ref})$	977	Chlorosilane (SiH_3Cl)	$\text{Cl}_1\text{H}_1\text{Si}_1(\text{g})$	764
Cesium (Cs ₂)	$\text{Cs}_2(\text{g})$	994	Chlorotrifluoromethane (CClF_3)	$\text{C}_1\text{Cl}_1\text{F}_3(\text{g})$	568
Cesium chloride ((CsCl) ₂)	$\text{Cl}_2\text{Cs}_2(\text{g})$	816	Chlorotrifluorosilane (SiClF_3)	$\text{Cl}_1\text{F}_3\text{Si}_1(\text{g})$	758
Cesium chloride (CsCl)	$\text{Cl}_1\text{Cs}_1(\text{cr})$	741	Chromium (Cr)	$\text{Cr}_1(\text{g})$	963
Cesium chloride (CsCl)	$\text{Cl}_1\text{Cs}_1(\text{l})$	742	Chromium (Cr)	$\text{Cr}_1(\text{ref})$	959
Cesium chloride (CsCl)	$\text{Cl}_1\text{Cs}_1(\text{g})$	744	Chromium (Cr)	$\text{Cr}_1(\text{cr},\text{l})$	962
Cesium chloride (CsCl)	$\text{Cl}_1\text{Cs}_1(\text{cr},\text{l})$	743	Chromium (Cr)	$\text{Cr}_1(\text{l})$	961
Cesium fluoride ((CsF) ₂)	$\text{Cs}_2\text{F}_2(\text{g})$	995	Chromium (Cr)	$\text{Cr}_1(\text{cr})$	960
Cesium fluoride (CsF)	$\text{Cs}_1\text{F}_1(\text{cr},\text{l})$	986	Chromium carbide (Cr_2C_6)	$\text{C}_6\text{Cr}_2(\text{cr})$	699
Cesium fluoride (CsF)	$\text{Cs}_1\text{F}_1(\text{l})$	985	Chromium carbide (Cr_3C_2)	$\text{C}_2\text{Cr}_3(\text{cr})$	667
Cesium fluoride (CsF)	$\text{Cs}_1\text{F}_1(\text{cr})$	984	Chromium carbide (Cr_7C_3)	$\text{C}_3\text{Cr}_7(\text{cr})$	688
Cesium fluoride (CsF)	$\text{Cs}_1\text{F}_1(\text{g})$	987	Chromium, ion (Cr^+)	$\text{Cr}_1^+(\text{g})$	964
Cesium hydroxide ((CsOH) ₂)	$\text{Cs}_2\text{H}_2\text{O}_2(\text{g})$	996	Chromium, ion (Cr^-)	$\text{Cr}_1^-(\text{g})$	965
Cesium hydroxide (CsOH)	$\text{Cs}_1\text{H}_1\text{O}_1(\text{cr})$	988	Chromium nitride (Cr_2N)	$\text{Cr}_2\text{N}_1(\text{cr})$	971
Cesium hydroxide (CsOH)	$\text{Cs}_1\text{H}_1\text{O}_1(\text{l})$	989	Chromium nitride (CrN)	$\text{Cr}_1\text{N}_1(\text{g})$	967
Cesium hydroxide (CsOH)	$\text{Cs}_1\text{H}_1\text{O}_1(\text{cr},\text{l})$	990	Chromium nitride (CrN)	$\text{Cr}_1\text{N}_1(\text{cr})$	966
Cesium hydroxide (CsOH)	$\text{Cs}_1\text{H}_1\text{O}_1(\text{g})$	991	Chromium oxide (Cr_2O_3)	$\text{Cr}_2\text{O}_1(\text{cr})$	972
Cesium hydroxide, ion (CsOH^+)	$\text{Cs}_1\text{H}_1\text{O}_1^+(\text{g})$	992	Chromium oxide (Cr_2O_3)	$\text{Cr}_2\text{O}_3(\text{cr},\text{l})$	974
Cesium, ion (Cs^+)	$\text{Cs}_1^+(\text{g})$	982	Chromium oxide (Cr_2O_3)	$\text{Cr}_2\text{O}_3(\text{l})$	973
Cesium, ion (Cs^-)	$\text{Cs}_1^-(\text{g})$	983	Chromium oxide (CrO)	$\text{Cr}_1\text{O}_1(\text{g})$	968
Cesium oxide (Cs_2O)	$\text{Cs}_2\text{O}_1(\text{g})$	997	Chromium oxide (CrO_2)	$\text{Cr}_1\text{O}_2(\text{g})$	969
Cesium oxide (CsO)	$\text{Cs}_1\text{O}_1(\text{g})$	993	Chromium oxide (CrO_3)	$\text{Cr}_1\text{O}_3(\text{g})$	970
Cesium sulfate (Cs_2SO_4)	$\text{Cs}_2\text{O}_4\text{S}_1(\text{l})$	1000	Chlorosilylidyne (SiCl)	$\text{Cl}_1\text{Si}_1(\text{g})$	806
Cesium sulfate (Cs_2SO_4)	$\text{Cs}_2\text{O}_4\text{S}_1(\text{cr},\text{l})$	1001	CNC radical (C_2N)	$\text{C}_2\text{N}_1(\text{g})$	681
Cesium sulfate (Cs_2SO_4)	$\text{Cs}_2\text{O}_4\text{S}_1(\text{g})$	1002	CNN radical (CNN)	$\text{C}_1\text{N}_2(\text{g})$	636
Cesium sulfate, I (Cs_2SO_4)	$\text{Cs}_2\text{O}_4\text{S}_1(\text{cr})$	998	Cobalt (Co)	$\text{Co}_1(\text{ref})$	943
Cesium sulfate, II (Cs_2SO_4)	$\text{Cs}_2\text{O}_4\text{S}_1(\text{cr})$	999	Cobalt (Co)	$\text{Co}_1(\text{cr})$	944
Chiolite ($\text{Na}_5\text{Al}_1\text{F}_4$)	$\text{Al}_1\text{F}_4\text{Na}_5(\text{cr})$	164	Cobalt (Co)	$\text{Co}_1(\text{l})$	945
Chiolite ($\text{Na}_5\text{Al}_3\text{F}_4$)	$\text{Al}_1\text{F}_4\text{Na}_5(\text{l})$	165	Cobalt (Co)	$\text{Co}_1(\text{cr},\text{l})$	946
Chiolite ($\text{Na}_5\text{Al}_3\text{F}_4$)	$\text{Al}_1\text{F}_4\text{Na}_5(\text{cr},\text{l})$	166	Cobalt (Co)	$\text{Co}_1(\text{g})$	947
Chlorine (Cl)	$\text{Cl}_1(\text{g})$	737	Cobalt chloride ((CoCl_2) ₂)	$\text{Cl}_4\text{Co}_2(\text{g})$	890
Chlorine (Cl ₂)	$\text{Cl}_2(\text{ref})$	811	Cobalt chloride (CoCl)	$\text{Cl}_1\text{Co}_1(\text{g})$	740
Chlorine fluoride (ClF)	$\text{Cl}_1\text{F}_1(\text{g})$	751	Cobalt chloride (CoCl_2)	$\text{Cl}_2\text{Co}_1(\text{cr})$	812
Chlorine fluoride (ClF_3)	$\text{Cl}_1\text{F}_1(\text{g})$	757	Cobalt chloride (CoCl_2)	$\text{Cl}_2\text{Co}_1(\text{l})$	813
Chlorine fluoride (ClF_5)	$\text{Cl}_1\text{F}_5(\text{g})$	759	Cobalt chloride (CoCl_2)	$\text{Cl}_2\text{Co}_1(\text{cr},\text{l})$	814
Chlorine, ion (Cl^+)	$\text{Cl}_1^+(\text{g})$	738	Cobalt chloride (CoCl_2)	$\text{Cl}_2\text{Co}_1(\text{g})$	815
Chlorine, ion (Cl^-)	$\text{Cl}_1^-(\text{g})$	739	Cobalt chloride (CoCl_3)	$\text{Cl}_3\text{Co}_1(\text{g})$	873
Chlorine oxide (ClClO)	$\text{Cl}_2\text{O}_1(\text{g})$	842	Cobalt fluoride (CoF_2)	$\text{Co}_1\text{F}_2(\text{cr},\text{l})$	952
Chlorine oxide (ClClO_2)	$\text{Cl}_2\text{O}_2(\text{g})$	846	Cobalt fluoride (CoF_2)	$\text{Co}_1\text{F}_2(\text{l})$	951
Chlorine oxide (ClO)	$\text{Cl}_1\text{O}_1(\text{g})$	795	Cobalt fluoride (CoF_2)	$\text{Co}_1\text{F}_2(\text{g})$	953
Chlorine oxide (ClO_2Cl)	$\text{Cl}_2\text{O}_2(\text{g})$	845	Cobalt fluoride (CoF_2)	$\text{Co}_1\text{F}_2(\text{cr})$	950
Chlorine oxide (ClO_3)	$\text{Cl}_1\text{O}_3(\text{g})$	799	Cobalt fluoride (CoF_3)	$\text{Co}_1\text{F}_3(\text{cr})$	994
Chlorine oxide (ClOCl)	$\text{Cl}_2\text{O}_1(\text{g})$	841	Cobalt, ion (Co^+)	$\text{Co}_1^+(\text{g})$	948
Chlorine oxide (ClOO)	$\text{Cl}_1\text{O}_2(\text{g})$	798	Cobalt, ion (Co^-)	$\text{Co}_1^-(\text{g})$	949
Chlorine oxide (ClOOCl)	$\text{Cl}_2\text{O}_2(\text{g})$	844	Cobalt oxide (Co_2O_4)	$\text{Co}_2\text{O}_4(\text{cr})$	957
Chlorine oxide (OCIO)	$\text{Cl}_1\text{O}_2(\text{g})$	797	Cobalt oxide (CoO)	$\text{Co}_1\text{O}_1(\text{cr})$	955
Chloroborane (BCl)	$\text{B}_1\text{Cl}_1(\text{g})$	197	Cobalt sulfate (CoSO_4)	$\text{Co}_1\text{O}_4\text{S}_1(\text{cr})$	956

Table Title	Formula	Page	Table Title	Formula	Page
Copper (Cu)	Cu ₁ (ref)	1005	Dibromochloroborane (BBr ₂ Cl)	B ₁ Br ₂ Cl ₁ (g)	192
Copper (Cu)	Cu ₁ (cr)	1006	Dibromofluoroborane (BBr ₂ F)	B ₁ Br ₂ F ₁ (g)	193
Copper (Cu)	Cu ₁ (l)	1007	Dibromosilane (SiH ₂ Br ₂)	Br ₂ H ₂ Si ₁ (g)	481
Copper (Cu)	Cu ₁ (cr,l)	1008	Dibromosilylene (SiBr ₂)	Br ₂ Si ₁ (g)	503
Copper (Cu)	Cu ₁ (g)	1009	Dichloroborane ((BCl ₂) ₂)	B ₂ Cl ₄ (g)	262
Copper (Cu ₂)	Cu ₂ (g)	1022	Dichloroborane (BCl ₂)	B ₁ Cl ₂ (g)	202
Copper chloride ((CuCl) ₃)	Cl ₃ Cu ₃ (g)	874	Dichloroborane (BHCl ₂)	B ₁ Cl ₂ H ₁ (g)	206
Copper chloride (CuCl)	Cl ₁ Cu ₁ (cr)	745	Dichloroborane, ion (BCl ₂ ⁺)	B ₁ Cl ₂ ⁺ (g)	203
Copper chloride (CuCl)	Cl ₁ Cu ₁ (l)	746	Dichloroborane, ion (BCl ₂ ⁻)	B ₁ Cl ₂ ⁻ (g)	204
Copper chloride (CuCl)	Cl ₁ Cu ₁ (cr,l)	747	Dichlorodifluoromethane (CCl ₂ F ₂)	C ₁ Cl ₂ F ₂ (g)	572
Copper chloride (CuCl)	Cl ₁ Cu ₁ (g)	748	Dichloroethyne (C ₂ Cl ₂)	C ₂ Cl ₂ (g)	664
Copper chloride (CuCl ₂)	Cl ₂ Cu ₁ (cr)	817	Dichlorofluoroborane (BCl ₂ F)	B ₁ Cl ₂ F ₁ (g)	205
Copper cyanide (CuCN)	C ₁ Cu ₁ N ₁ (cr)	577	Dichlorofluoromethane (CHCl ₂ F)	C ₁ H ₁ Cl ₂ F(g)	595
Copper fluoride (CuF)	Cu ₁ F ₁ (g)	1013	Dichloromethane (CH ₂ Cl ₂)	C ₁ H ₂ Cl ₂ (g)	607
Copper fluoride (CuF)	Cu ₁ F ₁ (cr)	1012	Dichloromethylene (CCl ₂)	C ₁ Cl ₂ (g)	571
Copper fluoride (CuF ₂)	Cu ₁ F ₂ (g)	1017	Dichlorosilane (SiH ₂ Cl ₂)	Cl ₂ H ₂ Si ₁ (g)	823
Copper fluoride (CuF ₂)	Cu ₁ F ₂ (cr,l)	1016	Dichlorosilylene (SiCl ₂)	Cl ₂ Si ₁ (g)	860
Copper fluoride (CuF ₂)	Cu ₁ F ₂ (l)	1015	Difluoroamidogen (NF ₂)	F ₂ N ₁ (g)	1124
Copper fluoride (CuF ₂)	Cu ₁ F ₂ (cr)	1014	Di fluoroborane ((BF ₂) ₂)	B ₂ F ₄ (g)	263
Copper hydroxide (Cu(OH) ₂)	Cu ₁ H ₂ O ₂ (cr)	1018	Di fluoroborane (BF ₂)	B ₁ F ₂ (g)	210
Copper, ion (Cu ⁺)	Cu ⁺ (g)	1010	Di fluoroborane (BHF ₂)	B ₁ F ₂ H ₁ (g)	213
Copper, ion (Cu ⁻)	Cu ⁻ (g)	1011	Di fluoroborane, ion (BF ₂ ⁺)	B ₁ F ₂ ⁺ (g)	211
Copper oxide (Cu ₂ O)	Cu ₂ O ₁ (cr,l)	1025	Di fluoroborane, ion (BF ₂ ⁻)	B ₁ F ₂ ⁻ (g)	212
Copper oxide (Cu ₂ O)	Cu ₂ O ₁ (l)	1024	Di fluoroborane oxide (O(BF ₂) ₂)	B ₂ F ₄ O ₁ (g)	264
Copper oxide (Cu ₂ O)	Cu ₂ O ₁ (cr)	1023	Di fluoroboroxin (B ₃ HO ₃ F ₂)	B ₃ F ₂ H ₁ O ₃ (g)	284
Copper oxide (CuO)	Cu ₁ O ₁ (cr)	1019	Di fluorodisulfane (FSSF)	F ₂ S ₂ (g)	1146
Copper oxide (CuO)	Cu ₁ O ₁ (g)	1020	Di fluorooethyne (C ₂ F ₂)	C ₂ F ₂ (g)	668
Copper oxide sulfate (CuO·CuSO ₄)	Cu ₂ O ₃ S ₁ (cr)	1026	Di fluorohydroxyborane (BF ₂ OH)	B ₁ F ₂ H ₁ O ₁ (g)	214
Copper sulfate (CuSO ₄)	Cu ₁ O ₄ S ₁ (cr)	1021	Di fluoromethane (CH ₂ F ₂)	C ₁ H ₂ F ₂ (g)	608
Cryolite (Na ₃ AlF ₆)	Al ₁ F ₆ Na ₃ (cr,l)	113	Di fluoromethylene (CF ₂)	C ₁ F ₂ (g)	582
Cryolite (Na ₃ AlF ₆)	Al ₁ F ₆ Na ₃ (l)	112	Di fluoromethylene, ion (CF ₂ ⁺)	C ₁ F ₂ ⁺ (g)	583
Cryolite, alpha (Na ₃ AlF ₆)	Al ₁ F ₆ Na ₃ (cr)	110	Di fluorooxsilane (OSiF ₂)	F ₂ O ₁ Si ₁ (g)	1131
Cryolite, beta (Na ₃ AlF ₆)	Al ₁ F ₆ Na ₃ (cr)	111	Di fluorosilane (SiH ₂ F ₂)	F ₂ H ₂ Si ₁ (g)	1108
Cyanide (CN ⁻)	C ₁ N ₁ ⁻ (g)	630	Di fluorosilylene (SiF ₂)	F ₂ Si ₁ (g)	1148
Cyanogen (CN)	C ₁ N ₁ (g)	628	Dihydroxyborane ((B(OH) ₂) ₂)	B ₂ H ₄ O ₄ (cr)	265
Cyanogen bromide (BrCN)	C ₁ Br ₁ N ₁ (g)	564	Dihydroxyborane ((B(OH) ₂) ₂)	B ₂ H ₄ O ₄ (g)	266
Cyanogen chloride (ClCN)	C ₁ Cl ₁ N ₁ (g)	569	Dihydroxyborane (B(OH) ₂)	B ₁ H ₂ O ₂ (g)	239
Cyanogen fluoride (FCN)	C ₁ F ₁ N ₁ (g)	580	Diiodoborane (Bi ₂)	B ₁ I ₂ (g)	238
Cyanogen iodide (CNI)	C ₁ I ₁ N ₁ (g)	616	Diiodosilane (SiH ₂ I ₂)	H ₂ I ₂ Si ₁ (g)	1313
Cyanogen, ion (CN ⁺)	C ₁ N ₁ ⁺ (g)	629	Diiodosilylene (SiI ₂)	I ₂ Si ₁ (g)	1432
Decaborane (B ₁₀ H ₁₄)	B ₁₀ H ₁₄ (g)	315	Electron gas (e ⁻)	e ⁻ (ref)	1049
Decaborane (B ₁₀ H ₁₄)	B ₁₀ H ₁₄ (cr,l)	314	Ethanedinitrile ((CN) ₂)	C ₂ N ₂ (g)	682
Decaborane (B ₁₀ H ₁₄)	B ₁₀ H ₁₄ (l)	313	Ethene (C ₂ H ₄)	C ₂ H ₄ (g)	676
Decaborane (B ₁₀ H ₁₄)	B ₁₀ H ₁₄ (cr)	312	Ethyne (C ₂ H ₂)	C ₂ H ₂ (g)	675
Deuterium (D)	D ₁ (g)	1029	Ethyne (C ₂ H)	C ₂ H ₁ (g)	672
Deuterium (D ₂)	D ₂ (ref)	1040	Fluorine (F)	F ₁ (g)	1051
Deuterium, ion (D ⁺)	D ₁ ⁺ (g)	1030	Fluorine (F ₂)	F ₂ (ref)	1099
Deuterium, ion (D ⁻)	D ₁ ⁻ (g)	1031	Fluorine, ion (F ⁺)	F ₁ ⁺ (g)	1052
Deuterium, ion (D ₂ ⁺)	D ₂ ⁺ (g)	1041	Fluorine, ion (F ⁻)	F ₁ ⁻ (g)	1053
Deuterium, ion (D ₂ ⁻)	D ₂ ⁻ (g)	1042	Fluorine nitrate (FONO ₂)	F ₁ N ₁ O ₃ (g)	1076
Diazene, cis (HNNH)	H ₂ N ₂ (g)	1321	Fluoroborane (BF)	B ₁ F ₁ (g)	208
Diazene-d ₂ , cis (DNND)	D ₂ N ₂ (g)	1044	Fluoroboroxin (B ₃ H ₂ O ₃ F)	B ₃ F ₁ H ₂ O ₃ (g)	293
Diborane (B ₂ H ₆)	B ₂ H ₆ (g)	267	Fluoroethyne (C ₂ HF)	C ₂ H ₁ F ₁ (g)	674
Dibromoborane (BBr ₂)	B ₁ Br ₂ (g)	191	Fluoroimidogen (NF)	F ₁ N ₁ (g)	1073
Dibromoborane (BHBBr ₂)	B ₁ Br ₂ H ₁ (g)	194			

Table Title

Table Title	Formula	Page	Table Title	Formula	Page
Fluoromethane (CH_3F)	$\text{C}_1\text{H}_3\text{F}_1(\text{g})$	613	Hydrogen isocyanate (HNCO)	$\text{C}_1\text{H}_1\text{N}_1\text{O}_1(\text{g})$	601
Fluoromethylene (CHF)	$\text{C}_1\text{H}_1\text{F}_1(\text{g})$	597	Hydrogen peroxide (HOOH)	$\text{H}_2\text{O}_2(\text{g})$	1330
Fluoromethylidyne (CF)	$\text{C}_1\text{F}_1(\text{g})$	578	Hydrogen sulfide (H_2S)	$\text{H}_2\text{S}_1(\text{g})$	1340
Fluoromethylidyne, ion (CF^+)	$\text{C}_1\text{F}_1^+(\text{g})$	579	Hydrogen sulfide- d_2 (D_2S)	$\text{D}_2\text{S}_1(\text{g})$	1046
Fluorosilane (SiH_3F)	$\text{F}_1\text{H}_1\text{Si}_1(\text{g})$	1058	Hydronium, ion (H_3O^+)	$\text{H}_3\text{O}_1^+(\text{g})$	1344
Fluorosilylidyne (SiF)	$\text{F}_1\text{Si}_1(\text{g})$	1093	Hydroperoxy (HO \cdot)	$\text{H}_1\text{O}_2(\text{g})$	1303
Fluorosulfuric acid (HSO_3F)	$\text{F}_1\text{H}_1\text{O}_3\text{S}_1(\text{g})$	1057	Hydroxyl (OH)	$\text{H}_1\text{O}_1(\text{g})$	1298
Formaldehyde (H_2CO)	$\text{C}_1\text{H}_2\text{O}_1(\text{g})$	609	Hydroxyl- d_1 (OD)	$\text{D}_1\text{O}_1(\text{g})$	1038
Formyl (HCO)	$\text{C}_1\text{H}_1\text{O}_1(\text{g})$	602	Hydroxyl, ion (OH^+)	$\text{H}_1\text{O}_1^+(\text{g})$	1299
Formyl fluoride (HCOF)	$\text{C}_1\text{H}_1\text{F}_1\text{O}_1(\text{g})$	598	Hydroxyl, ion (OH^-)	$\text{H}_1\text{O}_1^-(\text{g})$	1300
Formyl, unipositive ion (HCO^+)	$\text{C}_1\text{H}_1\text{O}_1^+(\text{g})$	603	Hypochlorous acid (HOCl)	$\text{Cl}_1\text{H}_1\text{O}_1(\text{g})$	763
Gallium (Ga)	$\text{Ga}_1(\text{ref})$	1253	Hypochlorous acid- d_1 (DOCl)	$\text{Cl}_1\text{D}_1\text{O}_1(\text{g})$	750
Gallium (Ga)	$\text{Ga}_1(\text{cr})$	1254	Hypofluorous acid (HOF)	$\text{F}_1\text{H}_1\text{O}_1(\text{g})$	1056
Gallium (Ga)	$\text{Ga}_1(\text{l})$	1255	Imidogen (NH)	$\text{H}_1\text{N}_1(\text{g})$	1286
Gallium (Ga)	$\text{Ga}_1(\text{cr},\text{l})$	1256	Imidogen- d_1 (ND)	$\text{D}_1\text{N}_1(\text{g})$	1037
Gallium (Ga)	$\text{Ga}_1(\text{g})$	1257	Iodine (I)	$\text{I}_1(\text{g})$	1387
Gallium, ion (Ga^+)	$\text{Ga}_1^+(\text{g})$	1258	Iodine (I_2)	$\text{I}_2(\text{g})$	1417
Gallium, ion (Ga^-)	$\text{Ga}_1^-(\text{g})$	1259	Iodine (I_2)	$\text{I}_2(\text{cr},\text{l})$	1416
			Iodine (I_2)	$\text{I}_2(\text{l})$	1415
Hafnium (Hf)	$\text{Hf}_1(\text{ref})$	1363	Iodine (I_2)	$\text{I}_2(\text{cr})$	1414
Hafnium (Hf)	$\text{Hf}_1(\text{g})$	1368	Iodine (I_2)	$\text{I}_2(\text{ref})$	1413
Hafnium (Hf)	$\text{Hf}_1(\text{cr},\text{l})$	1367	Iodine bromide (IBr)	$\text{Br}_1\text{I}_1(\text{g})$	442
Hafnium (Hf)	$\text{Hf}_1(\text{l})$	1366	Iodine chloride (ICl)	$\text{Cl}_1\text{I}_1(\text{g})$	771
Hafnium, alpha (Hf)	$\text{Hf}_1(\text{cr})$	1364	Iodine chloride (ICl)	$\text{Cl}_1\text{I}_1(\text{cr},\text{l})$	770
Hafnium, beta (Hf)	$\text{Hf}_1(\text{cr})$	1365	Iodine chloride (ICl)	$\text{Cl}_1\text{I}_1(\text{l})$	769
Hafnium, ion (Hf^+)	$\text{Hf}_1^+(\text{g})$	1369	Iodine chloride (ICl)	$\text{Cl}_1\text{I}_1(\text{cr})$	768
Hafnium, ion (Hf^-)	$\text{Hf}_1^-(\text{g})$	1370	Iodine fluoride (IF)	$\text{F}_1\text{I}_1(\text{g})$	1060
Helium (He)	$\text{He}_1(\text{ref})$	1361	Iodine fluoride (IF ₅)	$\text{F}_5\text{I}_1(\text{g})$	1196
Helium, ion (He^+)	$\text{He}_1^+(\text{g})$	1362	Iodine fluoride (IF ₇)	$\text{F}_7\text{I}_1(\text{g})$	1210
Hexachloroethane (C_2Cl_6)	$\text{C}_2\text{Cl}_6(\text{g})$	666	Iodine, ion (I^+)	$\text{I}_1^+(\text{g})$	1388
Hexafluoroethane (C_2F_6)	$\text{C}_2\text{F}_6(\text{g})$	671	Iodine, ion (I^-)	$\text{I}_1^-(\text{g})$	1389
Hydrazine (N_2H_4)	$\text{H}_4\text{N}_2(\text{g})$	1351	Iodine oxide (II O)	$\text{I}_2\text{O}_1(\text{g})$	1427
Hydrazine (N_2H_4)	$\text{H}_4\text{N}_2(\text{l})$	1350	Iodine oxide (IO)	$\text{I}_1\text{O}_1(\text{g})$	1404
Hydrochloric acid- d_1 (DCl)	$\text{Cl}_1\text{D}_1(\text{g})$	749	Iodine oxide (IO ₃)	$\text{I}_1\text{O}_3(\text{g})$	1407
Hydrofluoric acid- d_1 (DF)	$\text{D}_1\text{F}_1(\text{g})$	1032	Iodine oxide (IOI)	$\text{I}_2\text{O}_1(\text{g})$	1426
Hydrogen (H)	$\text{H}_1(\text{g})$	1261	Iodine oxide (IOO)	$\text{I}_1\text{O}_2(\text{g})$	1406
Hydrogen (H_2)	$\text{H}_2(\text{ref})$	1310	Iodine oxide (OIO)	$\text{I}_1\text{O}_2(\text{g})$	1405
Hydrogen bromide (HBr)	$\text{Br}_1\text{H}_1(\text{g})$	438	Iodoborane (BI)	$\text{B}_1\text{I}_1(\text{g})$	237
Hydrogen chloride (HCl)	$\text{Cl}_1\text{H}_1(\text{g})$	762	Iodosilane (SiH_3I)	$\text{H}_3\text{I}_1\text{Si}_1(\text{g})$	1342
Hydrogen cyanide (HCN)	$\text{C}_1\text{H}_1\text{N}_1(\text{g})$	600	Iodosilylidyne (SiI)	$\text{I}_1\text{Si}_1(\text{g})$	1409
Hydrogen- d_1 (HD)	$\text{D}_1\text{H}_1(\text{g})$	1033	Iron (Fe)	$\text{Fe}_1(\text{ref})$	1221
Hydrogen- d_1 , ion (HD^+)	$\text{D}_1\text{H}_1^+(\text{g})$	1034	Iron (Fe)	$\text{Fe}_1(\text{l})$	1224
Hydrogen- d_1 , ion (HD^-)	$\text{D}_1\text{H}_1^-(\text{g})$	1035	Iron (Fe)	$\text{Fe}_1(\text{cr},\text{l})$	1225
Hydrogen fluoride ((HF) ₂)	$\text{F}_2\text{H}_2(\text{g})$	1107	Iron (Fe)	$\text{Fe}_1(\text{g})$	1226
Hydrogen fluoride (H_3F_3)	$\text{F}_3\text{H}_3(\text{g})$	1161	Iron, alpha-delta (Fe)	$\text{Fe}_1(\text{cr})$	1222
Hydrogen fluoride (H_4F_4)	$\text{F}_4\text{H}_4(\text{g})$	1177	Iron bromide ((FeBr ₂) ₂)	$\text{Br}_4\text{Fe}_2(\text{g})$	525
Hydrogen fluoride (H_5F_5)	$\text{F}_5\text{H}_5(\text{g})$	1195	Iron bromide (FeBr ₂)	$\text{Br}_2\text{Fe}_1(\text{cr})$	477
Hydrogen fluoride (H_6F_6)	$\text{F}_6\text{H}_6(\text{g})$	1202	Iron bromide (FeBr ₂)	$\text{Br}_2\text{Fe}_1(\text{l})$	478
Hydrogen fluoride (H_7F_7)	$\text{F}_7\text{H}_7(\text{g})$	1209	Iron bromide (FeBr ₂)	$\text{Br}_2\text{Fe}_1(\text{cr},\text{l})$	479
Hydrogen fluoride (HF)	$\text{F}_1\text{H}_1(\text{g})$	1055	Iron bromide (FeBr ₂)	$\text{Br}_2\text{Fe}_1(\text{g})$	480
Hydrogen iodide (HI)	$\text{H}_1\text{I}_1(\text{g})$	1265	Iron carbonyl (Fe(CO) ₅)	$\text{C}_5\text{Fe}_1\text{O}_5(\text{g})$	680
Hydrogen, ion (H^+)	$\text{H}_1^+(\text{g})$	1262	Iron carbonyl (Fe(CO) ₅)	$\text{C}_5\text{Fe}_1\text{O}_5(\text{l})$	697
Hydrogen, ion (H^-)	$\text{H}_1^-(\text{g})$	1263	Iron chloride ((FeCl ₂) ₂)	$\text{Cl}_4\text{Fe}_2(\text{g})$	891
Hydrogen, ion (H_2^+)	$\text{H}_2^+(\text{g})$	1311	Iron chloride ((FeCl ₃) ₂)	$\text{Cl}_6\text{Fe}_2(\text{g})$	928
Hydrogen, ion (H_2^-)	$\text{H}_2^-(\text{g})$	1312	Iron chloride (FeCl)	$\text{Cl}_1\text{Fe}_1(\text{g})$	

Table Title	Formula	Page	Table Title	Formula	Page
Iron chloride (FeCl_2)	$\text{Cl}_2\text{Fe}_1(\text{cr},\text{l})$	821	Lead bromide (PbBr)	$\text{Br}_1\text{Pb}_1(\text{g})$	464
Iron chloride (FeCl_2)	$\text{Cl}_2\text{Fe}_1(\text{cr})$	819	Lead bromide (PbBr_2)	$\text{Br}_2\text{Pb}_1(\text{cr})$	499
Iron chloride (FeCl_2)	$\text{Cl}_2\text{Fe}_1(\text{l})$	820	Lead bromide (PbBr_2)	$\text{Br}_2\text{Pb}_1(\text{l})$	500
Iron chloride (FeCl_2)	$\text{Cl}_2\text{Fe}_1(\text{g})$	822	Lead bromide (PbBr_2)	$\text{Br}_2\text{Pb}_1(\text{cr},\text{l})$	501
Iron chloride (FeCl_1)	$\text{Cl}_1\text{Fe}_1(\text{g})$	879	Lead bromide (PbBr_2)	$\text{Br}_2\text{Pb}_1(\text{g})$	502
Iron chloride (FeCl_1)	$\text{Cl}_1\text{Fe}_1(\text{cr},\text{l})$	878	Lead bromide (PbBr_4)	$\text{Br}_4\text{Pb}_1(\text{g})$	529
Iron chloride (FeCl_1)	$\text{Cl}_1\text{Fe}_1(\text{l})$	877	Lead chloride (PbCl)	$\text{Cl}_1\text{Pb}_1(\text{g})$	801
Iron chloride (FeCl_1)	$\text{Cl}_1\text{Fe}_1(\text{cr})$	876	Lead chloride (PbCl_2)	$\text{Cl}_2\text{Pb}_1(\text{cr})$	850
Iron fluoride (FeF)	$\text{F}_1\text{Fe}_1(\text{g})$	1054	Lead chloride (PbCl_2)	$\text{Cl}_2\text{Pb}_1(\text{l})$	851
Iron fluoride (FeF_2)	$\text{F}_2\text{Fe}_1(\text{cr})$	1100	Lead chloride (PbCl_2)	$\text{Cl}_2\text{Pb}_1(\text{cr},\text{l})$	852
Iron fluoride (FeF_2)	$\text{F}_2\text{Fe}_1(\text{l})$	1101	Lead chloride (PbCl_2)	$\text{Cl}_2\text{Pb}_1(\text{g})$	853
Iron fluoride (FeF_2)	$\text{F}_2\text{Fe}_1(\text{cr},\text{l})$	1102	Lead chloride (PbCl_4)	$\text{Cl}_4\text{Pb}_1(\text{g})$	901
Iron fluoride (FeF_2)	$\text{F}_2\text{Fe}_1(\text{g})$	1103	Lead chloride, ion (PbCl^+)	$\text{Cl}_1\text{Pb}_1^+(\text{g})$	802
Iron fluoride (FeF_3)	$\text{F}_3\text{Fe}_1(\text{g})$	1159	Lead chloride, ion (PbCl_2^+)	$\text{Cl}_2\text{Pb}_1^+(\text{g})$	854
Iron fluoride (FeF_3)	$\text{F}_3\text{Fe}_1(\text{cr})$	1158	Lead fluoride (PbF)	$\text{F}_1\text{Pb}_1(\text{g})$	1089
Iron, gamma (Fe)	$\text{Fe}_1(\text{cr})$	1223	Lead fluoride (PbF_2)	$\text{F}_2\text{Pb}_1(\text{g})$	1142
Iron hydroxide (Fe(OH)_2)	$\text{Fe}_1\text{H}_2\text{O}_2(\text{cr})$	1229	Lead fluoride (PbF_2)	$\text{F}_2\text{Pb}_1(\text{cr},\text{l})$	1141
Iron hydroxide (Fe(OH)_2)	$\text{Fe}_1\text{H}_2\text{O}_2(\text{g})$	1230	Lead fluoride (PbF_2)	$\text{F}_2\text{Pb}_1(\text{l})$	1140
Iron hydroxide (Fe(OH)_3)	$\text{Fe}_1\text{H}_3\text{O}_3(\text{cr})$	1231	Lead fluoride (PbF_4)	$\text{F}_4\text{Pb}_1(\text{g})$	1186
Iron iodide ($(\text{FeI}_2)_2$)	$\text{Fe}_2\text{I}_4(\text{g})$	1247	Lead fluoride, alpha (PbF_2)	$\text{F}_2\text{Pb}_1(\text{cr})$	1138
Iron iodide (FeI_2)	$\text{Fe}_1\text{I}_2(\text{g})$	1235	Lead fluoride, beta (PbF_2)	$\text{F}_2\text{Pb}_1(\text{cr})$	1139
Iron iodide (FeI_2)	$\text{Fe}_1\text{I}_2(\text{cr},\text{l})$	1234	Lead hydride (PbH)	$\text{H}_1\text{Pb}_1(\text{g})$	1305
Iron iodide (FeI_2)	$\text{Fe}_1\text{I}_2(\text{l})$	1233	Lead iodide (PbI)	$\text{I}_1\text{Pb}_1(\text{g})$	1408
Iron iodide (FeI_2)	$\text{Fe}_1\text{I}_2(\text{cr})$	1232	Lead iodide (PbI_2)	$\text{I}_2\text{Pb}_1(\text{cr},\text{l})$	1430
Iron, ion (Fe^+)	$\text{Fe}_1^+(\text{g})$	1227	Lead iodide (PbI_2)	$\text{I}_2\text{Pb}_1(\text{g})$	1431
Iron, ion (Fe^-)	$\text{Fe}_1^-(\text{g})$	1228	Lead iodide (PbI_2)	$\text{I}_2\text{Pb}_1(\text{l})$	1429
Iron oxide (FeO)	$\text{Fe}_1\text{O}_1(\text{g})$	1239	Lead iodide (PbI_2)	$\text{I}_2\text{Pb}_1(\text{cr})$	1428
Iron oxide (FeO)	$\text{Fe}_1\text{O}_1(\text{cr},\text{l})$	1238	Lead iodide (PbI_4)	$\text{I}_4\text{Pb}_1(\text{g})$	1452
Iron oxide (FeO)	$\text{Fe}_1\text{O}_1(\text{l})$	1237	Lead, ion (Pb^+)	$\text{Pb}_1^+(\text{g})$	1840
Iron oxide (FeO)	$\text{Fe}_1\text{O}_1(\text{cr})$	1236	Lead, ion (Pb^-)	$\text{Pb}_1^-(\text{g})$	1841
Iron oxide, hematite (Fe_2O_3)	$\text{Fe}_2\text{O}_3(\text{cr})$	1248	Lead oxide (Pb_2O_4)	$\text{O}_4\text{Pb}_1(\text{cr})$	1787
Iron oxide, magnetite (Fe_3O_4)	$\text{Fe}_3\text{O}_4(\text{cr})$	1250	Lead oxide (PbO)	$\text{O}_1\text{Pb}_1(\text{l})$	1723
Iron oxide, wüstite ($\text{Fe}_{0.947}\text{O}$)	$\text{Fe}_{0.947}\text{O}_1(\text{cr})$	1219	Lead oxide (PbO)	$\text{O}_1\text{Pb}_1(\text{cr},\text{l})$	1724
Iron sulfate ($\text{Fe}_2(\text{SO}_4)_3$)	$\text{Fe}_2\text{O}_{12}\text{S}_3(\text{cr})$	1249	Lead oxide (PbO)	$\text{O}_1\text{Pb}_1(\text{g})$	1725
Iron sulfate (FeSO_4)	$\text{Fe}_1\text{O}_4\text{S}_1(\text{cr})$	1240	Lead oxide (PbO_2)	$\text{O}_2\text{Pb}_1(\text{cr})$	1749
Iron sulfide (FeS)	$\text{Fe}_1\text{S}_1(\text{g})$	1244	Lead oxide, red (PbO)	$\text{O}_1\text{Pb}_1(\text{cr})$	1721
Iron sulfide (FeS)	$\text{Fe}_1\text{S}_1(\text{l})$	1242	Lead oxide, yellow (PbO)	$\text{O}_1\text{Pb}_1(\text{cr})$	1722
Iron sulfide, marcasite (FeS_2)	$\text{Fe}_1\text{S}_2(\text{cr})$	1245	Lead silicate (Pb_2SiO_4)	$\text{O}_4\text{Pb}_2\text{Si}_1(\text{cr})$	1786
Iron sulfide, pyrite (FeS_2)	$\text{Fe}_1\text{S}_2(\text{cr})$	1246	Lead silicate (PbSiO_3)	$\text{O}_1\text{Pb}_1\text{Si}_1(\text{cr})$	1774
Iron sulfide, pyrrhotite ($\text{Fe}_{0.877}\text{S}$)	$\text{Fe}_{0.877}\text{S}_1(\text{cr})$	1220	Lead sulfide (PbS)	$\text{Pb}_1\text{S}_1(\text{g})$	1845
Iron sulfide, troilite (FeS)	$\text{Fe}_1\text{S}_1(\text{cr},\text{l})$	1243	Lead sulfide (PbS)	$\text{Pb}_1\text{S}_1(\text{cr},\text{l})$	1844
Iron sulfide, troilite (FeS)	$\text{Fe}_1\text{S}_1(\text{cr})$	1241	Lead sulfide (PbS)	$\text{Pb}_1\text{S}_1(\text{l})$	1843
Krypton (Kr)	$\text{Kr}_1(\text{ref})$	1491	Lead sulfide (PbS)	$\text{Pb}_1\text{S}_1(\text{cr})$	1842
Krypton, ion (Kr^+)	$\text{Kr}_1^+(\text{g})$	1492	Lithium (Li)	$\text{Li}_1(\text{g})$	1497
Lead (Pb)	$\text{Pb}_1(\text{g})$	1839	Lithium (Li)	$\text{Li}_1(\text{cr},\text{l})$	1496
Lead (Pb)	$\text{Pb}_1(\text{cr},\text{l})$	1838	Lithium (Li)	$\text{Li}_1(\text{l})$	1495
Lead (Pb)	$\text{Pb}_1(\text{l})$	1837	Lithium (Li)	$\text{Li}_1(\text{cr})$	1494
Lead (Pb)	$\text{Pb}_1(\text{cr})$	1836	Lithium (Li)	$\text{Li}_1(\text{ref})$	1493
Lead (Pb)	$\text{Pb}_1(\text{ref})$	1835	Lithium (Li_2)	$\text{Li}_2(\text{g})$	1505
Lead (Pb_2)	$\text{Pb}_2(\text{g})$	1846	Lithium aluminum oxide (LiAlO_2)	$\text{Al}_1\text{Li}_1\text{O}_2(\text{l})$	127
Lead borate ($\text{Pb}_2\text{B}_{10}\text{O}_{17}$)	$\text{B}_{10}\text{O}_{17}\text{Pb}_2(\text{cr})$	316	Lithium aluminum oxide (LiAlO_2)	$\text{Al}_1\text{Li}_1\text{O}_2(\text{cr},\text{l})$	128
Lead borate (Pb_2O_4)	$\text{B}_2\text{O}_4\text{Pb}_1(\text{cr})$	275	Lithium aluminum oxide (LiAlO_2)	$\text{Al}_1\text{Li}_1\text{O}_2(\text{cr})$	126
Lead borate (PbB_4O_7)	$\text{B}_4\text{O}_7\text{Pb}_1(\text{cr})$	301	Lithium borate ($\text{Li}_2\text{B}_4\text{O}_7$)	$\text{B}_4\text{Li}_2\text{O}_7(\text{cr})$	294
Lead borate (PbB_6O_9)	$\text{B}_6\text{O}_9\text{Pb}_1(\text{cr})$	307	Lithium borate ($\text{Li}_2\text{B}_4\text{O}_7$)	$\text{B}_4\text{Li}_2\text{O}_7(\text{cr},\text{l})$	295
			Lithium borate ($\text{Li}_2\text{B}_4\text{O}_7$)	$\text{B}_4\text{Li}_2\text{O}_7(\text{l})$	296
			Lithium borate ($\text{Li}_2\text{B}_6\text{O}_{10}$)	$\text{B}_6\text{Li}_2\text{O}_{10}(\text{cr})$	305

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Lithium borate ($\text{Li}_2\text{B}_3\text{O}_5$)	311
Lithium borate (LiBO_2)	247
Lithium borate (LiBO_2)	246
Lithium borate (LiBO_2)	245
Lithium borate (LiBO_2)	244
Lithium bromide ($(\text{LiBr})_2$)	488
Lithium bromide (LiBr)	447
Lithium bromide (LiBr)	448
Lithium bromide (LiBr)	449
Lithium bromide (LiBr)	450
Lithium carbide (Li_2C_2)	679
Lithium carbonate (Li_2CO_3)	624
Lithium carbonate (Li_2CO_3)	625
Lithium carbonate (Li_2CO_3)	626
Lithium chloride ($(\text{LiCl})_2$)	830
Lithium chloride ($(\text{LiCl})_3$)	881
Lithium chloride (LiCl)	780
Lithium chloride (LiCl)	779
Lithium chloride (LiCl)	778
Lithium chloride (LiCl)	777
Lithium chloride fluoride (Li_2ClF)	752
Lithium fluoride ($(\text{LiF})_2$)	1117
Lithium fluoride ($(\text{LiF})_3$)	1162
Lithium fluoride (LiF)	1066
Lithium fluoride (LiF)	1067
Lithium fluoride (LiF)	1068
Lithium fluoride (LiF)	1065
Lithium fluoride, ion (LiF^-)	1116
Lithium hexafluoroaluminate (Li_3AlF_6)	107
Lithium hexafluoroaluminate (Li_3AlF_6)	108
Lithium hexafluoroaluminate (Li_3AlF_6)	109
Lithium hydride (LiH)	1275
Lithium hydride (LiH)	1276
Lithium hydride (LiH)	1277
Lithium hydride (LiH)	1274
Lithium hydroxide ($(\text{LiOH})_2$)	1315
Lithium hydroxide (LiOH)	1278
Lithium hydroxide (LiOH)	1279
Lithium hydroxide (LiOH)	1280
Lithium hydroxide (LiOH)	1281
Lithium hydroxide, ion (LiOH^+)	1282
Lithium hypochlorite (LiOCl)	781
Lithium hypofluorite (LiOF)	1069
Lithium iodide ($(\text{LiI})_2$)	1419
Lithium iodide (LiI)	1397
Lithium iodide (LiI)	1396
Lithium iodide (LiI)	1395
Lithium iodide (LiI)	1394
Lithium, ion (Li^+)	1498
Lithium, ion (Li^-)	1499
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Lithium nitride (LiN)	1500
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Lithium oxide (Li_2O)	1506
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Lithium oxide, ion (LiO^-)	1504
Lithium oxynitride (LiON)	1501
Lithium perchlorate (LiClO_4)	782
Lithium perchlorate (LiClO_4)	783
Lithium perchlorate (LiClO_4)	784
Lithium peroxide (Li_2O_2)	1510
Lithium silicate ($\text{Li}_2\text{Si}_2\text{O}_5$)	1523
Lithium silicate ($\text{Li}_2\text{Si}_2\text{O}_5$)	1524
Lithium silicate ($\text{Li}_2\text{Si}_2\text{O}_5$)	1525
Lithium silicate (Li_2SiO_3)	1513
Lithium silicate (Li_2SiO_3)	1514
Lithium silicate (Li_2SiO_3)	1512
Lithium sodium oxide (LiONa)	1502
Lithium sulfate (Li_2SO_4)	1520
Lithium sulfate (Li_2SO_4)	1521
Lithium sulfate (Li_2SO_4)	1522
Lithium sulfate, alpha (Li_2SO_4)	1518
Lithium sulfate, beta (Li_2SO_4)	1519
Lithium tetrafluoroaluminate (LiAlF_4)	104
Lithium tetrafluoroberyllate (Li_2BeF_4)	387
Lithium tetrafluoroberyllate (Li_2BeF_4)	388
Lithium tetrafluoroberyllate (Li_2BeF_4)	389
Lithium tetrahydroaluminate (LiAlH_4)	120
Lithium tetrahydroborate (LiBH_4)	235
Lithium titanium oxide (Li_2TiO_3)	1516
Lithium titanium oxide (Li_2TiO_3)	1517
Lithium trifluoroberyllate (LiBeF_3)	383
Lithium trifluoroberyllate (LiBeF_3)	384
Lithium trifluoroberyllate (LiBeF_3)	385
Lithium trifluoroberyllate (LiBeF_3)	386
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Magnesium (Mg)	1529
Magnesium (Mg)	1530
Magnesium (Mg)	1531
Magnesium (Mg ₂)	1555
Magnesium aluminum oxide (MgAl_2O_4)	147
Magnesium aluminum oxide (MgAl_2O_4)	148
Magnesium aluminum oxide (MgAl_2O_4)	149
Magnesium boride (MgB_2)	268
Magnesium boride (MgB_4)	297
Magnesium bromide ((MgBr_2) ₂)	526
Magnesium bromide (MgBr)	451
Magnesium bromide (MgBr_2)	489
Magnesium bromide (MgBr_2)	490
Magnesium bromide (MgBr_2)	491
Magnesium bromide (MgBr_2)	492
Magnesium bromide, ion (MgBr_2^+)	493
Magnesium carbide (Mg_2C_1)	689
Magnesium carbide (Mg_2C_2)	680
Magnesium carbonate (MgCO_3)	627
Magnesium chloride ((MgCl_2) ₂)	892

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Magnesium chloride (MgCl)	Cl ₁ Mg ₁ (g)	785
Magnesium chloride (MgCl ₂)	Cl ₂ Mg ₁ (g)	834
Magnesium chloride (MgCl ₂)	Cl ₂ Mg ₁ (cr,l)	833
Magnesium chloride (MgCl ₂)	Cl ₂ Mg ₁ (l)	832
Magnesium chloride (MgCl ₂)	Cl ₂ Mg ₁ (cr)	831
Magnesium chloride fluoride (MgClF)	Cl ₁ F ₁ Mg ₁ (g)	753
Magnesium chloride, ion (MgCl ⁺)	Cl ₁ Mg [†] (g)	786
Magnesium fluoride ((MgF ₂) ₂)	F ₄ Mg ₂ (g)	1178
Magnesium fluoride (MgF)	F ₁ Mg ₁ (g)	1070
Magnesium fluoride (MgF ₂)	F ₂ Mg ₁ (g)	1121
Magnesium fluoride (MgF ₂)	F ₂ Mg ₁ (cr,l)	1120
Magnesium fluoride (MgF ₂)	F ₂ Mg ₁ (l)	1119
Magnesium fluoride (MgF ₂)	F ₂ Mg ₁ (cr)	1118
Magnesium fluoride, ion (MgF ⁺)	F ₁ Mg [†] (g)	1071
Magnesium fluoride, ion (MgF ₂)	F ₂ Mg [†] (g)	1122
Magnesium hydride (MgH)	H ₁ Mg ₁ (g)	1283
Magnesium hydride (MgH ₂)	H ₂ Mg ₁ (cr)	1316
Magnesium hydroxide (Mg(OH) ₂)	H ₂ Mg ₁ O ₂ (cr)	1317
Magnesium hydroxide (Mg(OH) ₂)	H ₂ Mg ₁ O ₂ (g)	1318
Magnesium hydroxide (MgOH)	H ₁ Mg ₁ O ₁ (g)	1284
Magnesium hydroxide, ion (MgOH ⁺)	H ₁ Mg ₁ O [†] (g)	1285
Magnesium iodide (MgI)	I ₁ Mg ₁ (g)	1398
Magnesium iodide (MgI ₂)	I ₂ Mg ₁ (cr)	1420
Magnesium iodide (MgI ₂)	I ₂ Mg ₁ (l)	1421
Magnesium iodide (MgI ₂)	I ₂ Mg ₁ (g)	1423
Magnesium iodide (MgI ₂)	I ₂ Mg ₁ (cr,l)	1422
Magnesium, ion (Mg ⁺)	Mg [†] (g)	1534
Magnesium nitride (Mg ₃ N ₂)	Mg ₃ N ₂ (cr)	1565
Magnesium nitride (MgN)	Mg ₁ N ₁ (g)	1535
Magnesium oxide (MgO)	Mg ₁ O ₁ (cr,l)	1538
Magnesium oxide (MgO)	Mg ₁ O ₁ (l)	1537
Magnesium oxide (MgO)	Mg ₁ O ₁ (cr)	1536
Magnesium oxide (MgO)	Mg ₁ O ₁ (g)	1539
Magnesium phosphate (Mg ₃ P ₂ O ₆)	Mg ₃ O ₈ P ₂ (cr)	1566
Magnesium phosphate (Mg ₃ P ₂ O ₆)	Mg ₃ O ₈ P ₂ (l)	1567
Magnesium phosphate (Mg ₃ P ₂ O ₆)	Mg ₃ O ₈ P ₂ (cr,l)	1568
Magnesium silicate (Mg ₂ SiO ₄)	Mg ₂ O ₄ Si ₁ (cr)	1556
Magnesium silicate (Mg ₂ SiO ₄)	Mg ₂ O ₄ Si ₁ (l)	1557
Magnesium silicate (Mg ₂ SiO ₄)	Mg ₂ O ₄ Si ₁ (cr,l)	1558
Magnesium silicate (Mg ₂ SiO ₄)	Mg ₁ O ₃ Si ₁ (cr,l)	1542
Magnesium silicate (Mg ₂ SiO ₄)	Mg ₁ O ₃ Si ₁ (l)	1541
Magnesium silicate (Mg ₂ SiO ₄)	Mg ₁ O ₃ Si ₁ (cr)	1540
Magnesium silicide (Mg ₂ Si)	Mg ₂ Si ₁ (cr)	1562
Magnesium silicide (Mg ₂ Si)	Mg ₂ Si ₁ (l)	1563
Magnesium silicide (Mg ₂ Si)	Mg ₂ Si ₁ (cr,l)	1564
Magnesium sulfate (MgSO ₄)	Mg ₁ O ₄ S ₁ (cr,l)	1548
Magnesium sulfate (MgSO ₄)	Mg ₁ O ₄ S ₁ (l)	1547
Magnesium sulfate (MgSO ₄)	Mg ₁ O ₄ S ₁ (cr)	1546
Magnesium sulfide (MgS)	Mg ₁ S ₁ (g)	1554
Magnesium sulfide (MgS)	Mg ₁ S ₁ (cr)	1553
Magnesium titanium oxide (Mg ₂ TiO ₄)	Mg ₂ O ₄ Ti ₁ (l)	1560
Magnesium titanium oxide (Mg ₂ TiO ₄)	Mg ₂ O ₄ Ti ₁ (cr,l)	1561
Magnesium titanium oxide (Mg ₂ TiO ₄)	Mg ₂ O ₄ Ti ₁ (cr)	1559
Magnesium titanium oxide (MgTi ₂ O ₅)	Mg ₁ O ₃ Ti ₂ (cr)	1550
Magnesium titanium oxide (MgTi ₂ O ₅)	Mg ₁ O ₃ Ti ₂ (l)	1551
Magnesium titanium oxide (MgTi ₂ O ₅)	Mg ₁ O ₃ Ti ₂ (cr,l)	1552

Table Title

Magnesium titanium oxide (MgTiO ₃)	Mg ₁ O ₃ Ti ₁ (l)	1544
Magnesium titanium oxide (MgTiO ₃)	Mg ₁ O ₃ Ti ₁ (cr)	1543
Magnesium titanium oxide (MgTiO ₃)	Mg ₁ O ₃ Ti ₁ (cr,l)	1545
Magnesium tungsten oxide (MgWO ₄)	Mg ₁ O ₄ W ₁ (cr)	1549
Manganese (Mn)	Mn ₁ (cr)	1572
Manganese (Mn)	Mn ₁ (ref)	1571
Manganese (Mn)	Mn ₁ (l)	1573
Manganese (Mn)	Mn ₁ (cr,l)	1574
Manganese (Mn)	Mn ₁ (g)	1575
Manganese, ion (Mn ⁺)	Mn [†] (g)	1576
Mercapto (HS)	H ₁ S ₁ (g)	1306
Mercapto-d ₁ (SD)	D ₁ S ₁ (g)	1039
Mercury (Hg)	Hg ₁ (g)	1375
Mercury (Hg)	Hg ₁ (cr,l)	1374
Mercury (Hg)	Hg ₁ (ref)	1373
Mercury bromide (Hg ₂ Br ₂)	Br ₂ Hg ₂ (cr)	486
Mercury bromide (HgBr)	Br ₁ Hg ₁ (g)	441
Mercury bromide (HgBr ₂)	Br ₂ Hg ₂ (g)	485
Mercury bromide (HgBr ₂)	Br ₂ Hg ₂ (cr,l)	484
Mercury bromide (HgBr ₂)	Br ₂ Hg ₂ (l)	483
Mercury bromide (HgBr ₂)	Br ₂ Hg ₁ (cr)	482
Mercury chloride (Hg ₂ Cl ₂)	Cl ₂ Hg ₂ (cr)	828
Mercury chloride (HgCl)	Cl ₁ Hg ₁ (g)	767
Mercury chloride (HgCl ₂)	Cl ₂ Hg ₁ (cr)	824
Mercury chloride (HgCl ₂)	Cl ₂ Hg ₁ (l)	825
Mercury chloride (HgCl ₂)	Cl ₂ Hg ₁ (cr,l)	826
Mercury chloride (HgCl ₂)	Cl ₂ Hg ₁ (g)	827
Mercury fluoride (Hg ₂ F ₂)	F ₂ Hg ₂ (cr)	1113
Mercury fluoride (HgF)	F ₁ Hg ₁ (g)	1059
Mercury fluoride (HgF ₂)	F ₂ Hg ₁ (g)	1112
Mercury fluoride (HgF ₂)	F ₂ Hg ₁ (cr)	1109
Mercury fluoride (HgF ₂)	F ₂ Hg ₁ (l)	1110
Mercury fluoride (HgF ₂)	F ₂ Hg ₁ (cr,l)	1111
Mercury hydride (HgH)	H ₁ Hg ₁ (g)	1264
Mercury iodide (Hg ₂ I ₂)	Hg ₂ I ₂ (cr)	1384
Mercury iodide (Hg ₂ I ₂)	Hg ₂ I ₂ (l)	1385
Mercury iodide (Hg ₂ I ₂)	Hg ₂ I ₂ (cr,l)	1386
Mercury iodide (HgI)	Hg ₁ I ₁ (g)	1377
Mercury iodide (HgI ₂)	Hg ₁ I ₂ (g)	1381
Mercury iodide (HgI ₂)	Hg ₁ I ₂ (cr,l)	1380
Mercury iodide (HgI ₂)	Hg ₁ I ₂ (l)	1379
Mercury iodide (HgI ₂)	Hg ₁ I ₂ (cr)	1378
Mercury, ion (Hg ⁺)	Hg [†] (g)	1376
Mercury oxide (HgO)	Hg ₁ O ₁ (g)	1383
Mercury oxide (HgO)	Hg ₁ O ₁ (cr)	1382
Methane (CH ₄)	C ₁ H ₄ (g)	615
Methinophosphide (CHP)	C ₁ H ₁ P ₁ (g)	604
Methyl (CH ₃)	C ₁ H ₃ (g)	610
Methylene (CH ₂)	C ₁ H ₂ (g)	605
Methylidyne (CH)	C ₁ H ₁ (g)	591
Methylidyne, ion (CH ⁺)	C ₁ H [†] (g)	592
Molybdenum (Mo)	Mo ₁ (g)	1581
Molybdenum (Mo)	Mo ₁ (cr,l)	1580
Molybdenum (Mo)	Mo ₁ (l)	1579
Molybdenum (Mo)	Mo ₁ (cr)	1578
Molybdenum (Mo)	Mo ₁ (ref)	1577

Table Title	Formula	Page	Table Title	Formula	Page
Molybdenum bromide (MoBr)	Br ₁ Mo ₁ (g)	452	Neon, ion (Ne ⁺)	Ne ^{+(g)}	1696
Molybdenum bromide (MoBr ₂)	Br ₂ Mo ₁ (g)	495	Nickel (Ni)	Ni ₁ (ref)	1697
Molybdenum bromide (MoBr ₂)	Br ₂ Mo ₁ (cr)	494	Nickel (Ni)	Ni ₁ (cr)	1698
Molybdenum bromide (MoBr ₃)	Br ₃ Mo ₁ (cr)	515	Nickel (Ni)	Ni ₁ (l)	1699
Molybdenum bromide (MoBr ₃)	Br ₃ Mo ₁ (g)	516	Nickel (Ni)	Ni ₁ (cr,l)	1700
Molybdenum bromide (MoBr ₄)	Br ₄ Mo ₁ (g)	528	Nickel (Ni)	Ni ₁ (g)	1701
Molybdenum bromide (MoBr ₄)	Br ₄ Mo ₁ (cr)	527	Nickel carbonyl (Ni(CO) ₄)	C ₄ Ni ₁ O ₄ (g)	695
Molybdenum chloride (MoCl ₄)	Cl ₄ Mo ₁ (cr)	893	Nickel carbonyl (Ni(CO) ₄)	C ₄ Ni ₁ O ₄ (l)	694
Molybdenum chloride (MoCl ₄)	Cl ₄ Mo ₁ (l)	894	Nickel chloride (NiCl)	Cl ₁ Ni ₁ (g)	794
Molybdenum chloride (MoCl ₄)	Cl ₄ Mo ₁ (cr,l)	895	Nickel chloride (NiCl ₂)	Cl ₂ Ni ₁ (g)	840
Molybdenum chloride (MoCl ₄)	Cl ₄ Mo ₁ (g)	896	Nickel chloride (NiCl ₂)	Cl ₂ Ni ₁ (cr,l)	839
Molybdenum chloride (MoCl ₅)	Cl ₅ Mo ₁ (g)	914	Nickel chloride (NiCl ₂)	Cl ₂ Ni ₁ (l)	838
Molybdenum chloride (MoCl ₅)	Cl ₅ Mo ₁ (cr)	911	Nickel chloride (NiCl ₂)	Cl ₂ Ni ₁ (cr)	837
Molybdenum chloride (MoCl ₅)	Cl ₅ Mo ₁ (cr,l)	913	Nickel, ion (Ni ⁺)	Ni ₁ ^{+(g)}	1702
Molybdenum chloride (MoCl ₅)	Cl ₅ Mo ₁ (l)	912	Nickel, ion (Ni ⁻)	Ni ₁ ^{-(g)}	1703
Molybdenum chloride (MoCl ₆)	Cl ₆ Mo ₁ (g)	930	Nickel sulfide (Ni ₃ S ₂)	Ni ₃ S ₂ (cr,l)	1713
Molybdenum chloride (MoCl ₆)	Cl ₆ Mo ₁ (cr)	929	Nickel sulfide (Ni ₃ S ₂)	Ni ₃ S ₂ (l)	1712
Molybdenum chloride oxide (MoO ₂ Cl ₂)	Cl ₂ Mo ₁ O ₂ (g)	835	Nickel sulfide (Ni ₃ S ₂)	Ni ₃ S ₂ (cr)	1711
Molybdenum fluoride ((MoF ₃) ₂)	F ₁₀ Mo ₂ (g)	1211	Nickel sulfide (Ni ₃ S ₄)	Ni ₃ S ₄ (cr)	1714
Molybdenum fluoride ((MoF ₃) ₂)	F ₁₅ Mo ₁ (g)	1213	Nickel sulfide (NiS)	Ni ₁ S ₁ (l)	1705
Molybdenum fluoride (MoF)	F ₁ Mo ₁ (g)	1072	Nickel sulfide (NiS)	Ni ₁ S ₁ (cr)	1704
Molybdenum fluoride (MoF ₂)	F ₂ Mo ₁ (g)	1123	Nickel sulfide (NiS)	Ni ₁ S ₁ (g)	1707
Molybdenum fluoride (MoF ₃)	F ₃ Mo ₁ (g)	1163	Nickel sulfide (NiS)	Ni ₁ S ₁ (cr,l)	1706
Molybdenum fluoride (MoF ₄)	F ₄ Mo ₁ (g)	1179	Nickel sulfide (NiS ₂)	Ni ₁ S ₂ (cr,l)	1710
Molybdenum fluoride (MoF ₅)	F ₅ Mo ₁ (g)	1197	Nickel sulfide (NiS ₂)	Ni ₁ S ₂ (l)	1709
Molybdenum fluoride (MoF ₆)	F ₆ Mo ₁ (l)	1203	Nickel sulfide (NiS ₂)	Ni ₁ S ₂ (cr)	1708
Molybdenum fluoride (MoF ₆)	F ₆ Mo ₁ (g)	1204	Niobium (Nb)	Nb ₁ (ref)	1675
Molybdenum fluoride oxide (MoF ₄ O)	F ₄ Mo ₁ O ₁ (g)	1180	Niobium (Nb)	Nb ₁ (cr)	1676
Molybdenum iodide (MoI)	I ₁ Mo ₁ (g)	1399	Niobium (Nb)	Nb ₁ (l)	1677
Molybdenum iodide (MoI ₂)	I ₂ Mo ₁ (g)	1425	Niobium (Nb)	Nb ₁ (cr,l)	1678
Molybdenum iodide (MoI ₃)	I ₃ Mo ₁ (g)	1444	Niobium (Nb)	Nb ₁ (g)	1679
Molybdenum iodide (MoI ₃)	I ₃ Mo ₁ (cr)	1443	Niobium bromide (NbBr ₃)	Br ₃ Nb ₁ (cr)	538
Molybdenum iodide (MoI ₄)	I ₄ Mo ₁ (g)	1451	Niobium bromide (NbBr ₃)	Br ₃ Nb ₁ (l)	539
Molybdenum iodide (MoI ₄)	I ₄ Mo ₁ (cr)	1450	Niobium bromide (NbBr ₃)	Br ₃ Nb ₁ (cr,l)	540
Molybdenum iodide, alpha (MoI ₂)	I ₂ Mo ₁ (cr)	1424	Niobium bromide (NbBr ₃)	Br ₃ Nb ₁ (g)	541
Molybdenum, ion (Mo ⁺)	Mo ^{+(g)}	1582	Niobium carbide (NbC _{0.98})	C _{0.98} Nb ₁ (cr)	549
Molybdenum, ion (Mo ⁻)	Mo ^{-(g)}	1583	Niobium chloride (NbCl ₃)	Cl ₃ Nb ₁ (g)	918
Molybdenum oxide (MoO)	Mo ₁ O ₁ (g)	1584	Niobium chloride (NbCl ₃)	Cl ₃ Nb ₁ (cr,l)	917
Molybdenum oxide (MoO _{2.750})	Mo ₁ O _{2.750} (cr)	1587	Niobium chloride (NbCl ₃)	Cl ₃ Nb ₁ (l)	916
Molybdenum oxide (MoO _{2.875})	Mo ₁ O _{2.875} (cr)	1588	Niobium chloride (NbCl ₃)	Cl ₃ Nb ₁ (cr)	915
Molybdenum oxide (MoO _{2.889})	Mo ₁ O _{2.889} (cr)	1589	Niobium, ion (Nb ⁺)	Nb ^{+(g)}	1680
Molybdenum oxide (MoO ₂)	Mo ₁ O ₂ (g)	1586	Niobium, ion (Nb ⁻)	Nb ^{-(g)}	1681
Molybdenum oxide (MoO ₂)	Mo ₁ O ₂ (cr)	1585	Niobium oxide (Nb ₂ O ₃)	Nb ₂ O ₃ (cr,l)	1692
Molybdenum oxide (MoO ₃)	Mo ₁ O ₃ (l)	1591	Niobium oxide (Nb ₂ O ₃)	Nb ₂ O ₃ (l)	1691
Molybdenum oxide (MoO ₃)	Mo ₁ O ₃ (cr)	1590	Niobium oxide (Nb ₂ O ₃)	Nb ₂ O ₃ (cr)	1690
Molybdenum oxide (MoO ₃)	Mo ₁ O ₃ (cr,l)	1592	Niobium oxide (NbO)	Nb ₁ O ₁ (cr)	1682
Molybdenum oxide (MoO ₃)	Mo ₁ O ₃ (g)	1593	Niobium oxide (NbO)	Nb ₁ O ₁ (l)	1683
Molybdenum sulfide (Mo ₂ S ₃)	Mo ₂ S ₃ (cr,l)	1597	Niobium oxide (NbO)	Nb ₁ O ₁ (cr,l)	1684
Molybdenum sulfide (Mo ₂ S ₃)	Mo ₂ S ₃ (l)	1596	Niobium oxide (NbO)	Nb ₁ O ₁ (g)	1685
Molybdenum sulfide (Mo ₂ S ₃)	Mo ₂ S ₃ (cr)	1595	Niobium oxide (NbO ₂)	Nb ₁ O ₂ (g)	1689
Molybdenum sulfide (Mo ₂ S ₂)	Mo ₂ S ₂ (cr)	1594	Niobium oxide (NbO ₂)	Nb ₁ O ₂ (cr,l)	1688
Molybdic acid (O ₂ Mo(OH) ₂)	H ₂ Mo ₁ O ₄ (g)	1319	Niobium oxide (NbO ₂)	Nb ₁ O ₂ (l)	1687
NCN radical (NCN)	C ₁ N ₂ (g)	637	Niobium oxide (NbO ₂)	Nb ₁ O ₂ (cr)	1686
NCO radical (NCO)	C ₁ N ₁ O ₁ (g)	635	Nitric acid (HONO ₂)	H ₁ N ₁ O ₃ (g)	1290
Neon (Ne)	Ne ₁ (ref)	1695	Nitrogen (N)	N ₁ (g)	1600
			Nitrogen (N ₂)	N ₂ (ref)	1621

Table Title	Formula	Page	Table Title	Formula	Page
Nitrogen fluoride (NF ₃)	F ₃ N ₁ (g)	1164	Phosphorus (P)	P ₁ (l)	1822
Nitrogen fluoride, cis (FNNF)	F ₂ N ₂ (g)	1125	Phosphorus (P)	P ₁ (ref)	1817
Nitrogen fluoride oxide (NF ₃ O)	F ₃ N ₁ O ₁ (g)	1165	Phosphorus (P)	P ₁ (g)	1824
Nitrogen fluoride, trans (FNNF)	F ₂ N ₂ (g)	1126	Phosphorus (P)	P ₁ (cr,l)	1823
Nitrogen, ion (N ⁺)	N ₁ ⁺ (g)	1601	Phosphorus (P ₂)	P ₂ (g)	1828
Nitrogen, ion (N ⁻)	N ₁ ⁻ (g)	1602	Phosphorus (P ₄)	P ₄ (g)	1829
Nitrogen, ion (N ₂ ⁺)	N ₂ ⁺ (g)	1622	Phosphorus, black (P)	P ₁ (cr)	1818
Nitrogen, ion (N ₂ ⁻)	N ₂ ⁻ (g)	1623	Phosphorus bromide (PBr)	Br ₁ P ₁ (g)	463
Nitrogen oxide (N ₂ O)	N ₂ O ₁ (g)	1624	Phosphorus bromide (PBr ₁)	Br ₃ P ₁ (g)	518
Nitrogen oxide (N ₂ O ₃)	N ₂ O ₃ (g)	1626	Phosphorus chloride (PCl)	Cl ₁ P ₁ (g)	800
Nitrogen oxide (N ₂ O ₄)	N ₂ O ₄ (cr)	1627	Phosphorus chloride (PCl ₁)	Cl ₃ P ₁ (g)	883
Nitrogen oxide (N ₂ O ₄)	N ₂ O ₄ (l)	1628	Phosphorus chloride (PCl ₅)	Cl ₅ P ₁ (g)	919
Nitrogen oxide (N ₂ O ₄)	N ₂ O ₄ (cr,l)	1629	Phosphorus fluoride (PF)	F ₁ P ₁ (g)	1085
Nitrogen oxide (N ₂ O ₄)	N ₂ O ₄ (g)	1630	Phosphorus fluoride (PF ₂)	F ₂ P ₁ (g)	1135
Nitrogen oxide (N ₂ O ₅)	N ₂ O ₅ (g)	1631	Phosphorus fluoride (PF ₃)	F ₃ P ₁ (g)	1167
Nitrogen oxide (NO)	N ₁ O ₁ (g)	1603	Phosphorus fluoride (PF ₅)	F ₅ P ₁ (g)	1198
Nitrogen oxide (NO ₂)	N ₁ O ₂ (g)	1605	Phosphorus fluoride, ion (PF ⁺)	F ₁ P ₁ ⁺ (g)	1086
Nitrogen oxide (NO ₃)	N ₁ O ₃ (g)	1607	Phosphorus fluoride, ion (PF ⁻)	F ₁ P ₁ ⁻ (g)	1087
Nitrogen oxide, ion (N ₂ O ⁺)	N ₂ O ₁ ⁺ (g)	1625	Phosphorus fluoride, ion (PF ₂ ⁺)	F ₂ P ₁ ⁺ (g)	1136
Nitrogen oxide, ion (NO ⁺)	N ₁ O ₁ ⁺ (g)	1604	Phosphorus fluoride, ion (PF ₂ ⁻)	F ₂ P ₁ ⁻ (g)	1137
Nitrogen oxide, ion (ONO ⁻)	N ₁ O ₂ ⁻ (g)	1606	Phosphorus, ion (P ⁺)	P ₁ ⁺ (g)	1825
Nitrogen sulfide (NS)	N ₁ S ₁ (g)	1609	Phosphorus, ion (P ⁻)	P ₁ ⁻ (g)	1826
Nitrosyl bromide (ONBr)	Br ₁ N ₁ O ₁ (g)	454	Phosphorus nitride (P ₃ N ₅)	N ₅ P ₃ (cr)	1634
Nitrosyl chloride (ONCl)	Cl ₁ N ₁ O ₁ (g)	787	Phosphorus nitride (PN)	N ₁ P ₁ (g)	1608
Nitrosyl fluoride (ONF)	F ₁ N ₁ O ₁ (g)	1074	Phosphorus oxide ((P ₂ O ₁) ₂)	O ₈ P ₄ (g)	1803
Nitrosyl hydride (HNO)	H ₁ N ₁ O ₁ (g)	1287	Phosphorus oxide ((P ₂ O ₃) ₂)	O ₁₀ P ₄ (g)	1811
Nitrosyl iodide (ONI)	I ₁ N ₁ O ₁ (g)	1400	Phosphorus oxide ((P ₂ O ₅) ₂)	O ₁₀ P ₄ (cr)	1810
Nitrous acid, cis (HONO)	H ₁ N ₁ O ₂ (g)	1288	Phosphorus oxide (PO)	O ₁ P ₁ (g)	1720
Nitrous acid, trans (HONO)	H ₁ N ₁ O ₂ (g)	1289	Phosphorus oxide (PO ₂)	O ₂ P ₁ (g)	1748
Nitryl chloride (NO ₂ Cl)	Cl ₁ N ₁ O ₂ (g)	788	Phosphorus, red, IV (P)	P ₁ (cr)	1819
Nitryl fluoride (NO ₂ F)	F ₁ N ₁ O ₂ (g)	1075	Phosphorus, red, V (P)	P ₁ (cr)	1820
Oxirane (C ₂ H ₄ O)	C ₂ H ₄ O ₁ (g)	677	Phosphorus sulfide (P ₄ S ₃)	P ₄ S ₃ (cr)	1830
Oxygen (O)	O ₁ (g)	1717	Phosphorus sulfide (P ₄ S ₃)	P ₄ S ₃ (l)	1831
Oxygen (O ₂)	O ₂ (ref)	1745	Phosphorus sulfide (P ₄ S ₁)	P ₄ S ₃ (cr,l)	1832
Oxygen fluoride (FOF)	F ₂ O ₁ (g)	1129	Phosphorus sulfide (P ₄ S ₃)	P ₄ S ₃ (g)	1833
Oxygen fluoride (FOOF)	F ₂ O ₂ (g)	1133	Phosphorus sulfide (PS)	P ₁ S ₁ (g)	1827
Oxygen fluoride (OF)	F ₁ O ₁ (g)	1081	Phosphorus, white (P)	P ₁ (cr)	1821
Oxygen fluoride (OFO)	F ₁ O ₂ (g)	1083	Phosphoryl bromide (POBr ₃)	Br ₃ O ₁ P ₁ (g)	517
Oxygen fluoride (OOF)	F ₁ O ₂ (g)	1084	Phosphoryl chloride (OPCl ₃)	Cl ₃ O ₁ P ₁ (g)	882
Oxygen, ion (O ⁺)	O ₁ ⁺ (g)	1718	Phosphoryl chloride fluoride (POClF ₂)	Cl ₁ F ₂ O ₁ P ₁ (g)	756
Oxygen, ion (O ⁻)	O ₁ ⁻ (g)	1719	Phosphoryl chloride fluoride (POCl ₂ F)	Cl ₂ F ₁ O ₁ P ₁ (g)	818
Oxygen, ion (O ₂ ⁺)	O ₂ ⁺ (g)	1746	Phosphoryl fluoride (POF ₃)	F ₃ O ₁ P ₁ (g)	882
Oxygen, ion (O ₂ ⁻)	O ₂ ⁻ (g)	1747	Potassium (K)	K ₁ (ref)	1465
Oxygen, ion (O ₂ ⁻)	O ₂ ⁻ (g)	1747	Potassium (K)	K ₁ (cr)	1466
Ozone (O ₃)	O ₃ (g)	1773	Potassium (K)	K ₁ (l)	1467
			Potassium (K)	K ₁ (cr,l)	1468
Pentaborane (B ₅ H ₉)	B ₅ H ₉ (l)	302	Potassium (K)	K ₁ (g)	1469
Pentaborane (B ₅ H ₉)	B ₅ H ₉ (g)	303	Potassium (K ₂)	K ₂ (g)	1475
Pentafluoro(trifluoromethyl) sulfur	(CF ₃ SF ₃)C ₁ F ₈ S ₁ (g)	590	Potassium aluminum chloride (K ₁ Al ₂ Cl ₉)	Al ₂ Cl ₉ K ₁ (cr)	144
Perchloryl fluoride (ClO ₃ F)	Cl ₁ F ₁ O ₃ (g)	755	Potassium borate (K ₂ B ₄ O ₇)	B ₄ K ₂ O ₇ (cr)	291
Phosphine (PH ₃)	H ₃ P ₁ (g)	1348	Potassium borate (K ₂ B ₄ O ₇)	B ₄ K ₂ O ₇ (l)	292
Phosphinidene (PH)	H ₁ P ₁ (g)	10	Potassium borate (K ₂ B ₄ O ₇)	B ₄ K ₂ O ₇ (cr,l)	293
Phosphino (PH ₂)	H ₂ P ₁ (g)	1339	Potassium borate (K ₂ B ₆ O ₁₀)	B ₆ K ₂ O ₁₀ (cr)	304
Phosphoric acid (H ₃ PO ₄)	H ₃ O ₄ P ₁ (cr,l)	1347	Potassium borate (K ₂ B ₈ O ₁₃)	B ₈ K ₂ O ₁₃ (cr)	308
Phosphoric acid (H ₃ PO ₄)	H ₃ O ₄ P ₁ (cr)	1345	Potassium borate (K ₂ B ₈ O ₁₃)	B ₈ K ₂ O ₁₃ (l)	309
Phosphoric acid (H ₃ PO ₄)	H ₃ O ₄ P ₁ (l)	1346	Potassium borate (K ₂ B ₈ O ₁₃)	B ₈ K ₂ O ₁₃ (cr,l)	310

Table Title	Formula	Page	Table Title	Formula	Page
Potassium borate (KBO ₂)	B ₁ K ₁ O ₂ (cr)	240	Potassium sulfate (K ₂ SO ₄)	K ₂ O ₄ S ₁ (l)	1483
Potassium borate (KBO ₂)	B ₁ K ₁ O ₂ (l)	241	Potassium sulfate (K ₂ SO ₄)	K ₂ O ₄ S ₁ (cr,l)	1484
Potassium borate (KBO ₂)	B ₁ K ₁ O ₂ (cr,l)	242	Potassium sulfate (K ₂ SO ₄)	K ₂ O ₄ S ₁ (g)	1485
Potassium borate (KBO ₂)	B ₁ K ₁ O ₂ (g)	243	Potassium sulfate, alpha (K ₂ SO ₄)	K ₂ O ₄ S ₁ (cr)	1481
Potassium bromide ((KBr) ₂)	Br ₂ K ₂ (g)	487	Potassium sulfate, beta (K ₂ SO ₄)	K ₂ O ₄ S ₁ (cr)	1482
Potassium bromide (KBr)	Br ₁ K ₁ (cr)	443	Potassium sulfide (K ₂ S)	K ₂ S ₁ (cr)	1486
Potassium bromide (KBr)	Br ₁ K ₁ (l)	444	Potassium sulfide (K ₂ S)	K ₂ S ₁ (l)	1487
Potassium bromide (KBr)	Br ₁ K ₁ (cr,l)	445	Potassium sulfide (K ₂ S)	K ₂ S ₁ (cr,l)	1488
Potassium bromide (KBr)	Br ₁ K ₁ (g)	446	Potassium superoxide (KO ₂)	K ₁ O ₂ (cr)	1474
Potassium carbonate (K ₂ CO ₃)	C ₁ K ₂ O ₃ (cr,l)	623	Potassium tetrachloroaluminate (KAICl ₄)	Al ₁ Cl ₄ K ₁ (cr)	87
Potassium carbonate (K ₂ CO ₃)	C ₁ K ₂ O ₃ (l)	622	Potassium tetrafluoroborate (KBF ₄)	B ₁ F ₄ K ₁ (cr)	217
Potassium carbonate (K ₂ CO ₃)	C ₁ K ₂ O ₃ (cr)	621	Potassium tetrafluoroborate (KBF ₄)	B ₁ F ₄ K ₁ (l)	218
Potassium chloride ((KCl) ₂)	Cl ₂ K ₂ (g)	829	Potassium tetrafluoroborate (KBF ₄)	B ₁ F ₄ K ₁ (cr,l)	219
Potassium chloride (KCl)	Cl ₁ K ₁ (g)	775	Potassium tetrafluoroborate (KBF ₄)	B ₁ F ₄ K ₁ (g)	220
Potassium chloride (KCl)	Cl ₁ K ₁ (cr,l)	774	Potassium tetrahydroborate (KBH ₄)	B ₁ H ₄ K ₁ (cr)	234
Potassium chloride (KCl)	Cl ₁ K ₁ (l)	773	Radon (Rn)	Rn ₁ (ref)	1857
Potassium chloride (KCl)	Cl ₁ K ₁ (cr)	772	Radon, ion (Rn ⁺)	Rn ₁ ⁺ (g)	1858
Potassium cyanide ((KCN) ₂)	C ₂ K ₂ N ₂ (g)	678	Rubidium (Rb)	Rb ₁ (ref)	1849
Potassium cyanide (KCN)	C ₁ K ₁ N ₁ (cr)	617	Rubidium (Rb)	Rb ₁ (cr)	1850
Potassium cyanide (KCN)	C ₁ K ₁ N ₁ (l)	618	Rubidium (Rb)	Rb ₁ (l)	1851
Potassium cyanide (KCN)	C ₁ K ₁ N ₁ (cr,l)	619	Rubidium (Rb)	Rb ₁ (cr,l)	1852
Potassium cyanide (KCN)	C ₁ K ₁ N ₁ (g)	620	Rubidium (Rb)	Rb ₁ (g)	1853
Potassium fluoride ((KF) ₂)	F ₂ K ₂ (g)	1115	Rubidium (Rb ₂)	Rb ₂ (g)	1856
Potassium fluoride (K(HF ₂))	F ₂ H ₁ K ₁ (cr)	1104	Rubidium, ion (Rb ⁺)	Rb ₁ ⁺ (g)	1854
Potassium fluoride (K(HF ₂))	F ₂ H ₁ K ₁ (l)	1105	Rubidium, ion (Rb ⁻)	Rb ₁ ⁻ (g)	1855
Potassium fluoride (K(HF ₂))	F ₂ H ₁ K ₁ (cr,l)	1106	Silane (SiH ₄)	H ₄ Si ₁ (g)	1353
Potassium fluoride (KF)	F ₁ K ₁ (l)	1062	Silicon (Si)	Si ₁ (ref)	1991
Potassium fluoride (KF)	F ₁ K ₁ (cr)	1061	Silicon (Si)	Si ₁ (cr)	1882
Potassium fluoride (KF)	F ₁ K ₁ (cr,l)	1063	Silicon (Si)	Si ₁ (l)	1883
Potassium fluoride (KF)	F ₁ K ₁ (g)	1064	Silicon (Si)	Si ₁ (cr,l)	1884
Potassium fluoride, ion (KF ₂ ⁻)	F ₂ K ₁ ⁻ (g)	1114	Silicon (Si)	Si ₁ (g)	1885
Potassium hexachloroaluminate (K ₃ AlCl ₆)	Al ₁ Cl ₆ K ₃ (cr)	89	Silicon (Si)	Si ₂ (g)	1888
Potassium hexafluoroaluminate (K ₃ AlF ₆)	Al ₁ F ₆ K ₃ (cr)	106	Silicon (Si)	Si ₃ (g)	1889
Potassium hydride (KH)	H ₁ K ₁ (cr)	1267	Silicon (Si ₂)	Si ₄ (g)	1886
Potassium hydride (KH)	H ₁ K ₁ (g)	1268	Silicon (Si ₃)	Si ₅ (g)	1887
Potassium hydroxide ((KOH) ₂)	H ₂ K ₂ O ₂ (g)	1314	Silicon carbide (Si ₂ C)	C ₁ Si ₂ (g)	651
Potassium hydroxide (KOH)	H ₁ K ₁ O ₁ (g)	1272	Silicon carbide (SiC)	C ₁ Si ₁ (g)	650
Potassium hydroxide (KOH)	H ₁ K ₁ O ₁ (cr,l)	1271	Silicon carbide (SiC ₂)	C ₂ Si ₁ (g)	685
Potassium hydroxide (KOH)	H ₁ K ₁ O ₁ (l)	1270	Silicon carbide, alpha (SiC)	C ₁ Si ₁ (cr)	648
Potassium hydroxide (KOH)	H ₁ K ₁ O ₁ (cr)	1269	Silicon carbide, beta (SiC)	C ₁ Si ₁ (cr)	649
Potassium hydroxide, ion (KOH ⁺)	H ₁ K ₁ O ₁ ⁺ (g)	1273	Silicon, ion (Si ⁺)	Si ₁ ⁺ (g)	1886
Potassium iodide ((KI) ₂)	I ₂ K ₂ (g)	1418	Silicon, ion (Si ⁻)	Si ₁ ⁻ (g)	1887
Potassium iodide (KI)	I ₁ K ₁ (g)	1393	Silicon nitride (Si ₂ N)	N ₁ Si ₂ (g)	1611
Potassium iodide (KI)	I ₁ K ₁ (cr,l)	1392	Silicon nitride (SiN)	N ₁ Si ₁ (g)	1610
Potassium iodide (KI)	I ₁ K ₁ (cr)	1390	Silicon nitride, alpha (Si ₃ N ₄)	N ₄ Si ₁ (cr)	1633
Potassium iodide (KI)	I ₁ K ₁ (l)	1391	Silicon oxide (SiO)	O ₁ Si ₁ (g)	1728
Potassium, ion (K ⁺)	K ₁ ⁺ (g)	1470	Silicon oxide (SiO ₂)	O ₂ Si ₁ (g)	1756
Potassium, ion (K ⁻)	K ₁ ⁻ (g)	1471	Silicon oxide (SiO ₂)	O ₂ Si ₁ (cr,l)	1755
Potassium oxide (K ₂ O)	K ₂ O ₁ (cr)	1476	Silicon oxide (SiO ₂)	O ₂ Si ₁ (l)	1754
Potassium oxide (KO)	K ₁ O ₁ (g)	1472	Silicon oxide, cristobalite, high (SiO ₂)	O ₂ Si ₁ (cr)	1751
Potassium oxide, ion (KO ⁻)	K ₁ O ₁ ⁻ (g)	1473	Silicon oxide, cristobalite, low (SiO ₂)	O ₂ Si ₁ (cr)	1752
Potassium perchlorate (KCIO ₄)	Cl ₁ K ₁ O ₄ (cr)	776	Silicon oxide, quartz (SiO ₂)	O ₂ Si ₁ (cr)	1753
Potassium peroxide (K ₂ O ₂)	K ₂ O ₂ (cr)	1477	Silicon sulfide (SiS)	S ₁ Si ₁ (g)	1867
Potassium silicate (K ₂ SiO ₃)	K ₂ O ₃ Si ₁ (cr)	1478	Silicon sulfide (SiS ₂)	S ₂ Si ₁ (cr,l)	1873
Potassium silicate (K ₂ SiO ₃)	K ₂ O ₃ Si ₁ (l)	1479	Silicon sulfide (SiS ₂)	S ₂ Si ₁ (l)	1872
Potassium silicate (K ₂ SiO ₃)	K ₂ O ₃ Si ₁ (cr,l)	1480	Silicon sulfide (SiS ₂)	S ₂ Si ₁ (cr)	1871

Table Title	Formula	Page	Table Title	Formula	Page
Silylidyne (SiH)	$\text{H}_1\text{Si}_{\text{l}}(\text{g})$	1307	Sodium oxide (Na_2O)	$\text{Na}_2\text{O}_{\text{l}}(\text{l})$	1649
Silylidyne, ion (SiH^+)	$\text{H}_1\text{Si}_{\text{l}}^+(\text{g})$	1308	Sodium oxide (Na_2O)	$\text{Na}_2\text{O}_{\text{l}}(\text{cr},\text{l})$	1650
Sodium (Na)	$\text{Na}_{\text{l}}(\text{g})$	1641	Sodium oxide (NaO)	$\text{Na}_{\text{l}}\text{O}_{\text{g}}$	1644
Sodium (Na)	$\text{Na}_{\text{l}}(\text{cr},\text{l})$	1640	Sodium oxide, ion (NaO^-)	$\text{Na}_{\text{l}}\text{O}_{\text{l}}^-(\text{g})$	1645
Sodium (Na)	$\text{Na}_{\text{l}}(\text{l})$	1639	Sodium perchlorate (NaClO_4)	$\text{Cl}_{\text{l}}\text{Na}_{\text{l}}\text{O}_4(\text{cr})$	793
Sodium (Na)	$\text{Na}_{\text{l}}(\text{cr})$	1638	Sodium peroxide (Na_2O_2)	$\text{Na}_2\text{O}_2(\text{cr})$	1651
Sodium (Na)	$\text{Na}_{\text{l}}(\text{ref})$	1637	Sodium silicate ($\text{Na}_2\text{Si}_2\text{O}_3$)	$\text{Na}_2\text{O}_5\text{Si}_2(\text{cr})$	1664
Sodium (Na_2)	$\text{Na}_{\text{2}}(\text{g})$	1647	Sodium silicate ($\text{Na}_2\text{Si}_2\text{O}_3$)	$\text{Na}_2\text{O}_5\text{Si}_2(\text{l})$	1665
Sodium aluminum oxide (NaAlO_2)	$\text{Al}_{\text{l}}\text{Na}_{\text{l}}\text{O}_2(\text{cr})$	131	Sodium silicate ($\text{Na}_2\text{Si}_2\text{O}_5$)	$\text{Na}_2\text{O}_5\text{Si}_2(\text{cr},\text{l})$	1666
Sodium borate ($\text{Na}_2\text{B}_4\text{O}_7$)	$\text{B}_4\text{Na}_2\text{O}_7(\text{cr})$	298	Sodium silicate (Na_2SiO_3)	$\text{Na}_2\text{O}_3\text{Si}_{\text{l}}$	1652
Sodium borate ($\text{Na}_2\text{B}_4\text{O}_7$)	$\text{B}_4\text{Na}_2\text{O}_7(\text{l})$	299	Sodium silicate (Na_2SiO_3)	$\text{Na}_2\text{O}_3\text{Si}_{\text{l}}(\text{l})$	1653
Sodium borate ($\text{Na}_2\text{B}_4\text{O}_7$)	$\text{B}_4\text{Na}_2\text{O}_7(\text{cr},\text{l})$	300	Sodium silicate (Na_2SiO_3)	$\text{Na}_2\text{O}_3\text{Si}_{\text{l}}(\text{cr},\text{l})$	1654
Sodium borate ($\text{Na}_2\text{B}_6\text{O}_{10}$)	$\text{B}_6\text{Na}_2\text{O}_{10}(\text{cr})$	306	Sodium sulfate (Na_2SO_4)	$\text{Na}_2\text{O}_4\text{S}_{\text{l}}(\text{l})$	1660
Sodium borate (NaBO_2)	$\text{B}_1\text{Na}_{\text{l}}\text{O}_2(\text{cr},\text{l})$	252	Sodium sulfate (Na_2SO_4)	$\text{Na}_2\text{O}_4\text{S}_{\text{l}}(\text{cr},\text{l})$	1661
Sodium borate (NaBO_2)	$\text{B}_1\text{Na}_{\text{l}}\text{O}_2(\text{g})$	253	Sodium sulfate (Na_2SO_4)	$\text{Na}_2\text{O}_4\text{S}_{\text{l}}(\text{g})$	1662
Sodium borate (NaBO_2)	$\text{B}_1\text{Na}_{\text{l}}\text{O}_2(\text{l})$	251	Sodium sulfate, delta (Na_2SO_4)	$\text{Na}_2\text{O}_4\text{S}_{\text{l}}(\text{cr})$	1655
Sodium borate (NaBO_2)	$\text{B}_1\text{Na}_{\text{l}}\text{O}_2(\text{cr})$	250	Sodium sulfate, I (Na_2SO_4)	$\text{Na}_2\text{O}_4\text{S}_{\text{l}}(\text{cr})$	1656
Sodium bromide ((NaBr) ₂)	$\text{Br}_2\text{Na}_2(\text{g})$	496	Sodium sulfate, III (Na_2SO_4)	$\text{Na}_2\text{O}_4\text{S}_{\text{l}}(\text{cr})$	1657
Sodium bromide (NaBr)	$\text{Br}_{\text{l}}\text{Na}_{\text{l}}(\text{cr})$	455	Sodium sulfate, IV (Na_2SO_4)	$\text{Na}_2\text{O}_4\text{S}_{\text{l}}(\text{cr})$	1658
Sodium bromide (NaBr)	$\text{Br}_{\text{l}}\text{Na}_{\text{l}}(\text{l})$	456	Sodium sulfate, V (Na_2SO_4)	$\text{Na}_2\text{O}_4\text{S}_{\text{l}}(\text{cr})$	1659
Sodium bromide (NaBr)	$\text{Br}_{\text{l}}\text{Na}_{\text{l}}(\text{cr},\text{l})$	457	Sodium sulfide (Na_2S)	$\text{Na}_2\text{S}_{\text{l}}(\text{cr})$	1667
Sodium bromide (NaBr)	$\text{Br}_{\text{l}}\text{Na}_{\text{l}}(\text{g})$	458	Sodium sulfide (Na_2S)	$\text{Na}_2\text{S}_{\text{l}}(\text{l})$	1668
Sodium carbonate (Na_2CO_3)	$\text{C}_{\text{l}}\text{Na}_2\text{O}_{\text{l}}(\text{cr},\text{l})$	640	Sodium sulfide (Na_2S)	$\text{Na}_2\text{S}_{\text{l}}(\text{cr},\text{l})$	1669
Sodium carbonate (Na_2CO_3)	$\text{C}_{\text{l}}\text{Na}_2\text{O}_{\text{l}}(\text{l})$	639	Sodium sulfide (Na_2S_2)	$\text{Na}_2\text{S}_2(\text{l})$	1671
Sodium carbonate (Na_2CO_3)	$\text{C}_{\text{l}}\text{Na}_2\text{O}_3(\text{cr})$	638	Sodium sulfide (Na_2S_2)	$\text{Na}_2\text{S}_2(\text{cr},\text{l})$	1672
Sodium chloride ((NaCl) ₂)	$\text{Cl}_2\text{Na}_2(\text{g})$	836	Sodium sulfide, beta (Na_2S_2)	$\text{Na}_2\text{S}_2(\text{cr})$	1670
Sodium chloride (NaCl)	$\text{Cl}_{\text{l}}\text{Na}_{\text{l}}(\text{cr})$	789	Sodium superoxide (NaO_2)	$\text{Na}_{\text{l}}\text{O}_2(\text{cr})$	1646
Sodium chloride (NaCl)	$\text{Cl}_{\text{l}}\text{Na}_{\text{l}}(\text{l})$	790	Sodium tetrachloroaluminate (NaAlCl_4)	$\text{Al}_{\text{l}}\text{Cl}_4\text{Na}_{\text{l}}(\text{cr})$	88
Sodium chloride (NaCl)	$\text{Cl}_{\text{l}}\text{Na}_{\text{l}}(\text{cr},\text{l})$	791	Sodium tetrafluoroaluminate (NaAlF_4)	$\text{Al}_{\text{l}}\text{F}_4\text{Na}_{\text{l}}(\text{g})$	105
Sodium chloride (NaCl)	$\text{Cl}_{\text{l}}\text{Na}_{\text{l}}(\text{g})$	792	Sodium tetrahydroborate (NaBH_4)	$\text{B}_{\text{l}}\text{H}_4\text{Na}_{\text{l}}(\text{cr})$	236
Sodium cyanide ((NaCN) ₂)	$\text{C}_2\text{N}_2\text{Na}_2(\text{g})$	683	Sodium tungsten oxide (Na_2WO_4)	$\text{Na}_2\text{O}_4\text{W}_{\text{l}}(\text{cr})$	1663
Sodium cyanide (NaCN)	$\text{C}_{\text{l}}\text{N}_{\text{l}}\text{Na}_{\text{l}}(\text{g})$	634	Strontium (Sr)	$\text{Sr}_{\text{l}}(\text{ref})$	1891
Sodium cyanide (NaCN)	$\text{C}_{\text{l}}\text{N}_{\text{l}}\text{Na}_{\text{l}}(\text{cr})$	631	Strontium (Sr)	$\text{Sr}_{\text{l}}(\text{l})$	1894
Sodium cyanide (NaCN)	$\text{C}_{\text{l}}\text{N}_{\text{l}}\text{Na}_{\text{l}}(\text{l})$	632	Strontium (Sr)	$\text{Sr}_{\text{l}}(\text{cr},\text{l})$	1895
Sodium cyanide (NaCN)	$\text{C}_{\text{l}}\text{N}_{\text{l}}\text{Na}_{\text{l}}(\text{cr},\text{l})$	633	Strontium (Sr)	$\text{Sr}_{\text{l}}(\text{g})$	1896
Sodium fluoride ((NaF) ₂)	$\text{F}_2\text{Na}_2(\text{g})$	1128	Strontium, alpha (Sr)	$\text{Sr}_{\text{l}}(\text{cr})$	1892
Sodium fluoride (NaF)	$\text{F}_{\text{l}}\text{Na}_{\text{l}}(\text{g})$	1080	Strontium, beta (Sr)	$\text{Sr}_{\text{l}}(\text{cr})$	1893
Sodium fluoride (NaF)	$\text{F}_{\text{l}}\text{Na}_{\text{l}}(\text{cr},\text{l})$	1079	Strontium bromide (SrBr)	$\text{Br}_{\text{l}}\text{Sr}_{\text{l}}(\text{g})$	466
Sodium fluoride (NaF)	$\text{F}_{\text{l}}\text{Na}_{\text{l}}(\text{l})$	1078	Strontium bromide (SrBr_2)	$\text{Br}_2\text{Sr}_{\text{l}}(\text{cr})$	504
Sodium fluoride (NaF)	$\text{F}_{\text{l}}\text{Na}_{\text{l}}(\text{cr})$	1077	Strontium bromide (SrBr_2)	$\text{Br}_2\text{Sr}_{\text{l}}(\text{l})$	505
Sodium fluoride, ion (NaF_2^-)	$\text{F}_2\text{Na}_{\text{l}}^-(\text{g})$	1127	Strontium bromide (SrBr_2)	$\text{Br}_2\text{Sr}_{\text{l}}(\text{cr},\text{l})$	506
Sodium hexachloroaluminate (Na_3AlCl_6)	$\text{Al}_{\text{l}}\text{Cl}_6\text{Na}_{\text{l}}(\text{cr})$	90	Strontium bromide (SrBr_2)	$\text{Br}_2\text{Sr}_{\text{l}}(\text{g})$	507
Sodium hydride (NaH)	$\text{H}_{\text{l}}\text{Na}_{\text{l}}(\text{cr})$	1291	Strontium chloride (SrCl)	$\text{Cl}_{\text{l}}\text{Sr}_{\text{l}}(\text{g})$	807
Sodium hydride (NaH)	$\text{H}_{\text{l}}\text{Na}_{\text{l}}(\text{g})$	1292	Strontium chloride (SrCl_2)	$\text{Cl}_2\text{Sr}_{\text{l}}(\text{cr})$	861
Sodium hydroxide ((NaOH) ₂)	$\text{H}_2\text{Na}_2\text{O}_2(\text{g})$	1322	Strontium chloride (SrCl_2)	$\text{Cl}_2\text{Sr}_{\text{l}}(\text{l})$	862
Sodium hydroxide (NaOH)	$\text{H}_{\text{l}}\text{Na}_{\text{l}}\text{O}_{\text{l}}(\text{cr})$	1293	Strontium chloride (SrCl_2)	$\text{Cl}_2\text{Sr}_{\text{l}}(\text{cr},\text{l})$	863
Sodium hydroxide (NaOH)	$\text{H}_{\text{l}}\text{Na}_{\text{l}}\text{O}_{\text{l}}(\text{l})$	1294	Strontium chloride (SrCl_2)	$\text{Cl}_2\text{Sr}_{\text{l}}(\text{g})$	864
Sodium hydroxide (NaOH)	$\text{H}_{\text{l}}\text{Na}_{\text{l}}\text{O}_{\text{l}}(\text{cr},\text{l})$	1295	Strontium fluoride (SrF)	$\text{F}_{\text{l}}\text{Sr}_{\text{l}}(\text{g})$	1094
Sodium hydroxide (NaOH)	$\text{H}_{\text{l}}\text{Na}_{\text{l}}\text{O}_{\text{l}}(\text{g})$	1296	Strontium fluoride (SrF_2)	$\text{F}_2\text{Sr}_{\text{l}}(\text{cr})$	1149
Sodium hydroxide, ion (NaOH^+)	$\text{H}_{\text{l}}\text{Na}_{\text{l}}\text{O}_{\text{l}}^+(\text{g})$	1297	Strontium fluoride (SrF_2)	$\text{F}_2\text{Sr}_{\text{l}}(\text{l})$	1150
Sodium iodide (NaI)	$\text{I}_{\text{l}}\text{Na}_{\text{l}}(\text{cr})$	1401	Strontium fluoride (SrF_2)	$\text{F}_2\text{Sr}_{\text{l}}(\text{cr},\text{l})$	1151
Sodium iodide (NaI)	$\text{I}_{\text{l}}\text{Na}_{\text{l}}(\text{l})$	1402	Strontium fluoride (SrF_2)	$\text{F}_2\text{Sr}_{\text{l}}(\text{g})$	1152
Sodium, ion (Na^+)	$\text{Na}_{\text{l}}^+(\text{g})$	1642	Strontium fluoride, ion (SrF^+)	$\text{F}_{\text{l}}\text{Sr}_{\text{l}}^+(\text{g})$	1095
Sodium, ion (Na^-)	$\text{Na}_{\text{l}}^-(\text{g})$	1643	Strontium hydroxide (Sr(OH)_2)	$\text{H}_2\text{O}_2\text{Sr}_{\text{l}}(\text{cr})$	1331
Sodium oxide (Na_2O)	$\text{Na}_2\text{O}_{\text{l}}(\text{cr})$	1648	Strontium hydroxide (Sr(OH)_2)	$\text{H}_2\text{O}_2\text{Sr}_{\text{l}}(\text{l})$	1332
			Strontium hydroxide (Sr(OH)_2)	$\text{H}_2\text{O}_2\text{Sr}_{\text{l}}(\text{cr},\text{l})$	1333

Table Title

Strontium hydroxide ($\text{Sr}(\text{OH})_2$)	$\text{H}_2\text{O}_2\text{Sr}_1(\text{g})$	1334
Strontium hydroxide (SrOH)	$\text{H}_1\text{O}_1\text{Sr}_1(\text{g})$	1301
Strontium hydroxide, ion (SrOH^+)	$\text{H}_1\text{O}_1\text{Sr}_1^+(\text{g})$	1302
Strontium iodide (SrI)	$\text{I}_1\text{Sr}_1(\text{g})$	1410
Strontium iodide (SrI_2)	$\text{I}_2\text{Sr}_1(\text{g})$	1436
Strontium iodide (SrI_2)	$\text{I}_2\text{Sr}_1(\text{cr},\text{l})$	1435
Strontium iodide (SrI_2)	$\text{I}_2\text{Sr}_1(\text{l})$	1434
Strontium iodide (SrI_2)	$\text{I}_2\text{Sr}_1(\text{cr})$	1433
Strontium, ion (Sr^+)	$\text{Sr}_1^+(\text{g})$	1897
Strontium oxide (SrO)	$\text{O}_1\text{Sr}_1(\text{g})$	1732
Strontium oxide (SrO)	$\text{O}_1\text{Sr}_1(\text{cr},\text{l})$	1731
Strontium oxide (SrO)	$\text{O}_1\text{Sr}_1(\text{l})$	1730
Strontium oxide (SrO)	$\text{O}_1\text{Sr}_1(\text{cr})$	1729
Strontium sulfide (SrS)	$\text{S}_1\text{Sr}_1(\text{cr})$	1868
Strontium sulfide (SrS)	$\text{S}_1\text{Sr}_1(\text{g})$	1869
Sulfur (S)	$\text{S}_1(\text{ref})$	1859
Sulfur (S)	$\text{S}_1(\text{l})$	1862
Sulfur (S)	$\text{S}_1(\text{cr},\text{l})$	1863
Sulfur (S)	$\text{S}_1(\text{g})$	1864
Sulfur (S_2)	$\text{S}_2(\text{g})$	1870
Sulfur (S_3)	$\text{S}_3(\text{g})$	1874
Sulfur (S_4)	$\text{S}_4(\text{g})$	1875
Sulfur (S_5)	$\text{S}_5(\text{g})$	1876
Sulfur (S_6)	$\text{S}_6(\text{g})$	1877
Sulfur (S_7)	$\text{S}_7(\text{g})$	1878
Sulfur (S_8)	$\text{S}_8(\text{g})$	1879
Sulfur bromide fluoride (SBrF_3)	$\text{Br}_1\text{F}_3\text{S}_1(\text{g})$	437
Sulfur chloride (ClSSCl)	$\text{Cl}_2\text{S}_2(\text{l})$	858
Sulfur chloride (ClSSCl)	$\text{Cl}_2\text{S}_2(\text{g})$	859
Sulfur chloride (S_2Cl)	$\text{Cl}_1\text{S}_2(\text{g})$	805
Sulfur chloride (SCl)	$\text{Cl}_1\text{S}_1(\text{g})$	803
Sulfur chloride (SCl_2)	$\text{Cl}_2\text{S}_1(\text{l})$	855
Sulfur chloride (SCl_2)	$\text{Cl}_2\text{S}_1(\text{g})$	856
Sulfur chloride fluoride (SClF_3)	$\text{Cl}_1\text{F}_3\text{S}_1(\text{g})$	760
Sulfur chloride, ion (SCl^+)	$\text{Cl}_1\text{S}_1^+(\text{g})$	804
Sulfur chloride, ion (SCl_2^-)	$\text{Cl}_2\text{S}_1^-(\text{g})$	857
Sulfur dioxide (SO_2)	$\text{O}_2\text{S}_1(\text{g})$	1750
Sulfur fluoride (S_2F_{10})	$\text{F}_{10}\text{S}_2(\text{g})$	1212
Sulfur fluoride (SF)	$\text{F}_1\text{S}_1(\text{g})$	1090
Sulfur fluoride (SF_2)	$\text{F}_2\text{S}_1(\text{g})$	1143
Sulfur fluoride (SF_3)	$\text{F}_3\text{S}_1(\text{g})$	1169
Sulfur fluoride (SF_4)	$\text{F}_4\text{S}_1(\text{g})$	1187
Sulfur fluoride (SF_5)	$\text{F}_5\text{S}_1(\text{g})$	1199
Sulfur fluoride (SF_6)	$\text{F}_6\text{S}_1(\text{g})$	1205
Sulfur fluoride, ion (SF^+)	$\text{F}_1\text{S}_1^+(\text{g})$	1091
Sulfur fluoride, ion (SF^-)	$\text{F}_1\text{S}_1^-(\text{g})$	1092
Sulfur fluoride, ion (SF_2^-)	$\text{F}_2\text{S}_1^-(\text{g})$	1144
Sulfur fluoride, ion (SF_2^-)	$\text{F}_2\text{S}_1^-(\text{g})$	1145
Sulfur fluoride, ion (SF_3^-)	$\text{F}_3\text{S}_1^-(\text{g})$	1170
Sulfur fluoride, ion (SF_3^-)	$\text{F}_3\text{S}_1^-(\text{g})$	1171
Sulfur fluoride, ion (SF_4^-)	$\text{F}_4\text{S}_1^-(\text{g})$	1188
Sulfur fluoride, ion (SF_4^-)	$\text{F}_4\text{S}_1^-(\text{g})$	1189
Sulfur fluoride, ion (SF_5^-)	$\text{F}_5\text{S}_1^-(\text{g})$	1200
Sulfur fluoride, ion (SF_5^-)	$\text{F}_5\text{S}_1^-(\text{g})$	1201
Sulfur fluoride, ion (SF_6^-)	$\text{F}_6\text{S}_1^-(\text{g})$	1206
Sulfur, ion (S^+)	$\text{S}_1^+(\text{g})$	1865

Table Title

Sulfur, ion (S^-)	$\text{S}_1^-(\text{g})$	1866
Sulfur, monoclinic (S)	$\text{S}_1(\text{cr})$	1860
Sulfur, orthorhombic (S)	$\text{S}_1(\text{cr})$	1861
Sulfur oxide (SO)	$\text{O}_1\text{S}_1(\text{g})$	1726
Sulfur oxide (SSO)	$\text{O}_1\text{S}_2(\text{g})$	1727
Sulfur trioxide (SO_3)	$\text{O}_3\text{S}_1(\text{g})$	1775
Sulfuric acid ($\text{O}_2\text{S}(\text{OH})_2$)	$\text{H}_2\text{O}_4\text{S}_1(\text{cr},\text{l})$	1335
Sulfuric acid ($\text{O}_2\text{S}(\text{OH})_2$)	$\text{H}_2\text{O}_4\text{S}_1(\text{g})$	1336
Sulfuric acid, dihydrate ($\text{H}_2\text{SO}_4 \cdot 2\text{H}_2\text{O}$)	$\text{H}_6\text{O}_6\text{S}_1(\text{cr},\text{l})$	1354
Sulfuric acid, hemihydrate ($\text{H}_2\text{SO}_4 \cdot 6.5\text{H}_2\text{O}$)	$\text{H}_{15}\text{O}_{10.5}\text{S}_1(\text{cr},\text{l})$	1357
Sulfuric acid, monohydrate ($\text{H}_2\text{SO}_4 \cdot \text{H}_2\text{O}$)	$\text{H}_4\text{O}_5\text{S}_1(\text{cr},\text{l})$	1352
Sulfuric acid, tetrahydrate ($\text{H}_2\text{SO}_4 \cdot 4\text{H}_2\text{O}$)	$\text{H}_{10}\text{O}_8\text{S}_1(\text{cr},\text{l})$	1356
Sulfuric acid, trihydrate ($\text{H}_2\text{SO}_4 \cdot 3\text{H}_2\text{O}$)	$\text{H}_8\text{O}_7\text{S}_1(\text{cr},\text{l})$	1355
Sulfuryl chloride (SO_2Cl_2)	$\text{Cl}_2\text{O}_2\text{S}_1(\text{g})$	847
Sulfuryl chloride fluoride (SO_2ClF)	$\text{Cl}_1\text{F}_1\text{O}_2\text{S}_1(\text{g})$	754
Sulfuryl fluoride (SO_2F_2)	$\text{F}_2\text{O}_2\text{S}_1(\text{g})$	1134
Tantalum (Ta)	$\text{Ta}_1(\text{cr})$	1900
Tantalum (Ta)	$\text{Ta}_1(\text{ref})$	1899
Tantalum (Ta)	$\text{Ta}_1(\text{l})$	1901
Tantalum (Ta)	$\text{Ta}_1(\text{cr},\text{l})$	1902
Tantalum (Ta)	$\text{Ta}_1(\text{g})$	1903
Tantalum carbide (TaC)	$\text{C}_1\text{Ta}_1(\text{l})$	653
Tantalum carbide (TaC)	$\text{C}_1\text{Ta}_1(\text{cr})$	652
Tantalum carbide (TaC)	$\text{C}_1\text{Ta}_1(\text{cr},\text{l})$	654
Tantalum chloride (TaCl_5)	$\text{Cl}_5\text{Ta}_1(\text{cr})$	920
Tantalum chloride (TaCl_5)	$\text{Cl}_5\text{Ta}_1(\text{g})$	923
Tantalum chloride (TaCl_5)	$\text{Cl}_5\text{Ta}_1(\text{l})$	921
Tantalum chloride (TaCl_5)	$\text{Cl}_5\text{Ta}_1(\text{cr},\text{l})$	922
Tantalum, ion (Ta^+)	$\text{Ta}_1^+(\text{g})$	1904
Tantalum, ion (Ta^-)	$\text{Ta}_1^-(\text{g})$	1905
Tantalum oxide (Ta_2O_3)	$\text{O}_3\text{Ta}_2(\text{cr})$	1793
Tantalum oxide (Ta_2O_3)	$\text{O}_3\text{Ta}_2(\text{l})$	1794
Tantalum oxide (Ta_2O_3)	$\text{O}_3\text{Ta}_2(\text{cr},\text{l})$	1795
Tantalum oxide (TaO)	$\text{O}_1\text{Ta}_1(\text{g})$	1733
Tantalum oxide (TaO_2)	$\text{O}_2\text{Ta}_1(\text{g})$	1757
Tetrabromomethane (CBr_4)	$\text{C}_1\text{Br}_4(\text{g})$	565
Tetrabromosilane (SiBr_4)	$\text{Br}_4\text{Si}_1(\text{g})$	531
Tetrabromosilane (SiBr_4)	$\text{Br}_4\text{Si}_1(\text{l})$	530
Tetrachloroethene (C_2Cl_4)	$\text{C}_2\text{Cl}_4(\text{g})$	665
Tetrachloromethane (CCl_4)	$\text{C}_1\text{Cl}_4(\text{g})$	576
Tetrachlorosilane (SiCl_4)	$\text{Cl}_4\text{Si}_1(\text{g})$	902
Tetrafluoroaluminate, ion (AlF_4^-)	$\text{Al}_1\text{F}_4^-(\text{g})$	103
Tetrafluoroethene (C_2F_4)	$\text{C}_2\text{F}_4(\text{g})$	670
Tetrafluorohydrazine (N_2F_4)	$\text{F}_4\text{N}_2(\text{g})$	1181
Tetrafluoromethane (CF_4)	$\text{C}_1\text{F}_4(\text{g})$	588
Tetrafluorosilane (SiF_4)	$\text{F}_4\text{Si}_1(\text{g})$	1190
Tetraiodosilane (SiI_4)	$\text{I}_4\text{Si}_1(\text{cr})$	1453
Tetraiodosilane (SiI_4)	$\text{I}_4\text{Si}_1(\text{l})$	1554
Tetraiodosilane (SiI_4)	$\text{I}_4\text{Si}_1(\text{cr},\text{l})$	1455
Tetraiodosilane (SiI_4)	$\text{I}_4\text{Si}_1(\text{g})$	1456
Tetramethylsilane ($\text{Si}(\text{CH}_3)_4$)	$\text{C}_4\text{H}_{12}\text{Si}_1(\text{g})$	692
Thionyl fluoride (OSF_2)	$\text{F}_2\text{O}_1\text{S}_1(\text{g})$	1130
Thiophosphoryl bromide (PSBr_3)	$\text{Br}_3\text{P}_1\text{S}_1(\text{g})$	519
Thiophosphoryl chloride (SPCl_3)	$\text{Cl}_3\text{P}_1\text{S}_1(\text{g})$	884
Thiophosphoryl fluoride (PSF)	$\text{F}_1\text{P}_1\text{S}_1(\text{g})$	1088

Table Title

Thiophosphoryl fluoride (PSF ₃)	F ₃ P ₁ S ₁ (g)	1168
Thiothionyl fluoride (SSF ₂)	F ₂ S ₂ (g)	1147
Titanium (Ti)	Ti ₁ (l)	1910
Titanium (Ti)	Ti ₁ (ref)	1907
Titanium (Ti)	Ti ₁ (cr,l)	1911
Titanium (Ti)	Ti ₁ (g)	1912
Titanium, alpha (Ti)	Ti ₁ (cr)	1908
Titanium, beta (Ti)	Ti ₁ (cr)	1909
Titanium boride (TiB)	B ₁ Ti ₁ (cr)	258
Titanium boride (TiB ₂)	B ₂ Ti ₁ (cr)	276
Titanium boride (TiB ₂)	B ₂ Ti ₁ (l)	277
Titanium boride (TiB ₂)	B ₂ Ti ₁ (cr,l)	278
Titanium bromide (TiBr)	Br ₁ Ti ₁ (g)	467
Titanium bromide (TiBr ₂)	Br ₂ Ti ₁ (cr)	508
Titanium bromide (TiBr ₂)	Br ₂ Ti ₁ (g)	509
Titanium bromide (TiBr ₃)	Br ₃ Ti ₁ (cr)	521
Titanium bromide (TiBr ₃)	Br ₃ Ti ₁ (g)	522
Titanium bromide (TiBr ₄)	Br ₄ Ti ₁ (cr,l)	534
Titanium bromide (TiBr ₄)	Br ₄ Ti ₁ (cr)	532
Titanium bromide (TiBr ₄)	Br ₄ Ti ₁ (g)	535
Titanium bromide (TiBr ₄)	Br ₄ Ti ₁ (l)	533
Titanium carbide (TiC)	C ₁ Ti ₁ (cr)	655
Titanium carbide (TiC)	C ₁ Ti ₁ (l)	656
Titanium carbide (TiC)	C ₁ Ti ₁ (cr,l)	657
Titanium chloride (TiCl)	Cl ₁ Ti ₁ (g)	808
Titanium chloride (TiCl ₂)	Cl ₂ Ti ₁ (cr)	865
Titanium chloride (TiCl ₂)	Cl ₂ Ti ₁ (g)	866
Titanium chloride (TiCl ₃)	Cl ₃ Ti ₁ (cr)	886
Titanium chloride (TiCl ₃)	Cl ₃ Ti ₁ (g)	887
Titanium chloride (TiCl ₄)	Cl ₄ Ti ₁ (g)	906
Titanium chloride (TiCl ₄)	Cl ₄ Ti ₁ (cr,l)	905
Titanium chloride (TiCl ₄)	Cl ₄ Ti ₁ (l)	904
Titanium chloride (TiCl ₄)	Cl ₄ Ti ₁ (cr)	903
Titanium chloride oxide (OTiCl)	Cl ₁ O ₁ Ti ₁ (g)	796
Titanium chloride oxide (TiOCl ₂)	Cl ₂ O ₁ Ti ₁ (g)	843
Titanium fluoride (TiF)	F ₁ Ti ₁ (g)	1096
Titanium fluoride (TiF ₂)	F ₂ Ti ₁ (g)	1153
Titanium fluoride (TiF ₃)	F ₃ Ti ₁ (cr)	1173
Titanium fluoride (TiF ₃)	F ₃ Ti ₁ (g)	1174
Titanium fluoride (TiF ₄)	F ₄ Ti ₁ (cr)	1191
Titanium fluoride (TiF ₄)	F ₄ Ti ₁ (g)	1192
Titanium fluoride oxide (OTiF)	F ₁ O ₁ Ti ₁ (g)	1082
Titanium fluoride oxide (OTiF ₂)	F ₂ O ₁ Ti ₁ (g)	1132
Titanium hydride (TiH ₂)	H ₂ Ti ₁ (cr)	1341
Titanium iodide (Til)	I ₁ Ti ₁ (g)	1411
Titanium iodide (Til ₂)	I ₂ Ti ₁ (cr)	1437
Titanium iodide (Til ₂)	I ₂ Ti ₁ (g)	1438
Titanium iodide (Til ₃)	I ₃ Ti ₁ (cr)	1446
Titanium iodide (Til ₃)	I ₃ Ti ₁ (g)	1447
Titanium iodide (Til ₄)	I ₄ Ti ₁ (cr)	1457
Titanium iodide (Til ₄)	I ₄ Ti ₁ (l)	1458
Titanium iodide (Til ₄)	I ₄ Ti ₁ (cr,l)	1459
Titanium iodide (Til ₄)	I ₄ Ti ₁ (g)	1460
Titanium, ion (Ti ⁺)	Ti ₁ ⁺ (g)	1913
Titanium, ion (Ti ⁻)	Ti ₁ ⁻ (g)	1914
Titanium nitride (TiN)	N ₁ Ti ₁ (cr,l)	1614

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Titanium nitride (TiN)	N ₁ Ti ₁ (l)	1613
Titanium nitride (TiN)	N ₁ Ti ₁ (cr)	1612
Titanium oxide (Ti ₂ O ₃)	O ₃ Ti ₂ (l)	1777
Titanium oxide (Ti ₂ O ₃)	O ₃ Ti ₂ (cr)	1776
Titanium oxide (Ti ₃ O ₅)	O ₅ Ti ₃ (l)	1798
Titanium oxide (Ti ₃ O ₅)	O ₅ Ti ₃ (cr,l)	1799
Titanium oxide (Ti ₄ O ₇)	O ₇ Ti ₄ (l)	1807
Titanium oxide (Ti ₄ O ₇)	O ₇ Ti ₄ (cr)	1806
Titanium oxide (TiO)	O ₁ Ti ₁ (g)	1738
Titanium oxide (TiO)	O ₁ Ti ₁ (cr,l)	1737
Titanium oxide (TiO)	O ₁ Ti ₁ (l)	1736
Titanium oxide (TiO ₂)	O ₂ Ti ₁ (g)	1762
Titanium oxide (TiO ₂)	O ₂ Ti ₁ (cr,l)	1761
Titanium oxide (TiO ₂)	O ₂ Ti ₁ (l)	1760
Titanium oxide, alpha (Ti ₃ O ₅)	O ₅ Ti ₃ (cr)	1796
Titanium oxide, alpha (TiO)	O ₁ Ti ₁ (cr)	1734
Titanium oxide, anatase (TiO ₂)	O ₂ Ti ₁ (cr)	1758
Titanium oxide, beta (Ti ₃ O ₅)	O ₅ Ti ₃ (cr)	1797
Titanium oxide, beta (TiO)	O ₁ Ti ₁ (cr)	1735
Titanium oxide, rutile (TiO ₂)	O ₂ Ti ₁ (cr)	1759
Tribromoborane (BBr ₃)	B ₁ Br ₃ (g)	196
Tribromoborane (BBr ₃)	B ₁ Br ₃ (l)	295
Tribromosilane (SiHBr ₃)	Br ₃ H ₁ Si ₁ (g)	514
Tribromosilyl (SiBr ₃)	Br ₃ Si ₁ (g)	520
Trichloroborane (BCl ₃)	B ₁ Cl ₃ (g)	207
Trichloroboroxin (B ₃ O ₂ Cl ₃)	B ₃ Cl ₁ O ₃ (g)	232
Trichlorofluorosilane (SiCl ₃ F)	Cl ₃ F ₁ Si ₁ (g)	875
Trichloromethane (CHCl ₃)	C ₁ H ₁ Cl ₃ (g)	596
Trichloromethyl (CCl ₃)	C ₁ Cl ₃ (g)	574
Trichloromethylsilane (SiCH ₃ Cl ₃)	C ₁ H ₃ Cl ₃ Si ₁ (g)	612
Trichlorosilane (SiHCl ₃)	Cl ₃ H ₁ Si ₁ (g)	880
Trichlorosilyl (SiCl ₃)	Cl ₃ Si ₁ (g)	885
Trichlorofluoromethane (CCl ₃ F)	C ₁ Cl ₃ F ₁ (g)	575
Trifluoriodomethane (CF ₃ I)	C ₁ F ₃ I ₁ (g)	587
Trifluoroacetonitrile (CF ₃ CN)	C ₂ F ₃ N ₁ (g)	669
Trifluoroborane (BF ₃)	B ₁ F ₃ (g)	216
Trifluoroboroxin (B ₃ O ₂ F ₃)	B ₃ F ₃ O ₃ (g)	286
Trifluoroboroxin (B ₃ O ₂ F ₃)	B ₃ F ₃ O ₃ (cr)	285
Trifluoromethane (CHF ₃)	C ₁ H ₁ F ₃ (g)	599
Trifluoromethyl (CF ₃)	C ₁ F ₃ (g)	585
Trifluoromethyl hypofluorite (CF ₃ OF)	C ₁ F ₄ O ₁ (g)	589
Trifluoromethyl, ion (CF ₃ ⁺)	C ₁ F ₃ ⁺ (g)	586
Trifluoromethylsilane (SiCH ₃ F ₃)	C ₁ H ₃ F ₃ Si ₁ (g)	614
Trifluorosilane (SiHF ₃)	F ₃ H ₁ Si ₁ (g)	1160
Trifluorosilyl (SiF ₃)	F ₃ Si ₁ (g)	1172
Triiodoborane (BI ₃)	B ₁ I ₃ (g)	239
Triiodosilane (SIH ₃ I)	H ₁ I ₃ Si ₁ (g)	1266
Triiodosilyl (SiI ₃)	I ₃ Si ₁ (g)	1445
Tungsten (W)	W ₁ (g)	1929
Tungsten (W)	W ₁ (cr,l)	1928
Tungsten (W)	W ₁ (l)	1927
Tungsten (W)	W ₁ (cr)	1926
Tungsten (W)	W ₁ (ref)	1925
Tungsten bromide (WBr)	Br ₁ W ₁ (g)	468

Table Title	Formula	Page	Table Title	Formula	Page
Tungsten bromide (WBr ₅)	Br ₅ W ₁ (cr)	542	Vanadium (V)	V ₁ (cr)	1918
Tungsten bromide (WBr ₅)	Br ₅ W ₁ (l)	543	Vanadium (V)	V ₁ (l)	1919
Tungsten bromide (WBr ₅)	Br ₅ W ₁ (cr,l)	544	Vanadium, ion (V ⁺)	V ₁ ⁺ (g)	1922
Tungsten bromide (WBr ₅)	Br ₅ W ₁ (g)	545	Vanadium, ion (V ⁻)	V ₁ ⁻ (g)	1923
Tungsten bromide (WBr ₆)	Br ₆ W ₁ (cr)	546	Vanadium nitride (VN)	N ₁ V ₁ (g)	1616
Tungsten bromide (WBr ₆)	Br ₆ W ₁ (g)	547	Vanadium nitride (VN)	N ₁ V ₁ (cr)	1615
Tungsten chloride ((WCl ₅) ₂)	Cl ₁₀ W ₂ (g)	936	Vanadium nitride (VN _{0.465})	N _{0.465} V ₁ (cr)	1599
Tungsten chloride (WCl)	Cl ₁ W ₁ (g)	809	Vanadium oxide (V ₂ O ₃)	O ₃ V ₂ (cr)	1779
Tungsten chloride (WCl ₂)	Cl ₂ W ₁ (g)	868	Vanadium oxide (V ₂ O ₃)	O ₃ V ₂ (l)	1780
Tungsten chloride (WCl ₂)	Cl ₂ W ₁ (cr)	867	Vanadium oxide (V ₂ O ₃)	O ₃ V ₂ (cr,l)	1781
Tungsten chloride (WCl ₄)	Cl ₄ W ₁ (g)	908	Vanadium oxide (V ₂ O ₄)	O ₄ V ₂ (cr,l)	1792
Tungsten chloride (WCl ₄)	Cl ₄ W ₁ (cr)	907	Vanadium oxide (V ₂ O ₄)	O ₄ V ₂ (l)	1791
Tungsten chloride (WCl ₅)	Cl ₅ W ₁ (cr,l)	926	Vanadium oxide (V ₂ O ₄)	O ₄ V ₂ (cr)	1790
Tungsten chloride (WCl ₅)	Cl ₅ W ₁ (g)	927	Vanadium oxide (V ₂ O ₅)	O ₅ V ₂ (cr,l)	1802
Tungsten chloride (WCl ₅)	Cl ₅ W ₁ (l)	925	Vanadium oxide (V ₂ O ₅)	O ₅ V ₂ (l)	1801
Tungsten chloride (WCl ₅)	Cl ₅ W ₁ (cr)	924	Vanadium oxide (V ₂ O ₅)	O ₅ V ₂ (cr)	1800
Tungsten chloride (WCl ₆)	Cl ₆ W ₁ (l)	933	Vanadium oxide (VO)	O ₁ V ₁ (g)	1742
Tungsten chloride (WCl ₆)	Cl ₆ W ₁ (cr,l)	934	Vanadium oxide (VO)	O ₁ V ₁ (cr,l)	1741
Tungsten chloride (WCl ₆)	Cl ₆ W ₁ (g)	935	Vanadium oxide (VO)	O ₁ V ₁ (l)	1740
Tungsten chloride (WCl ₆)	Cl ₆ W ₁ (cr)	931	Vanadium oxide (VO)	O ₁ V ₁ (cr)	1739
Tungsten chloride, alpha (WCl ₆)	Cl ₆ W ₁ (cr)	932	Vanadium oxide (VO ₂)	O ₂ V ₁ (g)	1763
Tungsten chloride, beta (WCl ₆)	Cl ₆ W ₁ (cr)	900			
Tungsten chloride oxide (OWCl ₄)	Cl ₄ O ₁ W ₁ (g)	899	Water (H ₂ O)	H ₂ O ₁ (g)	1324
Tungsten chloride oxide (OWCl ₄)	Cl ₄ O ₁ W ₁ (cr,l)	897	Water (H ₂ O)	H ₂ O ₁ (l)	1323
Tungsten chloride oxide (OWCl ₄)	Cl ₄ O ₁ W ₁ (cr)	897	Water, 1 bar (H ₂ O)	H ₂ O ₁ (l,g)	1325
Tungsten chloride oxide (OWCl ₄)	Cl ₄ O ₁ W ₁ (l)	898	Water, 10 bar (H ₂ O)	H ₂ O ₁ (l,g)	1326
Tungsten chloride oxide (WO ₂ Cl ₂)	Cl ₂ O ₂ W ₁ (g)	849	Water, 100 bar (H ₂ O)	H ₂ O ₁ (l,g)	1327
Tungsten chloride oxide (WO ₂ Cl ₂)	Cl ₂ O ₂ W ₁ (cr)	848	Water, 500 bar (H ₂ O)	H ₂ O ₁ (fl)	1328
Tungsten fluoride (WF)	F ₁ W ₁ (g)	1097	Water, 5000 bar (H ₂ O)	H ₂ O ₁ (fl)	1329
Tungsten fluoride (WF ₆)	F ₆ W ₁ (l)	1207	Water-d ₁ (HDO)	D ₁ H ₁ O ₁ (g)	1036
Tungsten fluoride (WF ₆)	F ₆ W ₁ (g)	1208	Water-d ₂ (D ₂ O)	D ₂ O ₁ (g)	1045
Tungsten fluoride oxide (WF ₄ O)	F ₄ O ₁ W ₁ (g)	1185			
Tungsten fluoride oxide (WF ₄ O)	F ₄ O ₁ W ₁ (l)	1183	Xenon (Xe)	Xe ₁ (ref)	1933
Tungsten fluoride oxide (WF ₄ O)	F ₄ O ₁ W ₁ (cr,l)	1184	Xenon, ion (Xe ⁺)	Xe ₁ ⁺ (g)	1934
Tungsten fluoride oxide (WF ₄ O)	F ₄ O ₁ W ₁ (cr)	1182			
Tungsten, ion (W ⁺)	W ₁ ⁺ (g)	1930	Zinc (Zn)	Zn ₁ (g)	1939
Tungsten, ion (W ⁻)	W ₁ ⁻ (g)	1931	Zinc (Zn)	Zn ₁ (cr,l)	1938
Tungsten oxide ((WO ₃) ₂)	O ₆ W ₂ (g)	1804	Zinc (Zn)	Zn ₁ (l)	1937
Tungsten oxide ((WO ₃) ₂)	O ₉ W ₃ (g)	1809	Zinc (Zn)	Zn ₁ (cr)	1936
Tungsten oxide ((WO ₃) ₄)	O ₁₂ W ₄ (g)	1812	Zinc (Zn)	Zn ₁ (ref)	1935
Tungsten oxide (W ₃ O ₈)	O ₈ W ₃ (g)	1808	Zinc (Zn)	Zn ₁ ⁺ (g)	1940
Tungsten oxide (WO)	O ₁ W ₁ (g)	1743	Zinc, ion (Zn ⁺)	Zn ₁ ⁺ (g)	1941
Tungsten oxide (WO ₂ 72)	O _{2.72} W ₁ (cr)	1766	Zinc, ion (Zn ⁻)	Zn ₁ ⁻ (g)	1941
Tungsten oxide (WO ₂ 90)	O _{2.90} W ₁ (cr)	1767	Zinc sulfate (ZnSO ₄)	O ₄ S ₁ Zn ₁ (cr)	1788
Tungsten oxide (WO ₂ 96)	O _{2.96} W ₁ (cr)	1768	Zirconium (Zr)	Zr ₁ (ref)	1943
Tungsten oxide (WO ₂)	O ₂ W ₁ (cr)	1764	Zirconium (Zr)	Zr ₁ (l)	1946
Tungsten oxide (WO ₂)	O ₂ W ₁ (g)	1765	Zirconium (Zr)	Zr ₁ (cr,l)	1947
Tungsten oxide (WO ₃)	O ₃ W ₁ (g)	1785	Zirconium (Zr)	Zr ₁ (g)	1948
Tungsten oxide (WO ₃)	O ₃ W ₁ (cr)	1782	Zirconium, alpha (Zr)	Zr ₁ (cr)	1944
Tungsten oxide (WO ₃)	O ₃ W ₁ (cr,l)	1784	Zirconium, beta (Zr)	Zr ₁ (cr)	1945
Tungsten oxide (WO ₃)	O ₃ W ₁ (l)	1783	Zirconium boride (ZrB ₂)	B ₂ Zr ₁ (cr,l)	281
Tungsten oxide (WO ₃)	H ₂ O ₄ W ₁ (g)	1338	Zirconium boride (ZrB ₂)	B ₂ Zr ₁ (l)	280
Tungstic acid (O ₂ W(OH) ₂)	H ₂ O ₄ W ₁ (g)	1337	Zirconium boride (ZrB ₂)	B ₂ Zr ₁ (cr)	279
Tungstic acid (O ₂ W(OH) ₂)	H ₂ O ₄ W ₁ (cr)		Zirconium bromide (ZrBr ₂)	Br ₁ Zr ₁ (g)	469
			Zirconium bromide (ZrBr ₂)	Br ₂ Zr ₁ (g)	513
Vanadium (V)	V ₁ (g)	1921	Zirconium bromide (ZrBr ₂)	Br ₂ Zr ₁ (cr,l)	512
Vanadium (V)	V ₁ (cr,l)	1920	Zirconium bromide (ZrBr ₂)	Br ₂ Zr ₁ (l)	511
Vanadium (V)	V ₁ (ref)	1917	Zirconium bromide (ZrBr ₂)		

Table Title	Formula	Page	Table Title	Formula	Page
Zirconium bromide (ZrBr_2)	$\text{Br}_2\text{Zr}_1(\text{cr})$	510	Zirconium fluoride (ZrF_4)	$\text{F}_4\text{Zr}_1(\text{g})$	1194
Zirconium bromide (ZrBr_3)	$\text{Br}_3\text{Zr}_1(\text{g})$	524	Zirconium fluoride (ZrF_4)	$\text{F}_4\text{Zr}_1(\text{cr})$	1193
Zirconium bromide (ZrBr_3)	$\text{Br}_3\text{Zr}_1(\text{cr})$	523	Zirconium hydride (ZrH)	$\text{H}_1\text{Zr}_1(\text{g})$	1309
Zirconium bromide (ZrBr_4)	$\text{Br}_4\text{Zr}_1(\text{g})$	537	Zirconium iodide (ZrI)	$\text{I}_1\text{Zr}_1(\text{g})$	1412
Zirconium bromide (ZrBr_4)	$\text{Br}_4\text{Zr}_1(\text{cr})$	536	Zirconium iodide (ZrI_2)	$\text{I}_2\text{Zr}_1(\text{g})$	1442
Zirconium carbide (ZrC)	$\text{C}_1\text{Zr}_1(\text{cr},\text{l})$	660	Zirconium iodide (ZrI_2)	$\text{I}_2\text{Zr}_1(\text{cr},\text{l})$	1441
Zirconium carbide (ZrC)	$\text{C}_1\text{Zr}_1(\text{l})$	659	Zirconium iodide (ZrI_2)	$\text{I}_2\text{Zr}_1(\text{l})$	1440
Zirconium carbide (ZrC)	$\text{C}_1\text{Zr}_1(\text{cr})$	658	Zirconium iodide (ZrI_2)	$\text{I}_2\text{Zr}_1(\text{cr})$	1439
Zirconium chloride (ZrCl)	$\text{Cl}_1\text{Zr}_1(\text{g})$	810	Zirconium iodide (ZrI_3)	$\text{I}_3\text{Zr}_1(\text{g})$	1449
Zirconium chloride (ZrCl_2)	$\text{Cl}_2\text{Zr}_1(\text{cr})$	869	Zirconium iodide (ZrI_3)	$\text{I}_3\text{Zr}_1(\text{cr})$	1448
Zirconium chloride (ZrCl_2)	$\text{Cl}_2\text{Zr}_1(\text{l})$	870	Zirconium iodide (ZrI_4)	$\text{I}_4\text{Zr}_1(\text{g})$	1462
Zirconium chloride (ZrCl_2)	$\text{Cl}_2\text{Zr}_1(\text{cr},\text{l})$	871	Zirconium iodide (ZrI_4)	$\text{I}_4\text{Zr}_1(\text{cr})$	1461
Zirconium chloride (ZrCl_2)	$\text{Cl}_2\text{Zr}_1(\text{g})$	872	Zirconium, ion (Zr^+)	$\text{Zr}_1^+(\text{g})$	1949
Zirconium chloride (ZrCl_3)	$\text{Cl}_3\text{Zr}_1(\text{cr})$	888	Zirconium, ion (Zr^-)	$\text{Zr}_1^-(\text{g})$	1950
Zirconium chloride (ZrCl_3)	$\text{Cl}_3\text{Zr}_1(\text{g})$	889	Zirconium nitride (ZrN)	$\text{N}_1\text{Zr}_1(\text{g})$	1620
Zirconium chloride (ZrCl_4)	$\text{Cl}_4\text{Zr}_1(\text{cr})$	909	Zirconium nitride (ZrN)	$\text{N}_1\text{Zr}_1(\text{cr})$	1617
Zirconium chloride (ZrCl_4)	$\text{Cl}_4\text{Zr}_1(\text{g})$	910	Zirconium nitride (ZrN)	$\text{N}_1\text{Zr}_1(\text{l})$	1618
Zirconium fluoride (ZrF)	$\text{F}_1\text{Zr}_1(\text{g})$	1098	Zirconium nitride (ZrN)	$\text{N}_1\text{Zr}_1(\text{cr},\text{l})$	1619
Zirconium fluoride (ZrF_2)	$\text{F}_2\text{Zr}_1(\text{g})$	1157	Zirconium oxide (ZrO)	$\text{O}_1\text{Zr}_1(\text{g})$	1744
Zirconium fluoride (ZrF_2)	$\text{F}_2\text{Zr}_1(\text{cr},\text{l})$	1156	Zirconium oxide (ZrO_2)	$\text{O}_2\text{Zr}_1(\text{cr})$	1769
Zirconium fluoride (ZrF_2)	$\text{F}_2\text{Zr}_1(\text{cr})$	1154	Zirconium oxide (ZrO_2)	$\text{O}_2\text{Zr}_1(\text{l})$	1770
Zirconium fluoride (ZrF_2)	$\text{F}_2\text{Zr}_1(\text{l})$	1155	Zirconium oxide (ZrO_2)	$\text{O}_2\text{Zr}_1(\text{cr},\text{l})$	1771
Zirconium fluoride (ZrF_3)	$\text{F}_3\text{Zr}_1(\text{g})$	1176	Zirconium oxide (ZrO_2)	$\text{O}_2\text{Zr}_1(\text{g})$	1772
Zirconium fluoride (ZrF_3)	$\text{F}_3\text{Zr}_1(\text{cr})$	1175	Zirconium silicate (ZrSiO_4)	$\text{O}_4\text{Si}_1\text{Zr}_1(\text{cr})$	1789