

Handbook Of Physical Chemical Properties And Environmental Fate For Organic Chemicals Second Edition Vol 1 Vol 4

The fifth volume, Pesticides, completes this unique series of information-packed handbooks on environmental fate. The handbook contains fate calculations for a variety of pesticides of environmental interest today. No other volume offers current data in this convenient format.

The properties of 72 of the most commonly used solvents are given, tabulated in the most convenient way, making this book a joy for industrial chemists to use as a desk reference. The properties covered are those which answer the basic questions of: Will it do the job? Will it harm the user? Will it pollute the air? Is it easy to handle? Will it pollute the water? Can it be recovered or incinerated? These are all factors that need to be considered at the early stages of choosing a solvent for a new product or process. A collection of the physical properties of most commonly used solvents, their behaviour in the environment and their health and fire hazards

A collection of the physical properties of most commonly used solvents, their behaviour in the environment and their health and fire hazards
This book provides comprehensive safety and health-related data for hydrocarbons and organic chemicals as well as selected data for inorganic chemicals.

This handbook provides a wide overview of the field, fundamental understanding of the synthetic methods and structure/property correlation, as well as studies related to applications in a wide range of subjects. The handbook also provides ¹H and ¹³C NMR spectra, FTIR spectra, DSC and TGA thermograms to aid in research activities. Additional tables on key NMR and FTIR frequencies unique to benzoxazine, heat of polymerization, T_g, and char yield will greatly aid in the choice of proper benzoxazine for a specific application. Provides thorough coverage of the chemistry and applications of benzoxazine resins with an evidence-based approach to enable chemists, engineers and material scientists to evaluate effectiveness Features spectra, which allow researchers to compare results, avoid repetition and save time as well as tables on key NMR frequency, IR frequency, heat of polymerization, of many benzoxazine resins to aid them in selection of materials Written by the foremost experts in the field Handbook of Physical-Chemical Properties and Environmental Fate for Organic Chemicals, Second Edition CRC Press

Transport and transformation processes are key for determining how humans and other organisms are exposed to chemicals. These processes are largely controlled by the chemicals' physical-chemical properties. This new edition of the Handbook of Physical-Chemical Properties and Environmental Fate for Organic Chemicals is a comprehensive series in four volumes that serves as a reference source for environmentally relevant physical-chemical property data of numerous groups of chemical substances. The handbook contains physical-chemical property data from peer-reviewed journals and other valuable sources on over 1200 chemicals of environmental concern. The handbook contains new data on the temperature dependence of selected physical-chemical properties, which allows scientists and engineers to perform better chemical assessments for climatic conditions outside the 20–25-degree range for which property values are generally

reported. This second edition of the Handbook of Physical-Chemical Properties and Environmental Fate for Organic Chemicals is an essential reference for university libraries, regulatory agencies, consultants, and industry professionals, particularly those concerned with chemical synthesis, emissions, fate, persistence, long-range transport, bioaccumulation, exposure, and biological effects of chemicals in the environment. This resource is also available on CD-ROM

If your work requires that you understand environmentally important properties of chemicals, then this databook will make your job easier. By providing you with easily accessed information on the structure and physical/chemical properties of more than 13,000 environmentally important chemicals, Handbook of Physical Properties of Organic Chemicals simplifies the task of locating and analyzing common and obscure compounds alike. One best experimental value is selected or an estimated value provided for: Melting point Boiling point Water solubility Octanol/water partition coefficient (log) Vapor pressure Disassociation constant Henry's law constant. These physical properties were identified from Syracuse Research Corporation's Environmental Fate Database, particularly from the DATALOG and CHEMFATE files. The contents have been divided into sections on physical states of polymers and characterization techniques. Chapters on physical states include discussions of the rubber elastic state, the glassy state, melts and concentrated solutions, the crystalline state, and the mesomorphic state. Characterization techniques described are molecular spectroscopy and scattering techniques.

Illustrated Handbook of Physical-Chemical Properties and Environmental Fate for Organic Chemicals is a comprehensive series that focuses on environmental fate prediction and quantitative structure activity relationship analysis.

This book provides numerical data on physical and thermodynamic properties of a large number of elements and compounds. SI units are used throughout, and in addition, an adequate set of conversion tables is included. This volume will be a valuable source of reference for physical chemists and chemical engineers.

CRC Practical Handbooks are a series of single-volume bench manuals that feature a synthesis of the most frequently used, basic reference information. These highly abridged versions of existing CRC multi-volume Handbooks contain largely tabular and graphic data. They provide extensive coverage in a scientific discipline and enable quick, convenient access to the most practical reference information...on the spot! Leading professionals in their respective fields collaborated to provide individuals and institutions with an economical and easy-to-use source of classic reference information. The CRC Practical Handbook of PHYSICAL PROPERTIES of ROCKS and MINERALS, prepared by leaders in their specialties, has been constructed to serve as a convenient, compact, yet comprehensive source of basic information. The technical data have been compiled and selectively edited to provide an organized and definitive presentation of the physical properties of rocks and their constituent minerals. The format is primarily tabular and graphical, for easy reference and comparisons. There is also instructive textual material to present, explain, and clarify the data. This edited and abridged version of the CRC Handbook of Physical Properties of Rocks, published in three volumes in 1982 - 1984, will serve as an easy-to-use source of current and useful reference information.

Refineries and petrochemical engineers today are accepting more unconventional feedstocks such as heavy oil and shale, causing unique challenges on the processing side of the business. To create more reliable engineering design of process equipment for the petrochemical industry, petroleum engineers and process managers are forced to study the physical properties and compounds of these particular hydrocarbons. Instead of looking up each compound's information, The Yaws Handbook of Physical Properties for Hydrocarbons and Chemicals, Second Edition presents an easy-to-use format with rapid access to search for the particular compound and understand all the complex calculations in one tabular format. Understanding the composition of hydrocarbons is not easy to calculate quickly or accurately, but

this must-have reference leads the engineer to better estimated properties and fractions from easily measured components. Expanded to cover more total compounds and relevant functions, The Yaws Handbook of Physical Properties for Hydrocarbons and Chemicals, Second Edition remains a necessary reference tool for every petrochemical and petroleum engineers' library. Coverage added on elements for hydrocarbons and chemicals with more than 200 real-world cases included for practicality Increased compound coverage from 41,000 to 54,000 total compounds to quickly access for everyday use New functions added such as testing boiling point temperature and new data on density and refractory index

Petroleum and chemical engineers are constantly looking for reliable data yet don't have the time to search through multiple sources and articles to get the most accurate pieces of data. The Yaws Handbook of Thermodynamic Properties for Hydrocarbons and Chemicals, 2nd edition brings a one-stop database reference for engineers to quickly gain access on over 12,000 compounds, simple and complex fluids, and an extensive list of properties – all to validate and improve on their thermodynamic modeling. Enhanced with eight new chapters covering more equation of state parameters, Yaws' product continues to remain a go-to source to crosscheck critical properties available on process simulators or PVT software and estimate these properties based on the group contribution methods described in the different chapters. The Yaws Handbook of Thermodynamic Properties for Hydrocarbons and Chemicals, 2nd edition stands as the trusted database to optimize petrochemical processes, equipment, and operations. Provides a reliable database reference for thermodynamic properties, even varied by temperature, as well as simple and complex fluids, mixtures, and property calculations Updated with eight additional new chapters covering a modern platform of practical applications in modelling both pure fluids and mixtures with cubic equations of state Delivers accurate and quick options and solutions to size or simulate petrochemical processes and develop better predictive models

Written by an author with over 38 years of experience in the chemical and petrochemical process industry, this handbook will present an analysis of the process steps used to produce industrial hydrocarbons from various raw materials. It is the first book to offer a thorough analysis of external factors effecting production such as: cost, availability and environmental legislation. An A-Z list of raw materials and their properties are presented along with a commentary regarding their cost and availability. Specific processing operations described in the book include: distillation, thermal cracking and coking, catalytic methods, hydroprocesses, thermal and catalytic reforming, isomerization, alkylation processes, polymerization processes, solvent processes, water removal, fractionation and acid gas removal. Flow diagrams and descriptions of more than 250 leading-edge process technologies An analysis of chemical reactions and process steps that are required to produce chemicals from various raw materials Properties, availability and environmental impact of various raw materials used in hydrocarbon processing

Providing in a single volume all essential information on the physical properties of alkali halides, this book will be a valuable reference for solid-state physicists and materials scientists.

This comprehensive series focuses on environmental fate prediction and quantitative structure activity relationship analysis.

"Written by the most lauded and respected author on chemical compounds in the field of chemical engineering, this volume is simply the most comprehensive collection of data on chemical compounds ever compiled. A compendium of over 41,000 organic and inorganic chemicals, this broad, ambitious and invaluable work covers c1to c100 organics and Ac to Zr inorganics, with useful applications for the following audiences: Chemists Chemical engineers Chemistry students Chemical engineering students Process engineers For use in the field, in the lab or in the classroom there is no other work that comes close to the research compiled in this handy reference. Collected in one volume, the

data on these 41,000 compounds is the most useful in the industry for the engineer and the chemist alike."--Publisher's website.

This unique and practical book provides quick and easy access to data on the physical and chemical properties of all classes of materials. The second edition has been much expanded to include whole new families of materials while many of the existing families are broadened and refined with new material and up-to-date information. Particular emphasis is placed on the properties of common industrial materials in each class. Detailed appendices provide additional information, and careful indexing and a tabular format make the data quickly accessible. This book is an essential tool for any practitioner or academic working in materials or in engineering.

The American edition of this handbook contains concise information on the basic physical properties of the elements and on their chemical characteristics. In general, the data selected for inclusion in the handbook are those which either agree well with calculated data (in those cases where calculations could be carried out) or satisfy various correlations, particularly those based on concepts of the distribution of valence electrons of isolated atoms in the formation of a condensed state, as electrons localized at atomic ions in the form of energetically stable configurations, and as nonlocalized electrons. The Russian edition was published in the USSR in 1965, and new or previously omitted data have been added to all the sections of the present edition. In addition, the authors have considered it necessary to include a series of new sections. Thus, a new table has been included, "Electronic Configurations and Ground States of Free Atoms and Their Ions," since, in the ionization of some atoms (particularly for transition metals), the electrons are not always abstracted from the outer shell, and, consequently, calculation of the ground state (electron energy level) using the usual vector model does not give a direct result. The ground states are obtained experimentally and the table contains the corresponding data on the configurations and states of triply-ionized atoms (which is usually sufficient).

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