

1. Record Nr.	UNINA9910824297803321
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Titolo	A guide to safe material and chemical handling / / Nicholas P. Cheremisinoff, Anton Davletshin
Pubbl/distr/stampa	Hoboken, NJ, : Wiley, c2010
ISBN	9786613203441 9781283203449 1283203448 9781613441701 1613441703 9780470648247 0470648244 9780470648261 0470648260
Descrizione fisica	1 online resource (498 p.)
Collana	Wiley-Scrivener ; ; v.5
Altri autori (Persone)	DavletshinAnton R
Disciplina	604.7
Soggetti	Hazardous substances - Safety measures Chemicals - Safety measures
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	A Guide to Safe Material and Chemical Handling; Contents; Preface; Author Biographies; List of Tables; 1. Corrosion; 1.1 General Information; 1.2 Types of Corrosion; 1.3 Materials Evaluation and Selection; 1.4 Corrosion Data; 2. Material Properties and Selection; 2.1 General Properties and Selection Criteria; 2.2 Cast Irons; 2.2.1 Gray Cast Iron; 2.2.2 White Cast Iron; 2.2.3 Malleable Cast Iron; 2.2.4 Nodular Cast Iron; 2.2.5 Austenitic Cast Iron; 2.2.6 Abrasion Resistance; 2.2.7 Corrosion Resistance; 2.2.8 Temperature Resistance; 2.2.9 Welding Cast Iron; 2.3 Steels 2.3.1 Low Carbon Steels (Mild Steel) 2.3.2 Corrosion Resistance; 2.3.3 Heat Resistance; 2.3.4 Low Temperatures; 2.3.5 High-Carbon Steels; 2.3.6 Low-Carbon, Low-Alloy Steels; 2.3.7 Mechanical Properties; 2.3.8 Corrosion Resistance; 2.3.9 Oxidation Resistance and Creep Strength; 2.3.10 Low-Temperature Ductility; 2.3.11 High-Carbon, Low-Alloy

Steels; 2.3.12 High-Alloy Steels; 2.3.12.1 Chromium Steels (400 Series), Low-Carbon Ferritic (Type 405); 2.3.12.2 Medium Carbon Martensitic; 2.3.12.3 Medium Carbon Ferrule; 2.3.12.4 Chromium/Nickel Austenitic Steels (300 Series)

2.3.13 Precipitation Hardening Stainless Steels

2.4 Materials Properties Data Tables; 3. Property Tables of Various Liquids, Gases, and Fuels; 3.1 General Properties of Hydrocarbons; 3.1.1 General Information; 3.1.2 Isomers; 3.1.3 Alkenes; 3.1.4 Alkynes; 3.1.5 Straight-Chain Hydrocarbon Nomenclature; 3.1.6 Aromatic Hydrocarbons; 3.1.7 Hydrocarbon Derivatives; 3.1.8 Halogenated Hydrocarbons; 3.1.9 Alcohols; 3.1.10 Ethers; 3.1.11 Ketones; 3.1.12 Aldehydes; 3.1.13 Peroxides; 3.1.14 Esters; 3.1.15 Amines; 3.2 Fuel Properties; 3.2.1 Crude Oil; 3.2.2 Gasoline; 3.2.3 Bioethanol and ETBE

3.2.4 Diesel Oil, Kerosene, Jet A1, and Biodiesel

3.2.5 Fuel Oil; 3.2.6 Natural Gas, Biogas, LPG and Methane Hydrates; 3.2.7 Hydrogen; 4. General Guidelines on Fire Protection, Evacuation, First Responder, and Emergency Planning; 4.1 Flammability Properties; 4.1.1.1 General Information; 4.1.1.2 Flammability Designation; 4.1.2 Ignition Temperature; 4.1.3 Flammability Limits; 4.1.4 Vapor Density; 4.1.5 Specific Gravity; 4.1.6 Water Solubility; 4.1.7 Responding to Fires; 4.1.8 Firefighting Agents; 4.1.8.1 Water; 4.1.8.2 Foam; 4.1.8.3 Alcohol-Resistant Foams; 4.1.8.4 High Expansion Foams

4.1.8.5 Other Extinguishing Agents

4.1.8.6 Carbon Dioxide; 4.1.9 Electrical Fire Prevention; 4.1.10 Firefighting Guidance; 4.1.10.1 Types; 4.1.10.2 Firefighting Agents and Extinguishers; 4.1.10.3 Vehicles; 4.1.10.4 Firefighting Gear; 4.1.11 Specialized Rescue Procedures; 4.1.12 First Responder to Electrical Fire Incidents; 4.1.13 Evacuation Planning; 4.1.13.1 Designated Roles and Responsibilities; 4.1.13.2 Preparation & Planning for Emergencies; 4.1.14 Evacuation Procedure; 4.1.15 General; 4.1.16 Template for Emergency Evacuation Plan; 5. Chemical Data; 6. Chemical Safety Data

7. Recommended Safe Levels of Exposure

Sommario/riassunto

There have been many volumes written that claim to be the most ""comprehensive"" compendium or handbook on chemical data. These wieldy volumes are often too big and extraneous to be useful to the practicing engineer. This new volume aims to be the most useful ""go to"" volume for the working engineer, scientist, or chemist who needs quick answers to daily questions about materials or chemicals and doesn't want to go on long searches through voluminous tomes or lengthy internet searches. Covering only the most commonly used chemicals in the most important processes in industry, A Guide to
