

1. Record Nr.	UNINA9910830359003321
Titolo	Guidelines for safe storage and handling of reactive materials [[electronic resource]]
Pubbl/distr/stampa	New York, : American Institute of Chemical Engineers, 1995
ISBN	1-282-81728-0 9786612817281 0-470-93801-3 1-59124-597-4 0-470-93800-5
Descrizione fisica	1 online resource (386 p.)
Disciplina	660.2804 660/.2804
Soggetti	Chemicals - Storage - Safety measures
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Guidelines for Safe Storage and Handling of Reactive Materials; Contents; Preface; Acknowledgments; Acronyms; Introduction; 1. Chemical Reactivity Hazards; 1.1. Framework for Understanding Reactivity Hazards; 1.1.1. Grouping of Reactivity Hazards into General Categories; 1.1.2. Key Parameters That Drive Reactions; 1.1.3. Types of Runaway Reactions; 1.1.4. How Reactive Chemical Storage and Handling Accidents are Initiated; 1.2. Self-Reactive Polymerizing Chemicals; 1.2.1. Thermal Instability; 1.2.2. Induction Time; 1.2.3. Example; 1.3. Self-Reactive Decomposing Chemicals; 1.3.1. Peroxides 1.3.2. Self-Accelerating Decomposition Temperature1.3.3. Predicting Instability Potential; 1.3.4. Deflagration and Detonation of Pure Material; 1.3.5. Slow Gas-Forming Reactions; 1.3.6. Heat of Compression; 1.3.7. Minimum Pressures for Vapor Decomposition; 1.3.8. Shock Sensitivity; 1.3.9. Examples of Shock Sensitivity; 1.4. Self-Reactive Rearranging Chemicals; 1.4.1. Isomerization; 1.4.2. Disproportionation; 1.5. Reactivity with Oxygen; 1.5.1. Spontaneous Ignition and Pyrophoricity; 1.5.2. Pyrophoricity versus Hypergolic Properties; 1.5.3. Accumulation and Explosion of Pyrophoric Materials

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Sommario/riassunto

With new and growing interest in dealing with the hazards of reactive chemicals, this book offers guidelines that can significantly reduce the risk or mitigate the severity of accidents associated with storing and handling reactive materials. Necessary elements of a reliable system to prevent equipment or human failures that might lead to a reactive chemical incident are sound and responsible management policies, together with a combination of superior siting, design, fabrication, erection, inspection, monitoring, maintenance, operations and maintenance of facilities. These Guidelines deal with
