

1. Record Nr.	UNINA9910143240003321
Autore	Johnson David W. <1942->
Titolo	Release : a model with data to predict aerosol rainout in accidental releases // David W. Johnson and John L. Woodward
Pubbl/distr/stampa	New York, New York : , : Center for Chemical Process Safety of the American Institute of Chemical Engineers, , 1999 ©1999
ISBN	1-282-84925-5 9786612849251 0-470-93517-0 1-59124-595-8 0-470-93516-2
Descrizione fisica	1 online resource (202 p.)
Collana	CCPS Concept books
Disciplina	628.5/3 628.53
Soggetti	Atmospheric diffusion - Computer simulation Hazardous substances - Environmental aspects - Computer simulation Vapors - Computer simulation Electronic books.
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 at the end of each chapters and index.
Nota di contenuto	Release: A Model with Data to Predict Aerosol Rainout in Accidental Releases; Contents; Preface; Acknowledgments; About This Book; Part I Design and Results of CCPS Aerosol Field Tests; 1 Introduction; 2 Chronological History; 3 Development of the Release Model; 4 Oklahoma Experimental Program (Water and CFC-11); 5 Nevada Experimental Program (Chlorine, Methylamine, and Cyclohexane); 6 Corrections to Experimental Data and Further Release Model Work; 7 Summary and Future Work; References; Part II Measurement and Modeling of Accidental Aerosol Releases; 8 Background and Objectives 9 Correcting Experimental Rainout Data10 The RELEASE Model for Predicting Rainout; 11 Aerosol Drop Size Correlation; Appendix A Experimental Rainout Data; Appendix B Solar Radiation Data for Las

Vegas, NV; Appendix C Theory of Model Used to Correct Rainout Data; Appendix D Additional Modeling Details; Appendix E Rainout Correlation Using Adiabatic Saturation Temperature; References; Nomenclature; Index

Sommario/riassunto

This book documents CCPS's Aerosol Research Program to develop a model to predict liquid rainout from release of a pressurized, liquefied gas--and, hence the residual amount of material in a vapor cloud, which may be greater than the amount calculated from an enthalpy chart. RELEASE predicts the rate of fluid discharge, the depressurization, flashing and formation of liquid drops, the entrainment of drops into the vapor cloud, the subsequent spreading of the jet, and rate of liquid rainout to a pool on the ground. Designed in a modular fashion to permit adjustment and corrections as new data b
