Record Nr. UNINA9910451266103321 Autore Bukhina M. F (Maia Faddeevna) Titolo Low-temperature behaviour of elastomers // M.F. Bukhina and S.K. Kurlyand Leiden;; Boston:,: VSP,, 2007 Pubbl/distr/stampa 0-429-08799-3 **ISBN** 1-281-92650-7 9786611926502 90-474-2242-2 1-60119-402-1 Descrizione fisica 1 online resource (193 p.) Collana New concepts in polymer science;; 31 Altri autori (Persone) KurlyandS. K Disciplina 547.842 Soggetti Elastomers - Thermal properties Materials at low temperatures 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 (p. [157]-181) and indexes. Nota di contenuto Front Cover; Contents; Foreword; Introduction; 1. Glass transition of elastomers; 2. Mechanical properties of elastomers near the glass transition temperature; 3. Crystallization of elastomers at low temperatures; 4. Stress-induced crystallization of elastomers; 5. Strength properties of elastomers at low temperatures; 6. Contribution of crystallization and glass transition to low-temperature resistance of elastomers; 7. Low-temperature resistance specifics of particular elastomers; References Sommario/riassunto This book focuses on the effect the composition of rubbers and the conditions of their processing have on low-temperature resistance. It considers the nature and development of two physical processes, glass transition and crystallization, determining low-temperature behavior of elastomers. The book addresses the effects of deformation, pressure, and temperature on these processes. It discusses the contribution of different factors in frost-resistance of elastomeric materials and articles and the possibility of increasing frost-resistance by

optimization of composition and design.