1. Record Nr. UNINA9910298614503321 Autore Vickers Les **Titolo** Fire-Resistant Geopolymers: Role of Fibres and Fillers to Enhance Thermal Properties / / by Les Vickers, Arie van Riessen, William D. A. Rickard Singapore:,: Springer Singapore:,: Imprint: Springer,, 2015 Pubbl/distr/stampa **ISBN** 981-287-311-2 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (135 p.) Collana SpringerBriefs in Materials, , 2192-1091 Disciplina 620.11 620.14 691 Soggetti Ceramics Glass Composites (Materials) Composite materials **Building materials** Structural materials Ceramics, Glass, Composites, Natural Materials **Building Materials** Structural Materials 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. Nota di contenuto Overview -- History of Geopolymers -- Portland Cement (OPC) and Concrete -- Geopolymer Applications -- Precursors and Additives for Geopolymer Synthesis -- Geopolymer Chemistry -- Fibres: Technical Benefits -- Thermal Properties of Geopolymers -- Fire Resistance of OPC and geopolymer -- Conclusion. Sommario/riassunto The book covers the topic of geopolymers, in particular it highlights the relationship between structural differences as a result of variations during the geopolymer synthesis and its physical and chemical properties. In particular, the book describes the optimization of the

thermal properties of geopolymers by adding micro-structural

modifiers such as fibres and/or fillers into the geopolymer matrix. The

range of fibres and fillers used in geopolymers, their impact on the microstructure and thermal properties is described in great detail. The book content will appeal to researchers, scientists, or engineers who are interested in geopolymer science and technology and its industrial applications.