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Nota di contenuto	1 Scope -- 1.1 General comments -- 1.2 Context and objectives -- 2 Introduction -- 2.1 Physical aspects of heated concrete -- 2.2 Modelling -- 2.3 References -- 3 Engineering Modelling -- 3.1 General approach -- 3.2 Eurocode -- 3.3 Thermal analysis -- 3.4 Mechanical analysis -- 3.5 Spalling -- 3.6 Examples of national guidelines -- 3.7 Discussion, limits -- 3.8 References -- 4 Advanced Modelling -- 4.1 Concrete as multiphase porous material -- 4.2 Heat and mass transfer -- 4.3 Key points for modelling cement-based materials at high temperature -- 4.4 Numerical approach -- 4.5 Simplified one-fluid model -- 4.6 Simplified thermo-mechanical approach -- 4.7 Mechanical modelling -- 4.8 References -- 5 Constitutive Parameters -- 5.1 Hygral Parameters -- 5.2 Thermal Parameters -- 5.3 Mechanical Parameters -- 5.4 References -- 6 Conclusion.
Sommario/riassunto	This book presents the work done by the RILEM Technical Committee

227-HPB (Physical properties and behaviour of High-Performance Concrete at high temperature). It contains the latest research results on the modelling of concrete behaviour at high temperature. Some monographs on the subject have been published already but generally they do not cover the whole range of possibilities which are encountered in the literature as well as in practice. Moreover, there has been a rapidly increasing development of computational models during the last twenty years, which deserves attention. Therefore, it is the aim of this report to compile and present most of the tools that are proposed in the literature and are nowadays available for practice in some commercial computational packages. The book is divided in 3 main chapters dealing with: - engineering modelling - advanced modelling - constitutive parameters including hydral, thermal and mechanical parameters. The results presented especially target a group of users composed by universities and research laboratories, building material companies and industries, material scientists and experts, building and infrastructure authorities, designers and civil engineers.