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fibre glass composites; 6.9 Conclusions; 6.10 Acknowledgements; References; Chapter 7.Ceramic fibres; 7.1 Introduction; 7.2 Silicon carbide-based fibres; 7.3 Other non-oxide fibres; 7.4 Alumina-based fibres; 7.5 Other polycrystalline oxide fibres; 7.6 Single-crystal oxide fibres; 7.7 Conclusions; References; Chapter 8.Chemically resistant fibres; 8.1 Introduction (ARH); 8.2 Chlorinated fibres: PVDC (ARH) 8.3 Fluorinated fibres: PTFE, PVF, PVDF and FEP (ARH)8.4 Poly (etheretherketones): PEEK (BM); 8.5 Poly(phenylene sulphide), PPS (ARH); 8.6 Poly(ether imide), PEI33,34 (ARH); 8.7 Others (ARH); References; Chapter 9.Thermally resistant fibres; 9.1 Introduction (ARH); 9.2 Thermosets (HE and HS); 9.3 Aromatic polyamides and polyarimids (ARH); 9.4 Semi-carbon fibres: oxidised acrylics (NS); 9.5 Polybenzimidazole, PBI (CT); 9.6 Polybenzoxazoles, PBO (ARH); 9.7 Final comments (ARH); References; Appendix:Quantities and units; Index

Sommario/riassunto

This important new handbook provides comprehensive coverage of how high performance fibres are designed and manufactured and covers their capabilities and applications. The high-modulus, high-tenacity (HM-HT) fibres fall naturally into three groups - polymer fibres such as aramids and polyethylene fibres; carbon fibres such as Kevlar; and inorganic fibres based on glass and ceramic fibres.The books shows how high performance fibres are being increasingly used for a wide range of applications including goetextiles and geomembranes and for construction and civil engineering projects as w