

## **Technical Organic and Inorganic Fibres from Natural Resources**

### **Glass fibres - Production, structure, and applications**

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One of the most adaptable industrial materials available today is “glass fibres (GFs)”: they are easily made from raw infinitely abundant ingredients. Glass fibre made of silica has a long history. Common glass fibres are available in a variety of chemical compositions. The majority of glass fibres are silica-based (50–60% SiO<sub>2</sub>) and include a variety of additional oxides, including those of calcium, boron, sodium, aluminum, iron, and others. The letters E and C stand for electrical, corrosion/chemical, and high silica content, respectively. S denotes high silica content: S-glass can endure higher temperatures compared to its counterparts in addition to being a great electrical insulator, excellent strength, and a reasonable Young's modulus. Glass fibres are utilized to create printed circuit boards, structural composites, etc. This chapter discusses briefly, glass fibres history, its production, structure, applications, challenges, and ways forwards and then a concise conclusion is drawn.