Monofilament Fiber Performance

GBF vs. Other Industrial Fibers

Performance	GBF Basalt filament	E-glass filament	S-glass filament	Carbon filament	Aramid filament
Density (g/cm^3)	2.65±0.1	2.54~2.57	2.54±0.1	1.78±0.1	1.45±0.1
Tensile strength (MPa)	3800~4800	3100~3800	4020~4650	3500~6000	2900~3430
Elastic modulus (GPa)	93.1~110	72.5~75.5	83~86	230~600	70~140
Breaking elongation (%)	2.0~3.5	4.2~5.2	4.8~5.8	1.5~2.0	2.8~3.6
Max operating temp.(°C)	650	380	300	500	250

Continuous Basalt Fiber

Continuous basalt fiber is an inorganic, non-metallic fiber derived from the rapid drawing of **molten volcanic rock at high temperatures** ranging from 1450°C to 1500°C. With its distinctive golden-brown hue, this high-performance fiber offers a **unique combination of physical and chemical properties**.

Key Features:

- **Exceptional thermal resistance**
- **Natural sustainable material**
- **Superior mechanical strength**
- **Outstanding chemical stability**
- **Excellent thermal and acoustic insulation**
- **Low dielectric constant and high electrical resistivity**
- **Strong resistance to ablation and wear**

Recognized as a **strategic material** for the modern era, continuous basalt fiber **plays a crucial role** in both high-performance engineering applications and the advancement of key industrial sectors. Its unique properties have positioned it as a key advanced material for innovation across high-tech and industrial sectors.