

# Basalt fiber properties - comparison

Physical properties	Steel	Basalt	E-Glas	S-Glas	PP	Carbon	Aramid
Spec. density (g/cm <sup>3</sup> )	7.8	2.63	2.54	2.54	0.91	1.78	1.45
Tensile strength (MPa)	600-900	3800-4000	2600-2800	3200-4100	420	3500-6000	2900-3400
Modulus of elasticity (Gpa)	250	89-93	72	86	3.5	230-430	70-140
Elongation at break (%)	25	3.1	4.7	5.3	10	1.5-2.0	1.8-3.6
Softening point (°C)	800	1050	850	850	100	---	250
Max. Operating temp (°C)	500	-260 bis 650	380	380	60	500	250
Short-term max. temp (°C)	950	1100	1000	950	100	800	500

Chemical properties	inert and amorphous
UV resistance	very good
Acid and alkali resistance	very good
Resistance to solvents	very good
Chemically inert	very good
Corrosion	non-corroding

Other properties	
Thermal conductivity	0.031-0.038 W/(m · K)
Compressive strength	very good
Electrical conductivity	Non conductive