

## Comparison Characteristics of Basalt Fiber and Fiberglass

Properties	Units	Basalt Fiber	Fiberglass
<b>Thermal</b>			
Sustained operating temperature	(°C)	680	480
Minimum operating temperature	(°C)	-260	-60
Melting temperature	(°C)	1450	1120
<b>Physical/Mechanical</b>			
Density	(g/cm <sup>3</sup> )	2.8	2.6
Filament diameter	(microns)	13-20	9-13
Tensile strength	(M Pa)	4840	3450
Elastic modulus	(G Pa)	89	77
Elongation at break	(%)	3.15	4.7
<b>Acoustics:</b>			
Sound absorption coefficient	(%)	0.9-0.99	0.8-0.93
<b>Chemical Resistance</b>			
% weight loss after 3 hrs boiling in:			
H <sub>2</sub> O	(%)	1.6	6.2
2n NaOH (Sodium Hydroxide)	(%)	2.75	6.0
2n HCl (Hydrochloric acid)	(%)	2.2	38.9