

HST

General Properties			
	Condition	Metric	US
Specific gravity	ASTM D792	1.20 g/cm ³	1.20 g/cm ³

Mechanical Properties			
Tensile modulus	ASTM D638	5475 - 5725 MPa	795 - 831 MPa
Tensile strength, ultimate	ASTM D638	48 - 51 MPa	7050 - 7350 psi
Elongation at break	ASTM D638	4.5 %	4.5 %
Flexural strength, ultimate	ASTM D790	83 - 89 MPa	12000 - 12900 psi
Flexural modulus	ASTM D790	4400 - 4550 MPa	638 - 660 ksi
Hardness shore D	ASTM D2240	75	75
Impact strength, notched Izod @ 23 °C	ASTM D256	37.4 J/m	0.7 ft-lb/in
Impact strength, unnotched Izod @ 23 °C	ASTM D256	310 J/m	5.8 ft-lb/in
Gardner impact	ASTM D5420	5 J	3.7 ft-lb

Thermal Properties			
Heat deflection temperature (HDT)	ASTM D648 @ 0.45 MPa/66 psi	184 °C	363 °F
	@ 1.82 MPa/264 psi	179 °C	355 °F
Co-efficient of thermal expansion	ASTM E831 @ 0 - 50 °C	138.3 µm/m-°C	76.8 µin/in-°F
	@ 85 - 145 °C	267.2 µm/m-°C	148.4 µin/in-°F
Specific heat capacity	ASTM E1269	1.503 J/g-°C	0.359 BTU/lb-°F
Flammability (3 mm)	UL 94	HB	HB

Electrical Properties			
Volume resistivity	ASTM D257	6.7 x 10 ¹⁵ Ω-cm	6.7 x 10 ¹⁵ Ω-cm
Surface resistivity	ASTM D257	5.2 x 10 ¹⁵ Ω	5.2 x 10 ¹⁵ Ω
Dissipation factor, 1 KHz	ASTM D150	0.028	0.028
Dielectric constant, 1 KHz	ASTM D150	3.14	3.14
Dielectric strength	ASTM D149	18.5 kV/mm	470 kV/in

** Data was generated by building parts using 100% virgin powder under typical default parameters. DuraForm® HST Composite was processed on a Sinterstation® HiQ™ + HS SLS® System at 25 watts laser power, 10 m/sec [400 inches/sec] scan speed, and powder layer thickness of 0.1 mm [0.004 inches].*