

INEOS Styrolution® HI-10

Terluran® HI-10 is an medium flow, injection molding grade with very high resistance to impact with excellent heat distortion and suitable for injection molding and extrusion. High toughness, Very high impact, Medium flow, Great mechanical strength and rigidity, High impact at sub-zero temperatures.

Applications: Injection molding, Compounding, Appliance housings, Lawn & garden components requiring superior toughness

Physical Properties	Metric	English	Comments
Density	1.03 g/cc	0.0372 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.21 % @Temperature 23.0 °C	0.21 % @Temperature 73.4 °F	50% RH; ISO 62
Water Absorption at Saturation	1.03 % @Temperature 23.0 °C	1.03 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	ISO 294-4
Melt Flow	5.5 g/10 min @Load 10.0 kg, Temperature 220 °C	5.5 g/10 min @Load 22.0 lb, Temperature 428 °F	Volumetric; cm ³ /10 min; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	95	95	ASTM Test
Ball Indentation Hardness	74.0 MPa	10700 psi	ISO 2039-1
Tensile Strength, Yield	38.0 MPa	5510 psi	ISO 527
Elongation at Break	9.0 %	9.0 %	Nominal; ISO 527
Elongation at Yield	2.8 %	2.8 %	ISO 527
Tensile Modulus	1.90 GPa	276 ksi	ISO 527
Flexural Strength	56.0 MPa	8120 psi	ISO 178
Izod Impact, Notched	1.20 J/cm @Temperature -30.0 °C	2.25 ft-lb/in @Temperature -22.0 °F	ASTM Test
	1.80 J/cm @Temperature -18.0 °C	3.37 ft-lb/in @Temperature -0.400 °F	ASTM Test
	4.50 J/cm @Thickness 3.17 mm	8.43 ft-lb/in @Thickness 0.125 in	ASTM Test
Izod Impact, Notched (ISO)	14.0 kJ/m ² @Temperature -30.0 °C	6.66 ft-lb/in ² @Temperature -22.0 °F	ISO 180/A
	36.0 kJ/m ² @Temperature 23.0 °C	17.1 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	14.0 J/cm ² @Temperature -30.0 °C	66.6 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.30 J/cm ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	3.50 J/cm ² @Temperature 23.0 °C	16.7 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA