

Terluran® HI-10

Acrylonitrile Butadiene Styrene
INEOS Styrolution Group GmbH

Message:

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.

General Information			
UL YellowCard	E108538-218717		
Features	Low Temperature Impact Resistance		
	Medium Flow		
	Medium Rigidity		
	Ultra High Impact Resistance		
	Ultra High Toughness		
Uses	Appliances		
	Compounding		
	Housings		
	Lawn and Garden Equipment		
Forms	Pellets		
Processing Method	Compounding		
	Extrusion		
	Injection Molding		
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)		
	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Specific Volume vs Temperature (ISO 11403-2)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.03	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
200°C/5.0 kg	0.10	g/10 min	
220°C/10.0 kg	8.0	g/10 min	
Melt Volume-Flow Rate (MVR)			
230°C/3.8 kg	1.70	cm³/10min	ASTM D1238
220°C/10.0 kg	5.50	cm³/10min	ISO 1133

Molding Shrinkage			
Flow	0.40 to 0.70	%	ASTM D955
--	0.40 to 0.70	%	ISO 294-4
Water Absorption			
Saturation, 23°C	1.0	%	ASTM D570, ISO 62
Equilibrium, 23°C, 50% RH	0.21	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	95		ASTM D785
Ball Indentation Hardness	74.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
--	2000	MPa	ASTM D638
--	1900	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	43.0	MPa	ASTM D638
Yield, 23°C	38.0	MPa	ISO 527-2
Tensile Strain			
Yield, 23°C	2.8	%	ISO 527-2
Break	3.5	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	9.0	%	ISO 527-2
Flexural Modulus	2050	MPa	ASTM D790
Flexural Strength			
--	66.0	MPa	ASTM D790
--	56.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-30°C	13	kJ/m ²	
23°C	35	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179
-30°C	140	kJ/m ²	
23°C	No Break		
Notched Izod Impact			
-30°C	120	J/m	ASTM D256
-18°C	180	J/m	ASTM D256
23°C	450	J/m	ASTM D256
-30°C	14	kJ/m ²	ISO 180/A
23°C	36	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	93.9	°C	ASTM D648
0.45 MPa, Annealed	102	°C	ASTM D648
0.45 MPa, Annealed	97.0	°C	ISO 75-2/B

1.8 MPa, Unannealed	85.6	°C	ASTM D648
1.8 MPa, Annealed	97.8	°C	ASTM D648
1.8 MPa, Annealed	93.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	103	°C	ISO 306/A50
--	90.0	°C	ISO 306/B50
CLTE - Flow	8.0E-5 to 1.1E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.17	W/m/K	DIN 52612
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			
--	> 1.0E+15	ohms·cm	ASTM D257
--	1.0E+15	ohms·cm	IEC 60093
Dielectric Constant			
1.00 mm, 1 MHz	2.80		ASTM D150
100 Hz	2.90		IEC 60250
1 MHz	2.80		IEC 60250
Dissipation Factor			
100 Hz	5.4E-3		IEC 60250
1 MHz	8.2E-3		
Optical	Nominal Value	Unit	Test Method
Yellowness Index	15	YI	DIN 6167
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	2.0 to 4.0	hr	
Processing (Melt) Temp	230 to 260	°C	
Mold Temperature	30.0 to 60.0	°C	
Injection Velocity	200	mm/sec	

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