

Styrolution PS 2710 HIPS

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Impact Modified

Material Notes:

Styrolution PS 2710 is a high impact grade of polystyrene with improved stress crack resistance, developed for extrusion and thermoforming applications, especially for the refrigerator industry. Improved Environmental stress cracking resistance (ESCR)

HIPSBalanced mechanical propertiesInformation provided by Styrolution

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styrolution-PS-2710-HIPS.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	<= 0.10 % @Temperature 23.0 Â°C	<= 0.10 % @Temperature 73.4 Â°F	50% RH; ISO 62
Water Absorption at Saturation	<= 0.10 % @Temperature 23.0 Â°C	<= 0.10 % @Temperature 73.4 Â°F	ISO 62
Linear Mold Shrinkage	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	ISO 294-4
Melt Flow	5.0 g/10 min @Load 5.00 kg, Temperature 200 Â°C	5.0 g/10 min @Load 11.0 lb, Temperature 392 Â°F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	65.0 MPa	9430 psi	ISO 2039-1
Tensile Strength, Yield	22.0 MPa	3190 psi	ISO 527
Elongation at Break	50 %	50 %	ISO 527
Elongation at Yield	1.8 %	1.8 %	ISO 527
Tensile Modulus	1.60 GPa	232 ksi	ISO 527
Flexural Strength	32.0 MPa	4640 psi	ISO 178
Izod Impact, Notched (ISO)	7.00 kJ/m ² @Temperature -30.0 Â°C	3.33 ft-lb/in ² @Temperature -22.0 Â°F	ISO 180/A
	12.0 kJ/m ² @Temperature 23.0 Â°C	5.71 ft-lb/in ² @Temperature 73.4 Â°F	ISO 180/A

Mechanical Properties	Metric	English	Comments
Charpy Impact Unnotched	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179
	NB	NB	ISO 179
Charpy Impact, Notched	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179
	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179
	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	100 Åµm/m-°C	55.6 Åµin/in-°F	ISO 11359
Thermal Conductivity	0.170 W/m-K	1.18 BTU-in/hr-ft ² - °F	DIN 52612-1
Deflection Temperature at 0.46 MPa (66 psi)	90.0 °C	194 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	82.0 °C	180 °F	ISO 75
Vicat Softening Point	92.0 °C	198 °F	50°C/h; ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	97.0 °C	207 °F	50°C/h; ISO 306
	@Load 1.02 kg	@Load 2.25 lb	

Optical Properties	Metric	English	Comments
Gloss	20 %	20 %	Specular Gloss, 60°; ASTM D 523

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+18 ohm-cm	>= 1.00e+18 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+14 ohm	>= 1.00e+14 ohm	IEC 60093
Dielectric Constant	2.5	2.5	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	155 kV/mm	3940 kV/in	Short Time; IEC 60243-1
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Dissipation Factor	0.00040	0.00040	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.00040	0.00040	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Processing Properties	Metric	English	Comments
Melt Temperature	180 - 260 Â°C	356 - 500 Â°F	ISO 294
Mold Temperature	10.0 - 60.0 Â°C	50.0 - 140 Â°F	ISO 294
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294

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