TOTAL Polystyrene Crystal 1050

General Purpose Polystyrene

TOTAL Refining & Chemicals

Message:

Polystyrene Crystal 1050 is an ice color, high molecular weight, high heat resistant polystyrene for extrusion and injection molding applications. It is recommended for manufacturing of sheet by direct gassing, where it gives expanded sheets with high mechanical properties. It can be used be in dilution with HIPS for the extrusion of sheet for hot-fill thermoforming application.
Applications:
High Heat Resistant Thermoformed Products
Foam Extrusion

General Information		
UL YellowCard	E314268-100055735	E472299-102068879
Features	High molecular weight Heat resistance, high	
Uses	Foam Sheet	
Agency Ratings	EC 1907/2006 (REACH)	
UL File Number	E314268	
Appearance	Water White	
Forms	Particle	
Processing Method	Extrusion Thermoforming Injection molding	

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm³	ASTM D792
Apparent Density [1]	0.60	g/cm³	ASTM D1895
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.8	g/10 min	ASTM D1238
Spiral Flow [2]	42.0	cm	ASTM D3123
Molding Shrinkage - Flow	0.40 - 0.70	%	ASTM D955
Water Absorption (24 hr)	0.040	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (L scale, 23°C, injection molding)	70		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Yield, 23°C, Injection Molded)	55.0	MPa	ASTM D638
Tensile Elongation (Break, 23°C, Injection Molded)	2.0	%	ASTM D638
Flexural Modulus (23°C, Injection Molded)	3100	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact (23°C, Injection Molded)	90	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	103	°C	ASTM D1525 [3]
CLTE - Flow	8.9E-5	cm/cm/°C	ASTM D696
Heat Distortion	87	°C	ASTM D648
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+14	ohms	IEC 60093
Dielectric Strength	150	kV/mm	ASTM D149
Injection	**Nominal Value**	**Unit**	
Rear Temperature	160 - 180	°C	
Middle Temperature	180 - 220	°C	
Front Temperature	220 - 240	°C	
Nozzle Temperature	210 - 260	°C	
Injection instructions			
Zone 4 Temperature: 210 to 260°C			
NOTE			
1.	Bulk Density: Bulk Density of all Natural grades is approximately 0.6 g/cm³		
2.	Mold temperature: 220°C		
3.	速率 A (50°C/h), 压 力1 (10N)		

Recommended distributors for this material

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