

TOTAL Polystyrene Crystal 1540 (AS)

General Purpose Polystyrene

TOTAL Refining & Chemicals

Message:

Polystyrene Crystal 1540 is a high flow polystyrene for injection molding application.
It offers low viscosity at high shear rate, that allows a good injectability, and a relatively high softening point.

Applications:

- Cutlery
- Jewel Box
- Toy

General Information			
UL YellowCard	E314268-100036310	E72824-249381	E472299-102067179
Features	Low viscosity		
	High liquidity		
	Heat resistance, high		
Uses	Kitchen utensils		
	Container		
	Toys		
Agency Ratings	EC 1907/2006 (REACH)		
UL File Number	E314268		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Apparent Density	0.60	g/cm ³	ASTM D1895
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	12	g/10 min	ASTM D1238, ISO 1133
Spiral Flow ¹	57.0	cm	ASTM D3123
Molding Shrinkage - Flow	0.40 - 0.70	%	ASTM D955
Water Absorption			
24 hr	< 0.10	%	ASTM D570
Equilibrium, 23°C, 50% RH	< 0.10	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
L scale, 23°C, injection molding	70		ASTM D785
L scale, 23°C	70		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			
Yield, 23°C, injection molding	45.0	MPa	ISO 527-2
Fracture, 23°C, injection molding	45.0	MPa	ASTM D638

Tensile Elongation (Break, 23°C, Injection Molded)	2.0	%	ASTM D638, ISO 527-2
Flexural Modulus (23°C, Injection Molded)	3300	MPa	ASTM D790, ISO 178
Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact			
23°C, injection molding	68	J/m	ASTM D256
23°C, injection molding	7.5	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	91.0	°C	ISO 306/A50, ASTM D1525 2
CLTE - Flow	7.1E-5	cm/cm/°C	ASTM D696
Heat Distortion			
--	75	°C	ASTM D648
--	75	°C	ISO 75-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+14	ohms	ASTM D257
Dielectric Strength	140	kV/mm	ASTM D149
Injection	Nominal Value	Unit	
Rear Temperature	170 - 180	°C	
Middle Temperature	180 - 220	°C	
Front Temperature	210 - 240	°C	
Nozzle Temperature	210 - 240	°C	
Injection instructions			
Zone 4: 210-240°C			
NOTE			
1.	Melt temperature: 220°C		
2.	速率 A (50°C/h), 压力1 (10N)		

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