

TOTAL Polystyrene Crystal 1340

General Purpose Polystyrene

TOTAL Refining & Chemicals

Message:

POLYSTYRENE CRYSTAL 1340 is a high molecular weight crystal polystyrene which allows maximum dilution rates with high impact polystyrene grades such as POLYSTYRENE IMPACT 7240. In dilution, POLYSTYRENE CRYSTAL 1340 gives excellent processing in both extrusion and thermoforming with good finished product dimensional stability and mechanical properties. POLYSTYRENE CRYSTAL 1340 can be used in injection.

General Information	
Features	Food Contact Acceptable
	Good Dimensional Stability
	Good Processability
	High Molecular Weight
Uses	Business Equipment
	Cups
	Toys
Agency Ratings	EC 1907/2006 (REACH)
Forms	Pellets
Processing Method	Extrusion
	Injection Molding
	Thermoforming
Multi-Point Data	Specific Volume vs Temperature (ISO 11403-2)
	Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Density			
--	1.05	g/cm ³	ISO 1183
--	1050	kg/m ³	ISO 1183 ¹
Apparent Density	0.60	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	4.0	g/10 min	ISO 1133
Melt volume-flow rate (200°C/5.0 kg)	4.00	cm ³ /10min	ISO 1133 ²
Molding Shrinkage	0.40 to 0.70	%	ISO 294-4
Water Absorption			
23°C, 24 hr	< 0.10	%	ISO 62
Saturation	0.10	%	ISO 62 ³
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	70		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus			
--	3100	MPa	ISO 527-2
--	3150	MPa	ISO 527-2 ⁴
Tensile Stress			
Break	44.0	MPa	ISO 527-2
Break	50.0	MPa	ISO 527-2 ⁵
Tensile Strain			
Break	2.5	%	ISO 527-2
Break	2.0	%	ISO 527-2 ⁶
Tensile Creep Modulus (1 hr)	3100	MPa	ISO 899-1 ⁷
Flexural Modulus	2900	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			
--	8.0	kJ/m ²	ISO 179/1eU
23°C	17.0	kJ/m ²	ISO 179/1eU ⁸
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, Unannealed	75.0	°C	ISO 75-2/A
1.8 MPa, Annealed	88.0	°C	ISO 75-2/A
1.8 MPa	88.0	°C	ISO 75-2 ⁹
Vicat Softening Temperature			
--	98.0	°C	ISO 306/A50
--	93.0	°C	ISO 306/B50
50°C/h, B (50N)	92.0	°C	ISO 306 ¹⁰
CLTE			
Flow	7.1E-5	cm/cm/°C	ISO 11359-2
Transverse	7.0E-5	cm/cm/°C	ISO 11359-2 ¹¹
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	> 1.0E+15	ohms	IEC 60093
--	1.0E+14	ohms	IEC 60093 ¹²
Electric Strength	140	kV/mm	IEC 60243-1
NOTE			
1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
3.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		

5.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
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11.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
12.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

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