

TOTAL Polystyrene Impact 7240

High Impact Polystyrene
TOTAL Refining & Chemicals

Message:

POLYSTYRENE IMPACT 7240 is a very high impact polystyrene for the extrusion industry. This grade has been designed to be diluted with crystal polystyrene such as POLYSTYRENE CRYSTAL 1160, 1340, 1540 at high levels to obtain stiff and impact resistant sheet for thermoformed packaging.

General Information			
Features	Food Contact Acceptable		
	Ultra High Impact Resistance		
Uses	Cups		
	Packaging		
	Sheet		
Agency Ratings	EC 1907/2006 (REACH)		
Forms	Pellets		
Processing Method	Extrusion		
	Thermoforming		
Multi-Point Data	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
Density			
--	1.04	g/cm ³	ISO 1183
--	1040	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)	4.5	g/10 min	ISO 1133
Melt volume-flow rate (200°C/5.0 kg)	5.00	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 (R-Scale)	65		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			

--	1950	MPa	ISO 527-2
--	1800	MPa	ISO 527-2 ⁴
Tensile Stress			
Yield	23.0	MPa	ISO 527-2
Break	21.0	MPa	ISO 527-2
Tensile Strain			
Yield	1.5	%	ISO 527-2 ⁵
Break	60	%	ISO 527-2
Nominal strain at break	> 50	%	ISO 527-2 ⁶
Tensile Creep Modulus (1 hr)	1750	MPa	ISO 899-1 ⁷
Flexural Modulus	1850	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
--	11	kJ/m ²	ISO 179/1eA
23°C	11.0	kJ/m ²	ISO 179/1eA ⁸
Notched Izod Impact Strength	11	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, Unannealed	74.0	°C	ISO 75-2/A
1.8 MPa, Annealed	90.0	°C	ISO 75-2/A
1.8 MPa	89.5	°C	ISO 75-2 ⁹
Vicat Softening Temperature			
--	97.0	°C	ISO 306/A50
--	87.0	°C	ISO 306/B50
50°C/h, B (50N)	85.0	°C	ISO 306 ¹⁰
CLTE			
Flow	9.1E-5	cm/cm/°C	ISO 11359-2
Transverse	9.0E-5	cm/cm/°C	ISO 11359-2 ¹¹
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	> 1.0E+15	ohms	IEC 60093
--	1.0E+13	ohms	IEC 60093 ¹²
Electric Strength	150	kV/mm	IEC 60243-1
Flammability	Nominal Value	Unit	Test Method
Burning Behav. at 1.6mm nom. thickn. (1.60 mm)	HB		ISO 1210 ¹³
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.
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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.
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

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