Polystyrol 145 D

General Purpose Polystyrene

BASF Corporation

IDES | Prospector

Product Description

Polystyrol 145 D is a medium strength, easy flowing general purpose grade, suitable for blending with impact modified Polystyrol.

General

Material Status	• Commercial: Active		
Availability	• Europe		
Features	• Food Contact Acceptable	• General Purpose	• Good Flow
Uses	• Blending	• General Purpose	• Sheet
Agency Ratings	• BGVO Food Contact, Unspecified Rating	• FDA Food Contact, Unspecified Rating	
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	15.0	cm³/10min	ISO 1133
Water Absorption			ISO 62
Saturation, 23°C	0.10	%	
Equilibrium, 23°C, 50% RH	0.10	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	3300	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	44.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.0	%	ISO 527-2
Flexural Strength (23°C)	70.0	MPa	ISO 178
Shear Modulus (23°C)	1350	MPa	ISO 537

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	3.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	25	kJ/m²	ISO 179/1eU

Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	150	MPa	ISO 2039-1

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	88.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	80.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	96.0	°C	ISO 306/A50
--	88.0	°C	ISO 306/B50

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+18	ohm·cm	IEC 60093
Relative Permittivity			IEC 60250
23°C, 100 Hz	2.50		
23°C, 1E+6 Hz	2.50		
Electric Strength (23°C)	140	kV/mm	IEC 60243-1

Additional Information

Charpy Unnotched Impact, ISO 179, Type 1, Edgewise, 23°C: <25 kJ/m²
Electric Strength, IEC 60243-1, K20/P50, 23°C: 135 kV/mm
Moisture Absorption, Equilibrium, ISO 62, 23C, 50% RH: <0.1%
Surface Resistivity, IEC 600903: >1E14 ohm
Volume Resistivity, IEC 600903: >1E16 ohm-m
Water Absorption, Equilibrium in Water, ISO 62, 23C: <0.1%

Injection	Nominal Value	Unit
Processing (Melt) Temp	180 to 280	°C
Mold Temperature	10.0 to 60.0	°C

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Revision History
Document Created: Thursday, August 27, 2009
Added to Prospector: April, 2007
Last Updated: 5/30/2008

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Extrusion Notes

Flat Film Extrusion Melt Temperature: 210 to 240°C

Notes

[1] Typical properties: these are not to be construed as specifications.

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