Styrolution PS 456EB

High Impact Polystyrene

INEOS Styrolution Group GmbH

Message:

Styrolution PS 456EB is a high flow, high impact polystyrene with a good heat resistance and a high stiffness, developed for injection blow molding applications, especially for bottle of yogurt.

General Information			
Features	High Flow High Impact Resistance High Stiffness Medium Heat Resistance		
Uses	Bottles Household Goods		
Forms	Granules		
Processing Method	Injection Blow Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.05	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	7.00	cm³/10min	ISO 1133
Molding Shrinkage	0.40 to 0.70	%	ISO 294-4
Water Absorption			ISO 62
Saturation, 23°C	< 0.10	%	
Equilibrium, 23°C, 50% RH	< 0.10	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness	90.0	MPa	ISO 2039-1
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2000	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	23.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield, 23°C	1.5	%	
Break, 23°C	40	%	
Flexural Modulus	2100	MPa	ISO 178
Flexural Stress	42.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	11	kJ/m²	ISO 179
Charpy Unnotched Impact Strength			ISO 179
-30°C	70	kJ/m²	
23°C	120	kJ/m²	

Notched Izod Impact Strength (23°C)	9.0	kJ/m²	ISO 180/A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, Annealed	85.0	°C	ISO 75-2/B
1.8 MPa, Annealed	77.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	94.0	°C	ISO 306/A50
--	86.0	°C	ISO 306/B50
CLTE - Flow	1.0E-4	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+14	ohms	IEC 60093
Volume Resistivity	> 1.0E+18	ohms·cm	IEC 60093
Electric Strength [1] (1.50 mm)	160	kV/mm	IEC 60243-1
Dielectric Constant (100 Hz)	2.50		IEC 60250
Dissipation Factor (1 MHz)	4.0E-4		IEC 60250
Injection	**Nominal Value**	**Unit**	
Processing (Melt) Temp	180 to 260	°C	
Mold Temperature	10.0 to 60.0	°C	
Injection Velocity	200	mm/sec	
NOTE			
1.	Short Time		

Recommended distributors for this material

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