Technical Data Sheet

POLYMAN® (SB) 416

General Purpose Polystyrene
Engineering Plastics

Product Description
Polystyrene with improved impact strength

General	
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PS

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.05 g/cm³	1.05 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	18 cm³/10min	18 cm³/10min	ISO 1133
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	368000 psi	2540 MPa	ISO 527-2/1A/1
Tensile Stress			ISO 527-2/1A/50
Yield	4160 psi	28.7 MPa	
Break	3070 psi	21.2 MPa	
Tensile Strain (Yield)	1.3 %	1.3 %	ISO 527-2/1A/50
Nominal Tensile Strain at Break	30 %	30 %	ISO 527-2/1A/50
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength (73°F (23°C))	2.8 ft·lb/in²	5.8 kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
73°F (23°C)	25 ft·lb/in²	52 kJ/m²	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Vicat Softening Temperature	181 °F	83.0 °C	ISO 306/B50
Flammability	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Burning Rate			
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	ISO 3795
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	FMVSS 302

Additional Information
1.) Not for use in food contact applications
2.) Not for use in medical or pharmaceutical applications

Notes

These are typical property values not to be construed as specification limits.