

Technical Data Sheet

POLYMAN[®] (ABS) M/SHI

Acrylonitrile Butadiene Styrene
Engineering Plastics

Product Description

High impact ABS grade; also available as permanent antistatic version

General

Features	• Impact Modified
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• ABS

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
----------	-------------------------	--------------------	-------------

Density	1.05 g/cm ³	1.05 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	13 cm ³ /10min	13 cm ³ /10min	ISO 1133

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
------------	-------------------------	--------------------	-------------

Tensile Modulus	305000 psi	2100 MPa	ISO 527-2/1A/1
Tensile Stress (Yield)	6530 psi	45.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	2.7 %	2.7 %	ISO 527-2/1A/50

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
--------	-------------------------	--------------------	-------------

Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	5.2 ft·lb/in ²	11 kJ/m ²	
73°F (23°C)	14 ft·lb/in ²	30 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	40 ft·lb/in ²	85 kJ/m ²	
73°F (23°C)	No Break	No Break	

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
----------	-------------------------	--------------------	-------------

Ball Indentation Hardness (H 358/30)	13800 psi	95.0 MPa	ISO 2039-1
--------------------------------------	-----------	----------	------------

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
---------	-------------------------	--------------------	-------------

Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	199 °F	93.0 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	192 °F	89.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	212 °F	100 °C	ISO 306/A50
--	199 °F	93.0 °C	ISO 306/B50

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
------------	-------------------------	--------------------	-------------

Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+13 ohms·m	> 1.0E+13 ohms·m	IEC 62631-3-1
Comparative Tracking Index	600 V	600 V	IEC 60112

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
Flammability Classification			IEC 60695-11-10, -20
0.06 in (1.5 mm)	HB	HB	
Glow Wire Flammability Index			IEC 60695-2-12
0.06 in (1.5 mm)	1200 °F	650 °C	
0.12 in (3.0 mm)	1200 °F	650 °C	