

Technical Data Sheet

# Polyman (ABS) HH 3 D

Acrylonitrile Butadiene Styrene  
LyondellBasell Industries  
Engineering Plastics

**Product Description**

Heat resistant ABS grade with high flow; also available as low emission grade; for automotive applications

**General**

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

**Physical**

	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.05 g/cm <sup>3</sup>	1.05 g/cm <sup>3</sup>	ISO 1183/A
Melt Volume-Flow Rate (MVR) (220°C/10.0 Kg)	12 cm <sup>3</sup> /10min	12 cm <sup>3</sup> /10min	ISO 1133

**Mechanical**

	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	334000 psi	2300 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	7110 psi	49.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	2.8 %	2.8 %	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)	2.9 ft·lb/in <sup>2</sup>	6.0 kJ/m <sup>2</sup>	
73°F (23°C)	5.2 ft·lb/in <sup>2</sup>	11 kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	13 ft·lb/in <sup>2</sup>	27 kJ/m <sup>2</sup>	
73°F (23°C)	33 ft·lb/in <sup>2</sup>	70 kJ/m <sup>2</sup>	
Notched Izod Impact (73°F (23°C))	0.24 ft·lb/in	13 J/m	ASTM D256

**Hardness**

	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	14500 psi	100 MPa	ISO 2039-1

**Thermal**

	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	228 °F	109 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	219 °F	104 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	230 °F	110 °C	ISO 306/B50
--	241 °F	116 °C	ISO 306/A50

**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)	2.8 in/min	71 mm/min	ISO 3795
0.0787 In (2.00 Mm)	2.8 in/min	71 mm/min	FMVSS 302
Flammability Classification			IEC 60695-11-10, -20
0.06 In (1.5 Mm)	HB	HB	
0.12 In (3.0 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	

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**Additional Information**

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

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Processing (Melt) Temp	446 to 482 °F	230 to 250 °C
Mold Temperature	104 to 176 °F	40 to 80 °C

**Notes**

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