

ABS PLASTIC MATERIAL PROPERTIES LIST

Physical	Nominal Value Unit	Test Method
Specific Gravity		
--	1.05 g/cm ³	ASTM D792
23°C	1.05 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)		ASTM D1238
200°C/5.0 kg	1.4 g/10 min	
220°C/10.0 kg	20 g/10 min	
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	20.0 cm ³ /10min	ISO 1133
Mechanical	Nominal Value Unit	Test Method
Tensile Stress		
Yield	54.0 MPa	ISO 527-2/50
Break	37.0 MPa	ISO 527-2/50
3.00 mm ⁴	45.1 MPa	ASTM D638
Tensile Elongation		
Break, 3.00 mm ⁴	25 %	ASTM D638
Break	20 %	ISO 527-2/50
Flexural Modulus		
6.00 mm ⁵	2650 MPa	ASTM D790
-- ⁶	2200 MPa	ISO 178
Flexural Strength		
6.00 mm ⁵	77.5 MPa	ASTM D790
-- ⁶	76.0 MPa	ISO 178
Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength	20 kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	No Break	ISO 179
Notched Izod Impact		
23°C, 3.00 mm	205 J/m	ASTM D256
23°C, 6.00 mm	175 J/m	ASTM D256
--	17 kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength	58 kJ/m ²	ISO 180/1U
Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (R-Scale)	116	ASTM D785
Ball Indentation Hardness (H 358/30)	110 MPa	ISO 2039-1
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		
1.8 MPa, Unannealed	85.0 °C	ASTM D648
1.8 MPa, Unannealed	88.0 °C	ISO 75-2/A
1.8 MPa, Annealed	95.0 °C	ASTM D648
1.8 MPa, Annealed	98.0 °C	ISO 75-2/A
Vicat Softening Temperature		
--	105 °C	ASTM D1525 ⁷
--	104 °C	ISO 306/A50
--	100 °C	ISO 306/B50
Flammability	Nominal Value Unit	Test Method
Flame Rating (1.60 mm)	HB	UL 94
Processing Temperature	Nominal Value Unit	Test Method
Nozzle Temperatur	190 to 230 °C	