

Technical Data Sheet

Diamond ABS TM40 1402BLK



Acrylonitrile Butadiene Styrene

Product Description

Diamond ABS TM40 1402BLK is a Acrylonitrile Butadiene Styrene material and is typically used in Extrusion, Injection Molding applications. Features include: High Heat Resistance.

Processing Method	Extrusion; Injection Molding
Attribute	High Heat Resistance
Forms	Pellets
Appearance	Black

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (200 °C/5.0 kg)	0.40	g/10 min	ASTM D1238
Density - Specific Gravity	1.07	g/cm ³	ASTM D792
Mechanical			
Tensile Strength at Yield, (51 mm/min)	49.0	MPa	ASTM D638
Tensile Stress at Yield	41.9	MPa	ISO 527-2
Flexural Modulus			
(1.3 mm/min, Tangent)	2190	MPa	ASTM D790
(Chord)	2250	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C)	13	kJ/m ²	ISO 179
(-30 °C)	8.2	kJ/m ²	ISO 179
Notched Izod Impact Strength			
(23 °C)	14	kJ/m ²	ISO 180
(-30 °C)	7.9	kJ/m ²	ISO 180
Notched Izod Impact			
(23 °C)	160	J/m	ASTM D256
(-30 °C)	94	J/m	ASTM D256
Hardness			
Rockwell Hardness, (R-Scale)	104		ASTM D785
Thermal			
Vicat Softening Temperature	137	°C	ISO 306

Deflection Temperature Under Load Annealed (264 psi), (3.18 mm)	116 °C	ASTM D648
Deflection Temperature Under Load Unannealed (0.45 MPa)	124 °C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa)	103 °C	ISO 75-2/A
Deflection Temperature Under Load Unannealed (264 psi), (3.18 mm)	106 °C	ASTM D648
Deflection Temperature Under Load Unannealed (66 psi)	123 °C	ASTM D648
Coefficient of Linear Thermal Expansion (CLTE), Flow (TMA)	9.1E-05 cm/cm/°C	ASTM E831
Coefficient of Linear Thermal Expansion (CLTE), Perpendicular (TMA)	0.00011 cm/cm/°C	ASTM E831

Extrusion Parameters	Nominal Value	Units
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	<0.020	%
Suggested Max Re grind	40	%
Drying Temperature	82 to 93	°C