

Toyolac® AX05 X03

Toray Plastics (Malaysia) Sdn. Bhd. - Acrylonitrile Butadiene Styrene

General Information			
General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific		
Features	• Good Chemical Resistance	• Recyclable Material	
Forms	• Pellets		
Processing Method	• Injection Molding		
ASTM and ISO Properties ¹			
Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity	1.04	1.04	ASTM D792
Density	1.04 g/cm³	1.04 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	17 g/10 min	17 g/10 min	ISO 1133
Molding Shrinkage (Flow)	0.0040 to 0.0060 in/in	0.40 to 0.60 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	305000 psi	2100 MPa	ISO 527-2/1
Tensile Strength ² (Yield)	5660 psi	39.0 MPa	ASTM D638
Tensile Stress (Yield)	6820 psi	47.0 MPa	ISO 527-2/50
Tensile Elongation ² (Break)	25 %	25 %	ASTM D638
Tensile Strain (Break)	> 10 %	> 10 %	ISO 527-2/50
Flexural Modulus ³	290000 psi	2000 MPa	ASTM D790
Flexural Strength ³	8700 psi	60.0 MPa	ASTM D790
Flexural Strength ⁴	8560 psi	59.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength 73 °F (23 °C)	14.3 ft-lb/in²	30.0 kJ/m²	ISO 179/1eA
Notched Izod Impact 73 °F (23 °C), 0.500 in (12.7 mm)	6.43 ft-lb/in	343 J/m	ASTM D256
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-Scale)	108	108	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed, 0.252 in (6.40 mm)	183 °F	84.0 °C	ASTM D648
Heat Deflection Temperature 264 psi (1.8 MPa), Unannealed	176 °F	80.0 °C	ISO 75-2/A
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating - UL	HB	HB	UL 94

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² 0.20 in/min (5.0 mm/min)
- ³ 0.12 in/min (3.0 mm/min)
- ⁴ 0.079 in/min (2.0 mm/min)

