

Ineos ABS Triax® 3050 ABS/Nylon Alloy, Injection Molding Grade (DAM)

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS)/Nylon Blend , Nylon

Material Notes:

Triax® 3050 resin is an ABS (Acrylonitrile Butadiene Styrene)/Nylon 6 alloy for injection molding. It is a semicrystalline thermoplastic with improved stability to light exposure, excellent processability, good chemical resistance, good fatigue performance, and excellent abrasion characteristics. Triax® 3050 resin exhibits a good balance of impact strength and flow properties. Typical applications include interior automotive applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_ineos-ABS-Triax-3050-ABSNylon-Alloy-Injection-Molding-Grade-DAM.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.06 g/cc	1.06 g/cc	ASTM-D792
Density	1.05 g/cc	0.0380 lb/in ³	ASTM-D792
Water Absorption	1.1 % @Time 86400 sec	1.1 % @Time 24.0 hour	ASTM-D570
Water Absorption at Saturation	4.3 %	4.3 %	ASTM-D570
Linear Mold Shrinkage	0.0090 cm/cm	0.0090 in/in	ASTM-D955
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	ASTM-D955
Melt Flow	6.0 g/10 min @Load 5.00 kg, Temperature 260 Å°C	6.0 g/10 min @Load 11.0 lb, Temperature 500 Å°F	ASTM-D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	105	105	ASTM-D785
Tensile Strength, Yield	43.4 MPa	6300 psi	ASTM-D638
Elongation at Break	>= 50 %	>= 50 %	ASTM-D638
Tensile Modulus	2.17 GPa	315 ksi	ASTM-D638
Flexural Yield Strength	75.2 MPa	10900 psi	ASTM-D790
Flexural Modulus	2.07 GPa	300 ksi	ASTM-D790
Izod Impact, Notched	0.694 J/cm @Thickness 6.35 mm, Temperature -40.0 Å°C	1.30 ft-lb/in @Thickness 0.250 in, Temperature -40.0 Å°F	ASTM-D256
	0.801 J/cm	1.50 ft-lb/in	

Mechanical Properties	Metric	English	Comments
	@Thickness 3.17 mm, Temperature -40.0 Â°C	@Thickness 0.125 in, Temperature -40.0 Â°F	ASTM-D256
	7.47 J/cm	14.0 ft-lb/in	ASTM-D256
	@Thickness 6.35 mm, Temperature 22.8 Â°C	@Thickness 0.250 in, Temperature 73.0 Â°F	ASTM-D256
	8.01 J/cm	15.0 ft-lb/in	ASTM-D256
	@Thickness 3.17 mm, Temperature 22.8 Â°C	@Thickness 0.125 in, Temperature 73.0 Â°F	ASTM-D256
Impact Test	47.5 J	35.0 ft-lb	Instrumented Impact, Total Energy: 0.100-in.; 0.5-in. dart; 1.6-in. clamp; 7.6 mph; ASTM-D3763
	@Temperature -40.0 Â°C	@Temperature -40.0 Â°F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	90.0 Â°C	194 Â°F	Unannealed; ASTM-D648
	@Thickness 3.17 mm	@Thickness 0.125 in	
	97.2 Â°C	207 Â°F	Unannealed; ASTM-D648
	@Thickness 6.35 mm	@Thickness 0.250 in	
Deflection Temperature at 1.8 MPa (264 psi)	65.0 Â°C	149 Â°F	Unannealed; ASTM-D648
	@Thickness 3.17 mm	@Thickness 0.125 in	
	73.9 Â°C	165 Â°F	Unannealed; ASTM-D648
	@Thickness 6.35 mm	@Thickness 0.250 in	
Vicat Softening Point	185 Â°C	365 Â°F	Rate B, 120Â°C/hour; ASTM-D1525
	@Load 1.00 kg	@Load 2.20 lb	

Electrical Properties	Metric	English	Comments
Surface Resistance	8.30e+15 ohm	8.30e+15 ohm	ASTM-D257
Dielectric Constant	3.5	3.5	Tinfoil Electrodes; ASTM-D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	16.7 kV/mm	425 kV/in	Short time under oil; ASTM-D149
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dissipation Factor	0.024	0.024	Tinfoil Electrodes; ASTM-D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	232 - 266 Â°C	450 - 511 Â°F	Injection Molding
Middle Barrel Temperature	232 - 266 Â°C	450 - 511 Â°F	Injection Molding
Front Barrel Temperature	232 - 266 Â°C	450 - 511 Â°F	Injection Molding
Nozzle Temperature	249 - 260 Â°C	480 - 500 Â°F	Injection Molding
Melt Temperature	238 - 271 Â°C	460 - 520 Â°F	Injection Molding
Mold Temperature	38.0 - 66.0 Â°C	100 - 151 Â°F	Injection Molding
Drying Temperature	88.0 Â°C @Time 7200 - 14400 sec	190 Â°F @Time 2.00 - 4.00 hour	
Moisture Content	0.15 - 0.35 %	0.15 - 0.35 %	
Dew Point	<= -29.0 Â°C	<= -20.2 Â°F	inlet air
Injection Pressure	41.4 - 82.7 MPa	6000 - 12000 psi	Injection Molding
Back Pressure	0.345 - 0.689 MPa	50.0 - 100 psi	Injection Molding
Clamp Pressure	46.2 - 77.0 MPa	6700 - 11200 psi	Injection Molding
Cushion	<= 0.317 cm	<= 0.125 in	Injection Molding

Descriptive Properties	Value	Comments
Hold Pressure	30-50% of Injection Pressure, Injection Molding	
Injection Speed	Fast	Injection Molding
Screw Compression Ratio	2.5:1	Injection Molding
Screw Length-to-Diameter Ratio	>= 20:1	Injection Molding
Screw Speed	Moderate, Injection Molding	
Shot Weight-to-Machine Capacity Ratio	0.5-0.7	Injection Molding

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