Akro-Plastic Akromid® B3 GF 50 9 RM-M (3147) PA 6 Dry, 50% Glass Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 50% Glass Fiber Filled

Material Notes:

In all, the construction relevant features show that the significantly reduced moisture absorption of AKROMID B3 GF 30 RM leads to increasing rigidities and strengths as already expected. Nevertheless, the viscosity features are on the level of PA6. Especially after storage, e.g. at 150° AKROMID RM shows comparable ageing characteristics. For appliances with very constant features, low warpage, very good finish together with an improved chemical resistance and for production of parts according to the GIT/WIT process, the version B3 GF 30 RM 9 black (3099) or respectively B3 GF 50 9 RM black (3147) offers an ideal solution. However, if a very good impact strength is predominant, our type B3 GF 30 RM black (3016) or respectively B3 GF 50 RM black (3146) will be favored.High quality surface finish:B3 GF 30 9 RM black (3099)/B3 GF 50 9 RM black (3147)Very constant features with regard to climateVery low warpageVery good surfaceCaCl2 resistantCost-effective:B3 GF 30 RM black (3016)/B3 GF 50 RM black (3146)Closer to PA 6 GF 30/GF 50Constant features with regard to climateLow warpageTendentious higher impact strengthTendentious higher notched impactApplications:Electronic market:e.g. sensor housings, coil former (wo.UL), plug-in connectors, plug panels etc.Automobile market:e.g. sensor housing, electrical parts, wind screen wiper bows, door handles, mirror elements, sliding roof frames etc.General mechanical engineering:e.g. control elements in printer, copier, housings of valves, pumps etc.Information from Akro-Plastic

Order this product through the following link:
http://www.lookpolymers.com/polymer_Akro-Plastic-Akromid-B3-GF-50-9-RM-M-3147-PA-6-Dry-50-Glass-Filled.php

Physical Properties	Metric	English	Comments
Density	1.61 g/cc	0.0582 lb/in³	ISO 1183
Filler Content	50 %	50 %	ISO 1172
Water Absorption	1.2 % @Temperature 70.0 °C	1.2 % @Temperature 158 °F	62% RH, Humidity; ISO 1110
Moisture Absorption	0.450 % @Temperature 70.0 °C, Time 180000 sec	0.450 % @Temperature 158 °F, Time 50.0 hour	62% RH
	0.700 % @Temperature 70.0 °C, Time 720000 sec	0.700 % @Temperature 158 °F, Time 200 hour	62% RH
	1.00 % @Temperature 70.0 °C, Time 1.44e+6 sec	1.00 % @Temperature 158 °F, Time 400 hour	62% RH
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	ISO 294-4
Spiral Flow	50.0 cm	19.7 in	7 x 4 [mm] diameter

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	280 MPa	40600 psi	H 961/30; ISO 2039-1
Tensile Strength at Break	210 MPa	30500 psi	5 [mm/min]; ISO 527-2/5
Tensile Strength	160 MPa @Temperature 70.0 °C, Time 1.44e+6 sec	23200 psi @Temperature 158 °F, Time 400 hour	62% RH
	175 MPa @Temperature 70.0 °C, Time 720000 sec	25400 psi @Temperature 158 °F, Time 200 hour	62% RH
	180 MPa @Temperature 70.0 °C, Time 180000 sec	26100 psi @Temperature 158 °F, Time 50.0 hour	62% RH
Elongation at Break	2.2 %	2.2 %	5 [mm/min]; ISO 527-2/5
Tensile Modulus	16.0 GPa	2320 ksi	1 [mm/min]; ISO 527-2/1
	13.5 GPa @Temperature 70.0 °C, Time 1.44e+6 sec	1960 ksi @Temperature 158 °F, Time 400 hour	62% RH
	14.0 GPa @Temperature 70.0 °C, Time 720000 sec	2030 ksi @Temperature 158 °F, Time 200 hour	62% RH
	15.0 GPa @Temperature 70.0 °C, Time 180000 sec	2180 ksi @Temperature 158 °F, Time 50.0 hour	62% RH
Charpy Impact Unnotched	6.00 J/cm² @Temperature -30.0 °C	28.6 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU
	7.00 J/cm² @Temperature 23.0 °C	33.3 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.60 J/cm² @Temperature -30.0 °C	7.61 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eA
	2.00 J/cm² @Temperature 23.0 °C	9.52 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Melting Point	225 °C	437 °F	DIN EN 11357-1

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	212 °C	413 °F	Unannealed; ISO 75-2/A
Deflection Temperature at 8.0 MPa	165 °C	329 °F	Unannealed; ISO 75-2/C
Flammability, UL94	HB @Thickness 0.800 mm	HB @Thickness 0.0315 in	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	600 V	600 V	IEC 60112

Processing Properties	Metric	English	Comments
Feed Temperature	60.0 - 80.0 °C	140 - 176 °F	
Nozzle Temperature	240 - 280 °C	464 - 536 °F	
Zone 1	225 - 300 °C	437 - 572 °F	
Zone 2	225 - 300 °C	437 - 572 °F	
Zone 3	225 - 300 °C	437 - 572 °F	
Zone 4	225 - 300 °C	437 - 572 °F	
Melt Temperature	260 - 300 °C	500 - 572 °F	
Mold Temperature	80.0 - 100 °C	176 - 212 °F	
Drying Temperature	80.0 °C	176 °F	
Dry Time	4.00 - 12.0 hour	4.00 - 12.0 hour	
Hold Pressure	75.0 MPa	10900 psi	
Back Pressure	5.00 - 10.0 MPa	725 - 1450 psi	

Descriptive Properties	Value	Comments
Acetone	Pass	100% Conc
Benzine	Pass	100% Conc
Benzol	Pass	100% Conc
Biodiesel	Pass	50°C, 100% Conc
Brake Fluid (DOT4)	Fail	130°C, 100% Conc
	Pass	100% Conc
Calcium chloride, alcoholic	Fail	10% Conc

Descriptive Properties	Value	Comments
	Pass	10% Conc, when surface treated with 4 (chemical-stabilized)
Calcium chloride, aqueous	Fail	10% Conc
	Pass	10% Conc, when surface treated with 4 (chemical-stabilized)
Citric acid	Pass	10% Conc
Diesel fuel (DIN 51601)	Pass	100% Conc
Sulphuric acid	Fail	96% Conc
Toluene	Pass	100% Conc
Water	Pass	100% Conc
Zinc chloride, aqueous	Fail	50% Conc

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