

Akro-Plastic Akromid® B3 GF 30 9 RM-M (3099) PA 6 Dry, 30% Glass Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% 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 climate Very low warpage Very good surface CaCl₂ resistant Cost-effective: B3 GF 30 RM black (3016)/B3 GF 50 RM black (3146) Closer to PA 6 GF 30/GF 50 Constant features with regard to climate Low warpage Tendentious higher impact strength Tendentious higher notched impact Applications: 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-30-9-RM-M-3099-PA-6-Dry-30-Glass-Filled.php

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in ³	ISO 1183
Filler Content	30 %	30 %	ISO 1172
Water Absorption	1.6 % @Temperature 70.0 °C	1.6 % @Temperature 158 °F	62% RH. Humidity; ISO 1110
Moisture Absorption	0.550 % @Temperature 70.0 °C, Time 180000 sec	0.550 % @Temperature 158 °F, Time 50.0 hour	62% RH
	1.40 % @Temperature 70.0 °C, Time 720000 sec	1.40 % @Temperature 158 °F, Time 200 hour	62% RH
	1.55 % @Temperature 70.0 °C, Time 1.44e+6 sec	1.55 % @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	0.010 cm/cm	0.010 in/in	ISO 294-4
Spiral Flow	70.0 cm	27.6 in	7 x 4 [mm] diameter

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	230 MPa	33400 psi	HB 961/30; ISO 2039-1
Tensile Strength at Break	170 MPa	24700 psi	5 [mm/min]; ISO 527-2/5
Tensile Strength	125 MPa	18100 psi	62% RH
	@Temperature 70.0 °C, Time 1.44e+6 sec	@Temperature 158 °F, Time 400 hour	
	130 MPa	18900 psi	62% RH
	@Temperature 70.0 °C, Time 720000 sec	@Temperature 158 °F, Time 200 hour	
	150 MPa	21800 psi	62% RH
	@Temperature 70.0 °C, Time 180000 sec	@Temperature 158 °F, Time 50.0 hour	
Elongation at Break	2.6 %	2.6 %	5 [mm/min]; ISO 527-2/5
	3.2 %	3.2 %	2 [mm/min], Flexural Strain; ISO 178
Tensile Modulus	10.5 GPa	1520 ksi	1 [mm/min]; ISO 527-2/1
	7.00 GPa	1020 ksi	62% RH
	@Temperature 70.0 °C, Time 1.44e+6 sec	@Temperature 158 °F, Time 400 hour	
	8.00 GPa	1160 ksi	62% RH
	@Temperature 70.0 °C, Time 720000 sec	@Temperature 158 °F, Time 200 hour	
	9.00 GPa	1310 ksi	62% RH
	@Temperature 70.0 °C, Time 180000 sec	@Temperature 158 °F, Time 50.0 hour	
Flexural Strength	250 MPa	36300 psi	2 [mm/min]; ISO 178
Flexural Modulus	9.60 GPa	1390 ksi	2 [mm/min]; ISO 178
Charpy Impact Unnotched	6.50 J/cm ²	30.9 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.00 J/cm ²	33.3 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179/1eU

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
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Thermal Properties	Metric	English	Comments
Melting Point	225 °C	437 °F	DIN EN 11357-1
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	Unannealed; ISO 75-2/A
Deflection Temperature at 8.0 MPa	160 °C	320 °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 Descriptive Properties	Pass Value	50°C, 100% Conc Comments
Brake Fluid (DOT4)	Fail	130°C, 100% Conc
	Pass	100% Conc
Calcium chloride, alcoholic	Fail	10% Conc
	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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