Akro-Plastic Akromid® S3 GF 30 4 (3552) PA 6.10 Dry, 30% Glass Filled (discontinued **)

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Nylon , Nylon 610 , Nylon 610, Glass Reinforced

Material Notes:

A characteristic property of AKROMID® S (PA 6.10) is that it has a renewable-resource content of up to 70 % and therefore fulfils the current definition of a bioplastic. The plant-based raw material used is sebacic acid, synthesized from castor oil which is obtained from the seeds of Ricinus communis, the castor oil plant. From a technical standpoint, AKROMID® S closes the gap between PA 6/PA 6.6 and PA 12. It is characterized by significantly lower moisture absorption compared to PA 6 and PA 6.6. At 23 °C and 50 % relative humidity, typical values for these product types are 3 % and 2.8 %, respectively. With a value of approximately 1.4 %, PA 6.10 absorbs just half as much moisture and can therefore be used as an engineering material in applications requiring a high dimensional consistency. Moreover, it exhibits excellent cold impact resistance. Other outstanding characteristics include very good chemical resistance due to the structure of the polymer and high hydrolysis resistance, although it can be processed like all common polyamides. The materials from the PA 6.10 product family are further characterized by exceptional dimensional stability, good surface resistance, good abrasion resistance and wear behaviour, and an improved carbon footprint. This is due to the fact that the plant-based raw materials have already removed CO2 from the environment during their growth phase. The product portfolio currently comprises one non reinforced variant and several reinforced variants with a glass-fibre content ranging from 15 % to 50 %. AKROMID® S is a bioplastic according to today's standards. Unlike certain materials used in the packaging industry, however, the material is not biodegradable. The distinguishing feature of AKROMID® S is its reduced ecological footprint: The use of harmful CO2 per ton of polyamide produced from renewable resources is significantly lower compared to one ton produced from fossil-based resources, without affecting the product's performance characteristics.Applications:Automotive SectorConnectors and housingsNon-return valvesPower steering-fluid reservoirsCorrugated tubing and fluid pipesMachine Construction and Tool-BuildingGearsDoor handles and fittingsOffice equipment, housings, functional parts, amongst othersConnectors and plugsPower toolsSports and LeisureComponents in high-end garden toolsBicycle accessoriesSail-boat accessoriesWinter sports accessoriesInformation from Akro-Plastic

Order this product through the following link:
http://www.lookpolymers.com/polymer_Akro-Plastic-Akromid-S3-GF-30-4-3552-PA-610-Dry-30-Glass-Filled-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.31 g/cc @Temperature 23.0 °C	0.0473 lb/in³ @Temperature 73.4 °F	ISO 1183
Filler Content	30 %	30 %	ISO 1172
Water Absorption	1.2 % @Temperature 23.0 °C	1.2 % @Temperature 73.4 °F	50% r.h.; ISO 62
Spiral Flow	40.0 cm	15.7 in	AKRO

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	195 MPa	28300 psi	HB 961/30; ISO 2039-1

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	155 MPa	22500 psi	5 [mm/min]; ISO 527-1/2
Elongation at Break	5.5 %	5.5 %	5 [mm/min]; ISO 527-1/2
Tensile Modulus	8.60 GPa	1250 ksi	1[mm/min]; ISO 527-1/2
Flexural Strength	230 MPa	33400 psi	2 [mm/min]; ISO 178
Flexural Modulus	7.70 GPa	1120 ksi	2 [mm/min]; ISO 178
Charpy Impact Unnotched	11.0 J/cm² @Temperature -30.0 °C	52.3 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU
	11.0 J/cm² @Temperature 23.0 °C	52.3 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.20 J/cm² @Temperature -30.0 °C	5.71 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eA
	1.60 J/cm² @Temperature 23.0 °C	7.61 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Melting Point	220 °C	428 °F	ISO 11357-1, DSC,10 [K/min]
Deflection Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	HDT/A; ISO 75-1/2
Deflection Temperature at 8.0 MPa	140 °C	284 °F	HDT/C; ISO 75-1/2
Flammability, UL94	HB @Thickness 0.800 mm	HB @Thickness 0.0315 in	

Processing Properties	Metric	English	Comments
Feed Temperature	60.0 - 80.0 °C	140 - 176 °F	
Nozzle Temperature	240 - 295 °C	464 - 563 °F	
Zone 1	220 - 300 °C	428 - 572 °F	
Zone 2	220 - 300 °C	428 - 572 °F	
Zone 3	220 - 300 °C	428 - 572 °F	
Zone 4	220 - 300 °C	428 - 572 °F	
Melt Temperature	260 - 310 °C	500 - 590 °F	
Mold Temperature	70.0 - 100 °C	158 - 212 °F	

Processing Properties	Metric	English	Comments
Dry Time	0.0 - 4 hour	0.0 - 4 hour	
Hold Pressure	30.0 - 80.0 MPa	4350 - 11600 psi	
Back Pressure	5.00 - 15.0 MPa	725 - 2180 psi	

Descriptive Properties	Value	Comments
Rate acc. FMVSS 302 (	Passed	
Rate acc. FMVSS 302,(	FMVSS 302, >1 [mm] Thickness	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China