ARKEMA

TECHNICAL DATASHEET

Agimid® 210 N000

Product information

Agimid®
POLYAMIDE 12

The Agimid range holds 3 long-chain polymers including 2 bio-based materials which have a broad range of applications in key markets such as automotive & industrial vehicles, sports [illegible]

- Easy processability
- Very good mechanical properties
  - High abrasion resistance
  - Stable modulus with moist environment
- Remarkable physical resistance
  - Lightest engineering polymers
  - Low water absorption
- Very good chemical resistance
- High aging resistance
- Wide range of temperature use

TRADEMARK	POLYMER		FLUIDITY		ADDITIVES		COLOUR	FLEXIBILITY		ADDITIVES	
Agimid	2	PA12	1	High fluidity	0	Any	N	Natural	000	Rigid	/	Any

Agimid 210 N000 is a PA 12 rigid with high fluidity dedicated to the injection molding. The main application is cable ties for the electric & electronics market.

MAIN MARKETS

AUTOMOTIVE

INDUSTRIAL

SPORTS & LEISURE

ELECTRICAL & ELECTRONICS

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Product properties

PROPERTY	TEST METHOD	VALUE
PHYSICAL PROPERTIES		
MELTING POINT	ISO 11357-1/-3	178 °C
DENSITY (23 °C)	ISO 1183	1,01 g/cm3
WATER ABSORPTION (23 °C) • with 50% of relative humidity • with 100% of relative humidity	Similar to ISO 62	 0,70% 1,40%
THERMAL PROPERTIES		
HEAT DEFLECTION TEMPERATURE (HDT) • 1,85 MPa • 0,45 MPa	 ISO 75 Method A ISO 75 Method B	 50 °C 120 °C
FLAME RESISTANCE Thickness test piece • 3,2 mm • 1,6 mm	UL 94	 HB HB
ELECTRICAL PROPERTIES		
VOLUME RESISTIVITY	ASTM D 257	10^{14} Ω.cm
SURFACE RESISTIVITY	ASTM D 257	10^{14} Ω
DIELECTRIC STRENGTH (dry state)	ASTM D 149	28 kV/mm
MECHANICAL PROPERTIES		
TENSILE • Elastic modulus • Break strength • Break elongation	 ISO 527	 1350 MPa 46 MPa >100%
CHARPY IMPACT STRENGTH • Unnotched at +23 °C • Unnotched at -30 °C • Notched at +23 °C • Notched at -30 °C	 ISO 179	 No break No break 5 kJ/m² 6 kJ/m²

The data given are based on our present knowledge and experience. They are published without obligation on our part and any liability will be assumed.

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Processing information

MACHINE		
GENERAL	All injection molding machines suitable for polyamides can run the 210 N000.	
SCREW TYPES	Screws with three zones (feeding, compression and metering zones) are recommended. Length: 18 D - 22 D	
MATERIAL		
STORAGE	210 N000 has to be stored in dry, indoor and safe facilities. It is highly recommended to run granules having reached the workshop temperature to prevent from moisture condensing on cold granules.	
DRYING	210 N000 is dried and packed with a moisture content of less than 0.10 %. If the packing has been damaged or left open for a long time (>2 hours), then the material has to be dried. Polyamides are sensitive to oxidation at temperatures > 80°C in the oxygen atmosphere. To avoid yellowing of the granules (for natural color grades only), it is recommended to respect the following settings.	
DRYING SETTINGS	AIR DRYER Temperature: max. 80°C Time: 4 - 8 hours	VACUUM DRYER Temperature: max. 80°C Time: 2 - 4 hours
LUBRICATION	210 N000 includes internal lubricants. However, the use of Zinc Stearate or Calcium Stearate can be helpful in case of process instability.	
PROCESS (recommended basic settings)		
BASIC MACHINE SETTINGS	Feeding zone 210 - 240°C Compression zone 220 - 250°C Metering zone 220 - 250°C Nozzle 220 - 250°C Melt 220 - 250°C	
MOULD TEMPERATURE	10 - 40°C	

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