

TECHNICAL DATASHEET

Agimid® 2153 N00

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 & leisure, electrical & electronics and industrial.

- 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	53 GF 30	N Natural	00 Rigid	/ Any

Agimid 2153 N00 is a polyamide 12 reinforced with 30% of glass fibers dedicated to injection molding. The main applications are car keys and fittings for the automotive and industrial markets.

MAIN MARKETS



AUTOMOTIVE



INDUSTRIAL

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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	1,24 g/cm ³
WATER ABSORPTION (23 °C) <ul style="list-style-type: none"> • with 50% of relative humidity • with 100% of relative humidity 	Similar to ISO 62	0,60% 1,20%
THERMAL PROPERTIES		
HEAT DEFLECTION TEMPERATURE (HDT) <ul style="list-style-type: none"> • 1,85 MPa • 0,45 MPa 	ISO 75 Method A ISO 75 Method B	160 °C 165 °C
FLAME RESISTANCE Thickness test piece <ul style="list-style-type: none"> • 3,2 mm • 1,6 mm 	UL 94	- HB
ELECTRICAL PROPERTIES		
VOLUME RESISTIVITY	ASTM D 257	10 ¹³ Ω.cm
SURFACE RESISTIVITY	ASTM D 257	-
DIELECTRIC STRENGTH (dry state)	ASTM D 149	35 kV/mm
MECHANICAL PROPERTIES		
TENSILE MODULUS <ul style="list-style-type: none"> • Break strength • Break elongation 	ISO 527	7000 MPa 100 MPa 5%
CHARPY IMPACT STRENGTH <ul style="list-style-type: none"> • Unnotched at +23 °C • Unnotched at -30 °C • Notched at +23 °C • Notched at -30 °C 	ISO 179	75 kJ/m ² 80 kJ/m ² 16 kJ/m ² 10 kJ/m ²

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 machines suitable for polyamides can run the Agimid 2153 N00.						
SCREW TYPES	Screws with three zones (feeding, compression and metering zones) are recommended Length: 18 D - 22 D						
MATERIAL							
STORAGE	Agimid 2153 N00 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	Agimid 2153 N00 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.						
DRYING SETTINGS	<table border="1"> <tr> <td>AIR DRYER</td> <td>VACUUM DRYER</td> </tr> <tr> <td>Temperature: max. 80°C</td> <td>Temperature: max. 80°C</td> </tr> <tr> <td>Time: 2 - 8 hours</td> <td>Time: 2 - 4 hours</td> </tr> </table>	AIR DRYER	VACUUM DRYER	Temperature: max. 80°C	Temperature: max. 80°C	Time: 2 - 8 hours	Time: 2 - 4 hours
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LUBRICATION	Agimid 2153 N00 includes internal lubricants and release agents.						
PROCESS (recommended basic settings)							
BASIC MACHINE SETTINGS	Feeding zone 240 - 260°C Compression zone 250 - 270°C Metering zone 255 - 275°C Melt temperature 260 - 280°C						
MOULD TEMPERATURE	80 – 90°C						

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