AQUAFIL synthetic fibres and polymers

10012706 AQUAMID 6G40 NAT

Emission date 14/02/2025
Ed./Rev. 2.0

AQUAMID 6G40 NAT is a natural color PA6 grade, filled with 40% glass fiber content, suitable for injection moulding applications.

DESCRIPTORS		
Symbol	**ISO 1043**	PA6-GF40
Designation	**ISO 16396-1**	-PA 6,GF40,MGNR,S14-120N
Part Marking	**ISO 16396-1**	>PA 6-GF40<

PROPERTIES	STANDARD	CONDITION	UNIT	VALUES	
PHYSICAL PROPERTIES				**d.a.m.***	**cond.***
Density	ISO 1183		g/cm3	1,45	-
Melt Volume Rate (MVR)	ISO 1133	275°C x 2,16 kg	cm3/10'	28	-
Moisture Absorption	ISO 62	23°C, 1000h	%	1,0-1,2	-
Moisture Content	Int. Method		%	max 0,2	-
Mold Shrinkage (Longitudinal)	ISO 2577	72h,23°C,50% RH	%	0,1-0,3	-
Mold Shrinkage (Transversal)	ISO 2577	72h,23°C,50% RH	%	0,5-0,7	-
MECHANICAL PROPERTIES				**d.a.m.***	**cond.***
Tensile Modulus	ISO 527	1 mm/min	MPa	11900	-
Tensile Strength	ISO 527	50 mm/min	MPa	200	-
Tensile Stress, Yield	ISO 527	50 mm/min	MPa	-	-
Tensile Strain, Yield	ISO 527	50 mm/min	%	-	-
Tensile Stress, Break	ISO 527	50 mm/min	MPa	200	-
Tensile Strain, Break	ISO 527	50 mm/min	%	4,8	-
Flexural Modulus	ISO 178	2 mm/min	MPa	9300	-
Flexural Stress, Break/max	ISO 178	2 mm/min	MPa	276	-
Flexural Strain, Break/max	ISO 178	2 mm/min	%	4,5	-
IMPACT PROPERTIES				**d.a.m.***	**cond.***
Charpy, notched	ISO 179/1eA	+23°C	kJ/m2	15	-
Charpy, unnotched	ISO 179/1eU	+23°C	kJ/m2	100	-
Charpy, notched	ISO 179/1eA	-30°C	kJ/m2	-	-
Charpy, unnotched	ISO 179/1eU	-30°C	kJ/m2	-	-
Izod, notched	ISO 180/1A	+23°C	kJ/m2	15	-
Izod, unnotched	ISO 180/1U	+23°C	kJ/m2	80	-
Izod, notched	ISO 180/1A	-30°C	kJ/m2	-	-
Izod, unnotched	ISO 180/1U	-30°C	kJ/m2	-	-

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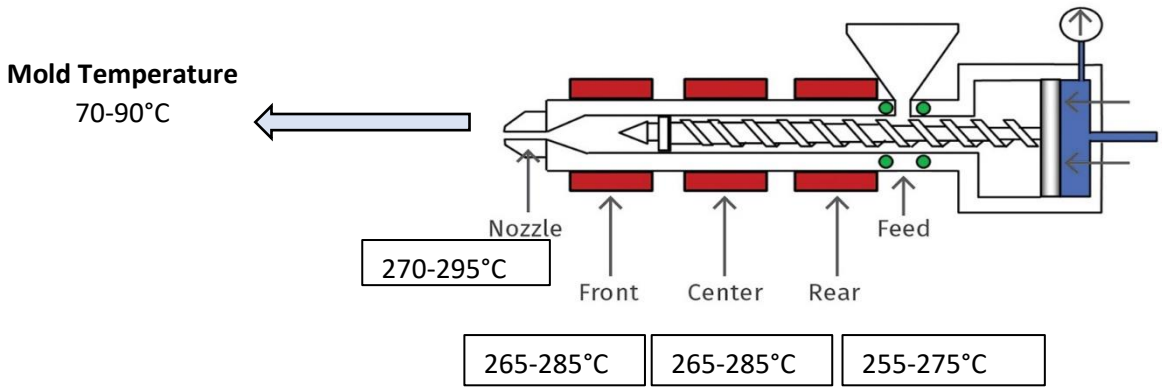
PROPERTIES	STANDARD	CONDITION	UNIT	VALUES	
THERMAL PROPERTIES				**d.a.m.***	**cond.***
Crystallization Temperature	ISO 11357	20°C/min, 0-280°C	°C	-	-
Melting Temperature	ISO 11357	20°C/min, 0-280°C	°C	220	-
HDT-B	ISO 75	0,45 MPa	°C	>210	-
HDT-A	ISO 75	1,80 MPa	°C	>180	-
VICAT	ISO 306	50°C/h - 50 N	°C	>200	-
RTI, 20000 h	ISO 2578		°C	-	-
ELECTRIC PROPERTIES				**d.a.m.***	**cond.***
Volume Resistivity	IEC 62631-3-1		Ohm*cm	-	-
Surface Resistivity	IEC 63631-3-2		Ohm	-	-
Comparative Tracking Index (CTI)	IEC 60112	Solution A	V	600	-
FIRE BEHAVIOUR				**d.a.m.***	**cond.***
Flammability	UL 94	-	Class	-	-
Glow-wire Flammability	IEC 60695-2-12	-	°C	-	-
Burning Speed	FMVSS 302	2 mm	mm/min	<100	-

SUGGESTED PROCESSING CONDITIONS FOR INJECTION MOULDING APPLICATIONS



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HINTS

- It is recommended to dry the material before moulding at 80-90°C for 4-6 h; the suggested maximum moisture content is 0,15%.

- *d.a.m. specimens are tested dry as moulded, stored at room temperature and 50% RH. Conditioned specimens are tested according to internal method (24h @70°C in DI water + 30min @23°C in DI water).

- Injection moulding parameters have to be considered as a starting guideline and those shall be refined in the intended application, depending on available injection equipment.

- Technical parameters reported are typical of the product under aforementioned testing conditions but may vary according to particular processing conditions applied in the final product manufacturing.

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AQUAFIL S.p.A. - Via Linfano, 9 - 38062 Arco (TN) - ITALIA
ISO 9001 e ISO 14001 Certified Quality System

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