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AQUAFIL s.p.a. synthetic fibres and polymers

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Technical Data Sheet

Product Description			Product Code		
AQUAMID AQPL 27000 N			10032958		
Polyamide 6, for injection moulding			Ed./Rev.		1.0
Product descriptors			Em. Date		07/02/2020
Symbol	ISO 1043		PA6		
Description	ISO 1874-1		PA6, M, 14-030		
TYPICAL PROPERTIES	METHOD	CONDITION	UNIT	VALUES d.a.m.*	DEV. STD
PHYSICAL					
Density	ISO 1183		g/cm ³	1,14	-
Melt Volume Rate	ISO 1133	275 °C / 1,2 kg	cm ³ / 10 min	165	-
Moisture Absorption	ISO 62	70%RH @ 62 °C	%	- / @ satur. 10%	-
Mold shrinkage (longitudinal)	ISO 2577	72h, 23 °C, 50% RH	%	PA6	
Mold shrinkage (trasversal)	ISO 2577	72h, 23 °C, 50% RH	%	PA6, M, 14-030	
MECHANICAL					
Tensile Modulus	ISO 527	1 mm/min	MPa	3200 / 1000	100
Tensile Stress, yield	ISO 527	50 mm/min	MPa	80 / 40	5
Tensile Stress, break	ISO 527	50 mm/min	MPa	0	5
Tensile Strain, break	ISO 527	50 mm/min	%	40 / >50	-
Flexural Modulus	ISO 178	2 mm/min	MPa	2800 / 900	100
Flexural Stress, break / max	ISO 178	2 mm/min	MPa	105 / 35	5
Flexural Strain, break	ISO 178	2 mm/min	%	> 5	-
IMPACT					
Charpy 23°C, notched	ISO 179/1eA	+ 23 °C	kJ / m ²	4,5 / 20	1
Charpy 23°C, unnotched	ISO 179/1eU	+ 23 °C	kJ / m ² (**)	-	-
Charpy -30°C, notched	ISO 179/1eA	- 30 °C	kJ / m ²	-	-
Charpy -30°C, unnotched	ISO 179/1eU	- 30 °C	kJ / m ²	-	-
Izod Impact, notched (+23°C)	ISO 180/1A	+ 23 °C	kJ / m ²	4,5 / 19	1
Izod Impact, unnotched (+23°C)	ISO 180/1U	+ 23 °C	kJ / m ² (**)	-	-
Izod Impact, notched (-30 °C)	ISO 180/1A	- 30 °C	kJ / m ²	-	-
Izod Impact, unnotched (-30 °C)	ISO 180/1U	- 30 °C	kJ / m ²	-	-
THERMAL					
Crystallization Temperature	DSC - ISO 11357-1	20 °C/min, 30-300 °C	°C	-	-
Melting Temperature	DSC - ISO 11357-1	20 °C/min, 30-300 °C	°C	221	2,5
Heat deflection temperature (HDT-B)	ISO 75	0,45 MPa	°C	175	
Heat deflection temperature (HDT-A)	ISO 75	1,80 Mpa	°C	65	
Vicat softening temperature	ISO 306	50°C/h - 50 N	°C	200	

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TYPICAL PROPERTIES	METHOD	CONDITION	UNIT	VALUES d.a.m.*	DEV. STD
ELECTRIC PROPERTIES					
Specific trasversal resistivity	IEC 60093		Ohm*cm	10 ¹⁵	
Specific surface resistivity	IEC 60093		Ohm	10 ¹³	
Tracking resistance	IEC 60112	Solution A	V	600	
FIRE BEHAVIOUR					
Flammability	UL 94	0,8 mm	class	V-2	
Glow-wire flammability	IEC 60695-2-12	1 - 3 mm	°C	750-850	
Burning speed (FMVSS)	FMVSS 302		mm/min	< 100	

Remarks

This document is a provisional datasheet, data refining is expected to improve the definition of the width of STD.DEV intervals

(): dry as moulded, where available the conditioned value is shown after the slash*

*(**): where percentage is given as the fractional amount of unbroken samples (out of 6 in total)*

The 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.

UNI EN ISO 9001:2008
Certified Quality System

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