

STARMID® B27 NAT

Polyamide 6 for injection molding.

Date of issue: 06/2021

General

Polymer type	PA6 (Polyamide)	
Processing technology	Injection molding	

Product identification

ISO 1043 abbreviation	PA6
ISO 1874-1 description	PA6, MR, 14-030N

Condition	Standard	Unit	Values d.a.m.*
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Physical properties

Density		ISO 1183	g/cm ³	1,14
Mold shrinkage (longitudinal)	72 hr, 23°C, 50% RH	ISO 2577	%	0,9 – 1,1
Mold shrinkage (trasversal)	72 hr, 23°C, 50% RH	ISO 2577	%	1-1,2
Melt volume-flow rate,	250°C/2,16 kg	ISO 1133	cm ³ /10min	31
Viscosity number	96% H ₂ SO ₄	ISO 307	cc/g	150

Mechanical properties

Tensile Modulus	1 mm/min	ISO 527	MPa	2500
Tensile Strenght	50 mm/min	ISO 527	MPa	75
Tensile Stress, yield	50 mm/min	ISO 527	MPa	75
Tensile Strain, yield	50 mm/min	ISO 527	%	5
Tensile Stress, break	50 mm/min	ISO 527	MPa	-
Tensile Strain, break	50 mm/min	ISO 527	%	-
Flexural Modulus	2 mm/min	ISO 178	MPa	2150
Flexural Stress, break / max	2 mm/min	ISO 178	MPa	100
Flexural Strain, break / max	2 mm/min	ISO 178	%	>5

Impact

Charpy 23°C, notched	+23°C	ISO 179/1eA	kJ/m ²	6,0
Charpy 23°C, unnotched	+23°C	ISO 179/1eU	kJ/m ² (**)	>200
Charpy -30°C, notched	-30°C	ISO 179/1eA	kJ/m ²	-
Charpy -30°C, unnotched	-30°C	ISO 179/1eU	kJ/m ²	-
Izod Impact, notched (+23°C)	+23°C	ISO 180/1A	kJ/m ²	6,0
Izod Impact, unnotched (+23°C)	+23°C	ISO 180/1U	kJ/m ² (**)	>200
Izod Impact, notched (-30°C)	-30°C	ISO 180/1A	kJ/m ²	-
Izod Impact, unnotched (-30°C)	-30°C	ISO 180/1U	kJ/m ²	-

Condition	Standard	Unit	Values d.a.m.*
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Thermal properties

Crystallization Temperature	20 °C/min, 30-300 °C	DSC - ISO 11357-1	°C	188
Melting Temperature	20 °C/min, 30-300 °C	DSC - ISO 11357-1	°C	221
Heat deflection temperature (HDT-B)	0,45 MPa	ISO 75	°C	175
Heat deflection temperature (HDT-A)	1,80 Mpa	ISO 75	°C	65
Vicat softening temperature	50°C/h - 50 N	ISO 306	°C	200

Electrical properties

Specific trasversal resistivity		IEC 60093	Ohm*cm	10 ¹⁵
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Typical Properties

Specific surface resistivity		IEC 60093	Ohm	10 ¹³
Tracking resistance	Solution A	IEC 60112	V	600

Fire Behaviour

Flammability	0,8 mm	UL 94	class	V2
Glow-wire flammability	1 - 3 mm	IEC 60695-2-12	°C	750-850
Burning speed (FMVSS)		FMVSS 302	mm/min	< 100

Test run at 23°C if not differently specified, DAM state (dry as moulded), valid for natural-colored products.
conditioned according to ISO 1110

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Recommended melt temperature	230 - 250 °C
Recommended mould temperature	60 - 90 °C

These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.

Remarks

(*): dry as moulded, tested within 24h; 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)

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