

Technical Data



Material Type

PA6 Unfilled

Trade Name

NM27H

Production Process

NylonMold
PA Casting

Features

Heat stabilized

Condition of test specimen

dry/cond.

Mechanical Properties

Measurement

Method/Condition

Specific Gravity	ISO 1183/ASTM D792	1.14 g/cm ³
Tensile Modulus	ISO 527/ASTM D638	2700 Mpa/1800 Mpa
Tensile Strength	ISO 527-84/ASTM D638	70 MPa/60 MPa
Flexural Modulus	ISO178-93/ASTM D790	
Flexural Strength	ISO 178-93/ASTM D790	86 Mpa
Elongation at break		17.00%
Izod notched impact strength at 23 °C	ISO 180/1A	6 kJ/m ² /9 kJ/m ²
Charpy impact strength	ISO 179-1/1eU	25.4 kJ/m ² /26.2 kJ/m ²
Impact strength (notched)	ISO 179-1/1eA	
Hardness, Shore D	ISO 868-85/ASTM D2240	79

Thermal properties

Measurement

Method/Condition

Thermal conductivity	DIN 52 612/ASTM E1225	0.28 W/K m
Linear thermal expansion	ISO 11359	80 10 ⁻⁶ /K
Melting temp. or glass transition temp.	ISO 11357	220 °C
Temp. of deflection under load (1,8 MPa)	ISO 75 HDT/A (1,8 MPa)	105 °C
Temp. of deflection under load (0,45 MPa)	ISO 75 HDT/A (0,45 MPa)	195 °C
Short time use temperature		180 °C
Continous use temperature		115 °C
Minimal use temperature		-40 °C

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Electrical properties

Measurement	Method/Condition	
Relative permittivity at 1 MHz	IEC 60250	3.7
Dissipation factor at 1 MHz	IEC 60250	300
Electric strength	IEC 60243-1	100 kV/mm
Thickness for electric strength		0.6 mm
Volume resistivity	IEC 60093	10^{13} Ohm m
Surface resistivity	IEC 60093	10^{12} Ohm
Comparative tracking index	IEC 60112	600

Other properties

Measurement	Method/Condition	
Humidity absorption at 23°C/50%	ISO 62	2.50%
Water absorption	ISO 62	7%
Transparency (opaque/translucent/clear)		opaque
Colouring		black

The figures in this datasheet are guide values. The values are affected by processing conditions, modifications, additives and environmental conditions and they do not release you from the obligation to check the validity and to undertake test on your own. The information given is based on our state of knowledge. The material data sheet is not to be constructed as guaranteeing specific properties and the data can not be used to deduce the suitability for a particular application.

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