

Algemene eigenschappen Pa6 | Nylon

Pa6 | Nylon | Polyamide

GENERAL

Density		1,15 g/cm ³	ISO 1183	DIN 53479
Water absorption in air 50% r.h.		2,4 %	ISO 62	DIN 53715
Absorption 23-C in water -saturation		7,0 %	ISO 62	DIN 53495

MECHANICAL PROPERTIES

Tensile stress at yield at break		58 (85) N/mm ²	ISO 527	DIN53455
Elongation at break		100 (20) %	ISO 527	DIN53455
Tensile Modulus of elasticity		1900 (3400)N/mm ²	ISO 527	DIN53455
Compression test 1% strain 1000h		7 (20) N/mm ²	ISO 899	DIN53444
Impact strength Charpy 7,5 J		no break	ISO R179	DIN53453
Notched impact strength Charpy		23 (5) KJ/ mm ²	ISO179/3C	DIN53453
Ball indentation hardness		100 (165) N/ mm ²	ISO2039.1	DIN53456
Rockwell hardness (dry)		M88	ISO2039.2	DIN53456
Coefficient of friction to steel	[12]	0,42	ISO 8295	DIN 53375

THERMAL PROPERTIES

Melting point		220 °C	ISO 3146	
Thermal conductivity		0,28 W/(km)	ISO 22007.2	DIN 52612
Deformation at temperature HDT [15]		96 °C	ISO75	DIN 53461
Linear expansion coefficient	23-60°C	80 x 10 ⁻⁶ K ⁻¹	ISO 11359	DIN 53752
Operating temperature continuously	[17]	100 °C		
Operating temperature short period	-no load [18]	160 °C		
Minimum operating temperature [19]		-30 °C		

Flammability UL 94 (3-6 mm thickness)	HB		UL94
Oxygen index (LOI)	25 %	ISO4589	DIN 22117

ELECTRICAL PROPERTIES

Dielectric constant at 1 MHz.	7 (3,7)	ISO 250	DIN 53483
Dielectric strength	30 KV/ mm	ISO 243	DIN 53481
Volume resistivity	$10^{12} \Omega \text{c m}$	ISO 93	DIN 53482
Dissipation factor $\tan \Delta$ at 1MHz	0,05	ISO 250	DIN 53483

N.B.

- Figures relate to specimen conditioned at 23°C and 50% RH. Figures between brackets relate to dry specimen. Figures for materials marked with * can change according to their moisture content.

- Figures refer to un-coloured specimen either injection moulded or machined in the easiest way. Tests made on specimen of different sizes give slightly different results.

- [12] Test on ground steel dry specimen load =0,05 N/mm² speed=0,6 m/s.

- [15] Deformation at temperature. HDT at 1,8 N/mm²

- [17] Operating temperature continuously 5000h From 23°C upwards the materials' features change in a non-uniform and disproportional way due to the heat. The quoted limits are indicative and based on a tensile stress of 50% of the value at 23° C.

- [18] Operating temperature short period (no load)

- [19] The mechanical features decrease with a reduction in temperature and are influenced also by other factors (moisture, etc.). The quoted value does not take into consideration impact conditions or heavy loads.

- A Amorphous

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