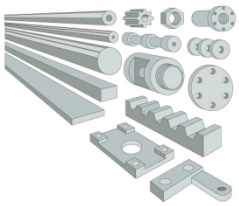
PA11 [RILSAN 11]



GENERAL

Density	1,04 g/cm³	ISO 1183	DIN 53479
Water absorption in air 50% r.h.	0,9 %	ISO 62	DIN 53715
Absorption 23-C in water-saturation	2,0 %	ISO 62	DIN 53495

MECHANICAL PROPERTIES

Tensile stress at yield at break	45 N/mm²	ISO 527	DIN53455
Elongation at break	270 %	ISO 527	DIN53455
Tensile Modulus of elasticity	1800 N/mm²	ISO 527	DIN53455
Compression test 1% strain 1000h	4 N/mm²	ISO 899	DIN53444
Impact strength Charpy 7,5 J	no break	ISO R179	DIN53453
Notched impact strength Charpy	20 KJ/ mm²	ISO179/3C	DIN53453
Ball indentation hardness	100 N/mm²	ISO2039.1	DIN53456
Rockwell hardness (dry)	M83	ISO2039.2	DIN53456
Coefficient of friction to steel [12]	0,36	ISO 8295	DIN 53375

THERMAL PROPERTIES

Melting point	183 °C	ISO 3146	
Thermal conductivity	0,23 W/(km)	ISO 22007.2	DIN 52612
Deformation at temperature HDT[15]	55 °C	ISO75	DIN 53461
Linear expansion coefficient 23-60°C	100 x 10^{-6} K^{-1}	ISO 11359	DIN 53752
Operating temperature continuously[17]	85 °C		
Operating temperature short period-no load[18]	120 °C		
Minimum operating temperature[19]	-50 °C		
Flammability UL 94 (3-6 mm thickness)	V2		UL94
Oxygen index (LOI)	25 %	ISO4589	DIN 22117

ELECTRICAL PROPERTIES

Dielectric constant at 1 MHz.	4	ISO 250	DIN 53483
Dielectric strength	30 KV/mm	ISO 243	DIN 53481
Volume resistivity	10^{15}'Ωcm	ISO 93	DIN 53482
Dissipation factor tan Δ at 1MHz	0,02	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/mm^2 speed=0,6 m/s.

- [15] Deformation at temperature. HDT at 1,8 N/mm^2

- [17] Operating temperature continuously 5000h From 23°C upwards the materials' features change in an 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

- All values and information provided are based on information currently in our possession and/or results archived from tests conducted in our laboratories. They are given in good faith and are not legally binding. For any particular application, the technical staff of Omnia Plastica spa is at your disposal to assist with solving your problem.