

MARYLAND METRICS

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TECHNICAL INFORMATION and DATA

Polyamid 66 (nylon®)

Mechanical properties (dry)	Dry	Humid
Yield strength N/mm ² (MPa)	85 N/mm ²	60 N/mm ²
Elongation %	30-60%	120-280%
Bending stress max.	130-135 N/mm ²	-
Elasticity module N/mm ²	2600-2900 N/mm ²	1700-2000 N/mm ²
Moisture absorption %	3,4-3,8%	-

Thermal properties (dry)	Dry	Humid
Smelting temperature	250-255 °C	-
Heat resistance briefly, max.	150-170 °C	-
Heat resistance continuously	80-100 °C	-

Chemical properties:

Resistant against:

Acetone, Ammonia 10%, Brandy, Butter, Citric acid 10%, Diesel, Formaldehyde, Fruit juice, Gasoline, Glycerine 90%, hydrogen peroxide, Ink, Mercury, Methanol, Milk acid 10%, Mineral oil, Petroleum, Potassium hydroxide 50%, Potassium nitrate 10%, Soap solution 1%, Sodium carbonate 10%, Sodium chloride (salt), Sodium hydroxide 10%, Vaseline, Vegetable oils, Wax, Wine

Not resistant against:

Acetic acid, Boric acid, Chlorine gas, Chlorine water, Chloroform, Chromium trioxide, Formic acid, Hydrochloric acid, Nitric acid, Ozone, Perchloric acid, Phenol, Phosphoric acid, Sulphuric acid, Hot water

Tolerances






Tolerances for polyamid (nylon ®) fasteners correspond about to those of steel fasteners multiplied by 2.

Tightening torques M_A [Nm] (as guideline only)

Nominal diameter	M3	M4	M5	M6	M8	M10	M12	M16
Screws	0,1	0,2	0,5	1	2	3	4	8
Nuts	0,1	0,3	0,6	1,5	3,0	4	6	12

Fastening in plastics

Following table helps to select the correct type of screws. However, making suitable tests is recommend in any case to determine the two most important parameters: core hole diameter and thread engagement.

Inscription: ∅ very suitable φ limited suitable σ not suitable	Tapping screws  DIN standard	Tapping screws  with cutting edge	Thread cutting screws  DIN 7513 metr. thread	PT screws 	PT screws  with cutting edge
Soft thermoplastics as: CA, CAB, PUR, soft PVC, PTFE, PP, PE	∅	φ	σ	∅	φ
Hard thermoplastics as: PPO, PC, PMMA, PA, hard PVC, ABS, PS, SB, SAN, POM	φ	φ	σ	∅	φ
Duroplastics as: PF, UF, MF, UP, EP	σ	φ	∅	φ	∅
Suitable for reassembling:	∅	σ	φ	∅	φ