

# ERTALON® NYLATRON®

## Polyamides (PA)

Within the polyamides, commonly referred to as "nylons", we distinguish different types. The most important ones are: PA 6, PA 66, PA 11 and PA 12. The differences in physical properties which exist between these types are mainly determined by the composition and the structure of their molecular chains.

### Main characteristics:

- high mechanical strength, stiffness, hardness and toughness
- good fatigue resistance
- high mechanical damping ability
- good sliding properties
- excellent wear resistance
- good machinability

### EXTRUDED PRODUCTS

#### ERTALON 6 SA (PA 6) natural (white) / black

This material offers an optimal combination of mechanical strength, stiffness, toughness, mechanical damping properties and wear resistance. These properties, together with a favourable electrical insulating ability and a good chemical resistance make ERTALON 6 SA a "general purpose" grade for mechanical construction and maintenance.

#### ERTALON 66 SA (PA 66) natural (cream) / black

Material with a higher mechanical strength, stiffness, heat and wear resistance than ERTALON 6 SA. It also has a better creep resistance but its impact strength and mechani-

cal damping ability are reduced. Well suited for machining on automatic lathes.

#### ERTALON 4.6 (PA 4.6) (reddish brown)

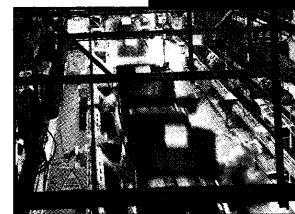
Compared with the conventional nylons, ERTALON 4.6 (STANYL®) features a better retention of stiffness and creep resistance over a wide range of temperatures as well as a superior heat ageing resistance. Therefore, applications for ERTALON 4.6 are situated in the "higher temperature area" (80 - 150°C) where stiffness, creep resistance, heat ageing resistance, fatigue strength and wear resistance of PA 6, PA 66, POM and PET fall short.

#### ERTALON 66-GF30 (PA 66-GF30) (black)

Compared with virgin PA 66, this 30% glass fibre reinforced and heat stabilised nylon grade offers increased strength, stiffness, creep resistance and dimensional stability whilst retaining an excellent wear resistance. It also allows higher max. service temperatures.

#### NYLATRON GS (PA 66 + MoS<sub>2</sub>) (grey-black)

The addition of MoS<sub>2</sub> renders this material somewhat stiffer, harder and dimensionally more stable than ERTALON 66 SA, but results in some loss of impact strength. The nucleating effect of the molybdenum disulphide results into an improved crystalline structure enhancing bearing and wear properties.



*round rods*

Diameters (mm)	Tolerances on the diameters (mm)		Weights (1) - (kg/m)	
			ERTALON 4.6	ERTALON 66-GF30
			40005500	40004500
5			○ 0.026	-
6	+ 0.1	+ 0.4	○ 0.037	-
8			○ 0.065	○ 0.072
10	+ 0.1	+ 0.5	● 0.100	● 0.111
12			○ 0.146	● 0.163
15			● 0.225	● 0.250
16	+ 0.2	+ 0.7	○ 0.256	● 0.283
18			○ 0.322	● 0.355
20			● 0.395	● 0.436
22			○ 0.480	○ 0.530
25	+ 0.2	+ 0.9	● 0.615	● 0.680
28			○ 0.770	○ 0.850
30			● 0.880	● 0.970
32			○ 1.01	○ 1.11
36	+ 0.2	+ 1.1	○ 1.27	● 1.40
40			● 1.57	● 1.72
45	+ 0.3	+ 1.3	○ 1.99	● 2.18
50			● 2.45	● 2.68
60	+ 0.3	+ 1.6	● 3.52	● 3.86
70			-	● 5.22
80	+ 0.4	+ 2	-	● 6.84
90	+ 0.5	+ 2.2	-	○ 8.66
100	+ 0.6	+ 2.5	-	● 10.70
110	+ 0.7	+ 3	-	○ 13.00
120			-	● 15.50
125	+ 0.8	+ 3.5	-	○ 16.80
130			-	● 18.20
140	+ 0.9	+ 3.8	-	○ 21.05
150	+ 1	+ 4.2	-	● 24.20
180	+ 1.2	+ 5	-	● 34.85
200	+ 1.3	+ 5.5	-	● 42.95
<b>Standard lengths (mm)</b>			<b>Tolerance on the lengths (%)</b>	
1000			0 + 3	
3000				
<b>Non-standard lengths (cut-to-size) : ○</b>				

(1) : average production weights

- : **standard** item (available from stock or with short delivery time)
- : **non-standard** item (manufactured on request)
- : not available

**PRODUCT CODE**

