

Technical section

Nylon (PA) 66 - Heat stabilised

Nylon (PA) 66 - Heat Stabilised - Material Data Sheet

All Harnessflex un-reinforced nylon fittings

Properties	Test Method	Value	Unit
General			
Density	ISO 1183	1.14	g/cm ³
Melting point	ISO 1218	263	°C
Mechanical			
Tensile strength	ISO 527	95 (Dry)	MPa
Elongation at break	ISO 527	23 (Dry)	%
Youngs modulus	ISO 527	3400 (Dry)	MPa
Flexural modulus	ISO 178	2850 (Dry)	MPa
Charpy impact strength	ISO 179	DNB (Dry)	kJ/m ²
Charpy notched impact strength	-	6 (Dry)	kJ/m ²
IZOD impact strength	ISO 180C	DNB (Dry)	kJ/m ²
IZOD notched impact strength	ISO 180A	5 (Dry)	kJ/m ²
Thermal			
Heat distortion temperature-A @1.8Mpa	ISO 75-2	85	°C
Heat distortion temperature-B @ 0.45MPa	ISO 75-2	230	°C
Flammability			
Flammability	ISO 527	95 (Dry)	MPa
Glow wire flammability @ 1.5mm	IEC 695-2-1/2	850 (Con)	°C
Electrical			
Dielectric strength	IEC 243	60 (Dry)	MV/m
Surface resistivity	IEC 60093	1E+15	Ω
Volume resistivity	IEC 60093	1E+15	Ω.cm
Comparative tracking index	IEC 60112	600	V

NOTE: All tests undertaken at 23°C where applicable

Technical section

Nylon (PA) 66 - 30% Glass fibre filled

Nylon (PA) 66 - 30% Glass Fibre Filled - Material Data Sheet

Used on: SC-M27 and SC-M24 Swivel nuts

Properties	Test Method	Value	Unit
General			
Density	ISO 1183	1.36	g/cm ³
Moisture absorption ⁽¹⁾	Sim to ISO 62	1.6	%
Mechanical ⁽²⁾			
Tensile stress at yield/break ⁽³⁾	ISO 527	195	N/mm ²
Elongation at break ISO 527 3%			
Modulus of elasticity ⁽⁴⁾	ISO 527	10000	N/mm ²
IZOD notched impact strength - @ +23°C			
- @ -30°C 10 kJ/m ²	ISO 180/1A	13	kJ/m ²
Thermal			
Heat deflection temperature (HDT)	ISO 75/A	250	°C
Ball pressure test	IEC 60695-10-2	> 200	°C
Flammability			
Flammability (1.6mm thickness)	UL94	HB	
Oxygen index	ISO4589	24	%
Glow wire test extinguishing time ⁽⁵⁾	IEC60695-2-1/1	<15	s
Hot wire ignition (HWI) (1.5mm thickness)	IEC60695-2-20	>15	s
High current arc ignition (HAI) (0.7mm thickness)	IEC60947	>120	No of arcs
Electrical ⁽²⁾			
Dielectric strength	IEC 60243-1	>30	kV/mm
Specific surface resistivity	IEC 60093	10 ¹⁵	Ω
Specific volume resistivity	IEC 60093	10 ¹⁵	Ω.cm
Dielectric constant - @ 100Hz	IEC60250	3.8	
- @ 1MHz		3.5	
Dissipation factor - @ 100Hz	IEC60250	90	x10 ⁻⁴
- @ 1MHz		160	x10 ⁻⁴
Comparative tracking index	IEC 60112	600	V
168h/100°C ref fuel B	-	+91	%

NOTE: All tests undertaken at 23°C where applicable

⁽¹⁾ Moisture absorption, saturation at +23°C and 50% RH (ref. DIN53495)

⁽²⁾ Dry as moulded

⁽³⁾ Test speed 5mm/min

⁽⁴⁾ Test speed 1mm/min

⁽⁵⁾ Glow wire applied during 30secs, temperature 750°C, thickness 1.6mm

Notes

- DNB = Did not break
- Dry = Dry as moulded
- Con = Conditioned 168hrs @ 23°C, 50% RH

Chemical resistance

Polyamide (Nylon) 66 Harnessflex fittings are resistant to all underbonnet oils, greases, fuels, cleaning and synthetic fluids. Like all Nylons they are resistant to weak acids but not resistant to strong or oxidizing acids.