

# DATASHEET

## NYLON 66 SA

Material with a higher mechanical strength, stiffness, heat, and wear resistance than Nylon 6 SA. It also has a better creep resistance; its impact strength and mechanical damping ability is reduced. Well suited for machining on automatic lathes.

### Applications

- Sleeve & Slide Bearings
- Wear Pads
- Support & Guide Wheel
- Conveyor Rollers & Tension Rollers
- Pulleys & Pulley Linings
- Buffer Blocks

### Availability

- Colour – Natural & Black
- Type – Sheets, Rods & Tubes
- Regularly produced in a wide variety of thicknesses

### Typical Properties

General Properties	Method	Unit	Test Result
<b>Physical Properties</b>			
Colour	-	-	Natural/Black
Density	ISO 1183-1	g/cm <sup>3</sup>	1.14
Water Absorption:			
- After 24h immersion in water of 23°C	ISO 62	mg	0.60
- At saturation in water of 23°C	-	%	8
<b>Thermal Properties</b>			
Melting Temperature (DSC, 10°C/min)	ISO 11357 – 1/-3	°C	260
Glass Transition Temperature (DSC, 10°C/min)	ISO 11357 – 1/-2	°C	-
Thermal Conductivity at 23°C	-	W/(K.m)	0.28
Coefficient of Linear Thermal Expansion:			
- Average value between 23 and 100°C	-	W/(K.m)	80x10 <sup>-6</sup>
- Average value between 23 and 150°C	-	W/(K.m)	95x10 <sup>-6</sup>
- Average value above 150°C	-	W/(K.m)	-
Temperature of Deflection Under Load:			
- Method A: 1.8 MPa	ISO 75-1/-2	°C	85
Max Allowable Service Temperature in Air:			
- Continuously: for 5,000 to 20,000h	-	°C	80
Minimum Service Temperature	-	°C	-30

Flammability:			
- According to UL94 (3/6mm thickness)	-	-	HB
<b>Mechanical Properties</b>			
Tension Test:			
- Tensile Strength	ISO 527-1/-2	MPa	90
- Tensile Strain at Yield	ISO 527-1/-2	%	5
- Tensile Strain at Break	ISO 527-1/-2	%	50
- Tensile Modulus of Elasticity	ISO 527-1/-2	MPa	3550
Flexural Test:			
- Flexural Strength	ISO 178	MPa	135
- Flexural Modulus of Elasticity	ISO 178	MPa	3240
Compression Test:			
- Compressive Stress @ 1/2/5% Nominal Strain	ISO 604	MPa	32/62/100
Charpy Impact Strength - Unnotched	ISO 179-1-1eU	kJ/m <sup>2</sup>	No break
Charpy Impact Strength - Notched	ISO 179-1-1eU	kJ/m <sup>2</sup>	4.5
Rockwell Hardness	ISO 2039-2	-	88
Dynamic Coefficient of Friction	ISO 7148-2(15)	-	0.4-0.6
Wear Rate	ISO 7148-2(15)	Um/km	14
<b>Electrical Properties</b>			
Electric Strength	EC 60243-1	kV/mm	27
Volume Resistivity	IEC 60093	Ohm.cm	>10E 14
Surface Resistivity	IEC 60093	Ohm	>10E 13
Relative Permittivity – at 1MHz	IEC 60250	-	3.30
Dielectric Dissipation Factor – at 1 MHz	IEC 60250	-	0.02