

# RÖCHLING datasheet

SUSTAMID | 2009

## SUSTAMID 66 (Extruded Nylon)

SUSTAMID 66 is an extruded general purpose nylon (Polyamide 66). Nylon is one of the original engineering plastics and is still today the material of choice for many bearing and wear applications. Due to its unique combination of physical properties such as toughness, abrasion resistance, chemical resistance and light weight, SUSTAMID 66 is regularly machined into parts to replace bronze, brass, steel and aluminum. SUSTAMID 66 MoS<sub>2</sub> is enhanced with molybdenum disulfide and provides a lower coefficient of friction and improved wear resistance. SUSTAMID 66 GF 30 is reinforced with 30% glass fibers and offers higher tensile strength, flexural strength and superior abrasion resistance.

### Product Features:

- ⇒ Good abrasion and wear resistance
- ⇒ Very easy to fabricate
- ⇒ High strength and stiffness at elevated temperatures
- ⇒ Good impact strength at low temperature
- ⇒ Continuous use temperature of 220°F
- ⇒ Outstanding chemical resistance to alkalis and oxidizing agents
- ⇒ Light weight (approx. 1/8 vs. bronze)
- ⇒ Natural is FDA, USDA and 3A Dairy compliant

### Typical Properties of Stock Shapes

Property	Units	Test Method	Value Natural	Value MoS <sub>2</sub>	Value GF 30
Specific Gravity	%	ASTM D 792	1.14	1.15	1.34
Water Absorption 24 hrs	%	ASTM D 570	1	1	0.7
Water Absorption Saturation	-	ASTM D 570	8.5	8.5	5.5
Flammability	psi	UL 94	HB	HB	HB
Tensile Strength	%	ASTM D 638	12,000	12,000	22,500
Elongation	psi	ASTM D 638	40	25	6
Modulus	psi	ASTM D 638	400,000	450,000	1,200,000
Flexural Strength	psi	ASTM D 790	15,000	17,000	26,000
Modulus	ft-lb/in	ASTM D 790	420,000	460,000	1,100,000
Notched Izod	-	ASTM D 256	0.6	0.6	1.5
Rockwell Hardness	°F	ASTM D 785	M85	M85	M101
HDT @ 264 psi	in/in/°F	ASTM D 648	195	195	380
Coefficient Linear thermal expansion	V / mil	ASTM D 696	4.50 x 10 <sup>-5</sup>	4.0 x 10 <sup>-5</sup>	1.7 x 10 <sup>-5</sup>
Dielectric Strength	ohm-cm	ASTM D 149	350	350	350
Volume Resistivity	-	ASTM D 257	>10 <sup>13</sup>	>10 <sup>13</sup>	>10 <sup>13</sup>
Dielectric Constant		ASTM D 150	3.8	3.8	3.5

### Typical Applications

- ⇒ Bushings
- ⇒ Bearings
- ⇒ Rollers
- ⇒ Manifolds
- ⇒ Gears
- ⇒ Sprockets
- ⇒ Sheaves
- ⇒ Insulators
- ⇒ Wear components

### Certifications

- ⇒ ASTM D4066 PA 0111
- ⇒ ASTM D6779
- ⇒ Natural is FDA, USDA & 3A Dairy compliant



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