

# 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 alkalies and oxidizing agents
- ⇒ Light weight (approx. 1/8 vs. bronze)
- ⇒ Natural is FDA and USDA

### Typical Properties of Stock Shapes

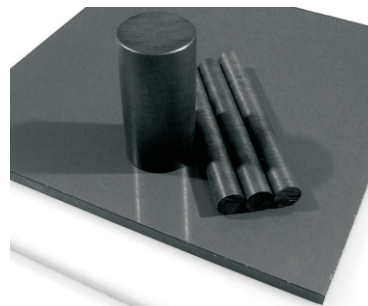
Property	Units	Test Method	Value Natural	Value MoS <sub>2</sub>	Value GF 30
Specific Gravity	-	ASTM D 792	1.14	1.15	1.34
Water Absorption 24 hrs	%	ASTM D 570	1	1	0.7
Water Absorption Saturation	%	ASTM D 570	8.5	8.5	5.5
Flammability	-	UL 94	HB	HB	HB
Tensile Strength	psi	ASTM D 638	12,000	12,000	22,500
Elongation	%	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	psi	ASTM D 790	420,000	460,000	1,100,000
Notched Izod	ft-lb/in	ASTM D 256	0.6	0.6	1.5
Rockwell Hardness	-	ASTM D 785	M85	M85	M101
HDT @ 264 psi	°F	ASTM D 648	195	195	380
Coefficient Linear thermal expansion	in/in/°F	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	V / mil	ASTM D 149	350	350	350
Volume Resistivity	ohm-cm	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 and USDA



### Röchling Engineering Plastics

903 Gastonia Technology Parkway Phone: 704-922-7814  
 Dallas, NC 28034, USA Fax: 704-922-7651

email: [info@roechling-plastics.us](mailto:info@roechling-plastics.us)  
[www.roechling-plastics.us](http://www.roechling-plastics.us)