



Nyloil[®] Nylon

Self-Lubricating, Low Friction Nylon

Description and Overview

Nyloil[®] is a self-lubricating nylon material made of an oil-based lubricant and cast nylon. Self-lubrication provides this oil-filled nylon with a 25% lower coefficient of friction than other nylon grades and allows it to continue working in wet conditions, such as marine applications. The oil won't spin out, dry out, or drain out, even in the harshest of operating conditions. Standard green Nyloil[®] is not FDA compliant, but food-grade versions of Nyloil[®] (Nyloil[®] FG) are available.

Like its base material nylon, Nyloil[®] can be used to replace metal parts and is preferable in designs where long part life and noise reduction are important.

Applications and Uses

Nyloil[®] sees use in a wide variety of industrial, marine, and commercial applications where self-lubrication, strength, wear resistance, and dimensional stability are important. It can be machined into an array of different parts, including bushings, bearings, gears, pulleys, rollers, wheels, wear rails, wear strips, and wear pads.

- Bushings
- Pulleys
- Bearings
- Wheels and rollers
- Wear rails, pads, and strips
- General replacement for metal parts



Nyloil[®] is available in sheet, rod, and tube shapes.


Properties and Specifications


Deflection Temperature	ASTM Test Method	Units	NYCAST [®] , NYLOIL [®] , NYCAST [®] , NYLOIL [®] FG
@ 264 psi	D 648	°F	200 - 300
@ 66 psi	D 648	°F	300 - 400
Continuous Service Temperature	-	°F	230
Intermittent Service Temperature	-	°F	330
Coefficient of Friction, Dynamic	D 1894	-	0.12

Properties are typical.
Chem is an abbreviation for chemically affixed with glues, chemicals, or adhesive.
Mech is an abbreviation for mechanically affixed bonding.
Field testing is recommended for any application.

330 Commerce Circle
Sacramento, CA 95815
800-742-3444

interstateplastics.com

 WARNING: This product can expose you to chemicals including N,N-Dimethylformamide, CAS 68-12-2, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

 WARNING: This product can expose you to chemicals including METHYLPYRROLIDONE, CAS 872-50-4, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



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Rev 3 (07/25/2023)



Typical Properties

Property	ASTM Test Method	Units	NYCAST® NYLOIL®, NYCAST® NYLOIL® FG
MECHANICAL			
Specific Gravity	D 792	g/cm ³	1.14 - 1.15
Tensile Strength	D 638	psi	9,500 - 11,000
Tensile Elongation	D 638	%	35 - 55
Tensile Modulus	D 638	psi	375,000 - 475,000
Compressive Strength	D 695	psi	13,500 - 15,000
Compressive Modulus	D 695	psi	325,000 - 375,000
Flexural Strength	D 790	psi	354
Flexural Modulus	D 790	psi	375,000 - 475,000
Shear Strength	D 732	psi	8,000 - 9,000
Notched Izod Impact	D 256	ft.lbs/in.	1.4 - 1.8
Hardness Rockwell	D 785	R	110 - 115
Hardness, Shore D D 2240 74 - 80	D 2240	D	74 - 80
Limiting Pressure Velocity	-	Psi-ft/min	16,000
Melting Point	D 3418	°F	430 +/- 10
Coefficient of Linear Thermal Expansion	D 696	in./in./°F	5.0 * 10 ⁻⁵
Deformation Under Load	D 621	%	0.7 - 3.0

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