

# 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

## Properties and Specifications

Property	Units	ASTM Test Method	NYCAST® NYLOIL®, NYCAST® NYLOIL® FG
Specific Gravity	g/cm3	D 792	1.14 - 1.15
Tensile Strength	psi	D 638	9,500 - 11,000
Tensile Elongation	%	D 638	35 - 55
Tensile Modulus	psi	D 638	375,000 - 475,000
Compressive Strength	psi	D 695	13,500 - 15,000
Compressive Modulus	psi	D 695	325,000 - 375,000
Flexural Strength	psi	D 790	14,000 - 16,000
Flexural Modulus	psi	D 790	375,000 - 475,000
Shear Strength	psi	D 732	8,000 - 9,000
Notched Izod Impact	ft.lbs/in.	D 256	1,4 - 1,8
Hardness Rockwell	R	D 785	110 - 115
Hardness, Shore	D	D 2240	74 - 80
Limiting Pressure Velocity	Psi-ft/min	-	16,000
Melting Point	°F	D 3418	430 +/- 10
Coefficient of Linear Thermal Expansion	in./in./°F	D 696	5.0 * 10-5
Deformation Under Load	%	D 621	0.7 - 3.0
<b>Deflection Temperature</b>			
264 psi	°F	D 648	200 - 300
66 psi	°F	D 648	300 - 400
Continuous Service Temperature	°F	-	230
Intermittent Service Temperature	°F	-	330
Coefficient of Friction, Dynamic		D 1894	0.12

330 Commerce Circle  
 Sacramento, CA 95815  
 (888) 768-5759

 **WARNING:** This product can expose you to chemicals, which are known to the State of California to cause cancer, birth defects, and/or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

