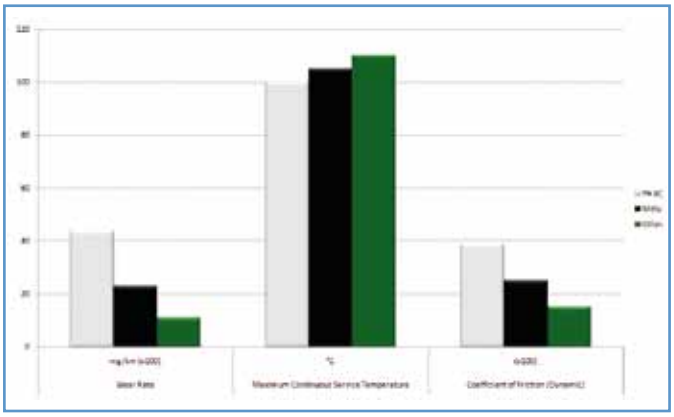
Nylacast Oilon

Oilon was a break through of the first magnitude in the world of cast nylons, developed in the early 70's by Nylacast Ltd and introduced to the market in 1974.
Oilon was the very first authentic lubricated Nylon having a blended liquid lubricant system built in during the process stages, which obviously resulted in a substantial increase in bearing life, 5 times that of Natural cast nylon and 25 times that of phosphor bronze! The lubricant contained within the material will not drain, machine, spin, leech or dry out and never needs replenishment.

A uniformed distribution of the lubricant throughout the product guarantees a constant performance over the whole service life and improvements in rate of wear, sliding frictional properties, abrasion resistance and stick slip performance are just a few of the benefits offered by this material. Oilon has been successful in considerably enlarging the application possibilities of nylons in many areas and specifically that of unlubricated moving parts. Oilon has acquired an unmatchable track record over the past 20 years and continues to go from strength to strength, for Nylacast has over this period produced thousands of tons of Oilon and the trend continues. There have been many imitators over the years since Oilon has been introduced, however Oilon has not yet been equalled by its rivals and remains the premier oil-lubricated nylon available from any source. Oilon is suitable for use in applications in both the food and pharmaceutical industries.

Benefits of Nylacast Oilon

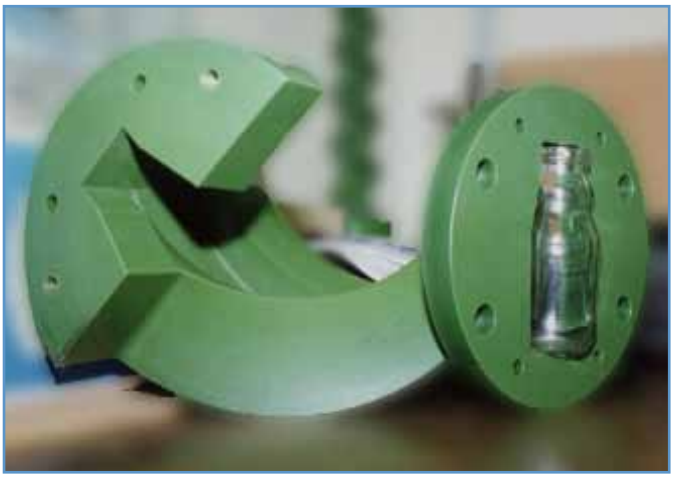


- First authentic lubricated nylon
- Improved wear and abrasion resistance
- Improved PV characteristics
- Improved coefficient of friction and stick/slip characteristics
- Consistent wear performance throughout product life
- Reduced water absorption
- Excellent mechanical, thermal and chemical resistance properties
- Good dimensional stability
- FDA compliant for direct food contact applications
- Blended liquid lubricant system

Industry Users

- Petrochemical
- Construction
- Transport
- Food and food packaging
- Bottling and canning
- Pharmaceuticals
- Steel mills
- Quarrying/mining
- Cranes
- Conveyors
- Offshore

Typical Application



- Wear pads
- Support rails
- Sheaves
- Rollers
- Guide plates
- Bearings
- Spacers
- Pulleys
- Spacers
- Brake blocks
- Conveyor rail
- Pipe Clamps
- Gears
- Bushes
- Wear Strips
- Bespoke Components

Nylacast Oilon is available as standard plate, rod and over thousands of tubes OD/ID configurations in four different lengths.

In addition cut piece derivatives, strips, billets, discs and rings up to 2.5 metres diameter as well as custom castings to specific designs are available.

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Nylacast Oilon

PROPERTY	TEST METHOD	NOTES	METRIC	UNITS	IMPERIAL	UNITS
GENERAL						
Colour				Green		Green
Density	ISO1183:1987	Test Method A	g/cm^3	1.140	lb/inch^3	0.041
Moisture Absorption (Equilibrium)	ISO 62:1999	50% RH, 23C	%	-	%	-
Water Absorption (24 Hours)	ISO 62:1999(modified)	Immersion, 23C	%	-	%	-
Water Absorption (Saturation)	ISO 62:1999	Immersion, 23C	%	-	%	-
MECHANICAL						
Tensile strength	ISO 527-1/2:1993	Sample Type 1B, 50mm min^{-1}	MPa	75	psi	10878
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm min^{-1}	MPa	4000	psi	580152
Elongation at break	ISO 527-1/2:1993	Sample Type 1B, 50mm min^{-1}	%	>30	%	>30
Compressive strength	ISO 604:2002	Sample Type B, 5mm min^{-1}	MPa	95	psi	13779
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm min^{-1}	MPa	2500	psi	362595
Flexural Strength*	ISO 178:2001	1.5mm min^{-1}	MPa	100	psi	14504
Flexural Modulus	ISO 178:2001	1.5mm min^{-1}	MPa	3100	psi	449618
Izod Impact Strength	ISO 180:2000	Sample Type A (Notched)	kJ/m^2	6.00	ft.lb/in^2	2.86
Charpy Impact Strength	ISO 179-2:1999	Notched	kJ/m^2	-	ft.lb/in^2	-
Hardness (Shore D)	ISO 868: 2003			83		83
Coefficient of Friction (Dynamic)		31.4m/min, 1.75MPa		0.15		0.15
Limiting PV			Mpa/m.min	-	psi.ft/min	-
Wear Rate		31.4m/min, 1.75MPa	mg/km	0.11		-
K-Factor		31.4m/min, 1.75MPa	mm^3/Nm	1.2 x 10^{-6}	in^{3}min/ft.lb.hr	0.60 x 10^{-9}
THERMAL						
Melting Temperature	-		°C	220	°F	428
Glass Transition Temperature (Tg)	ISO 11359-2:1999		°C	-	°F	-
Heat Deflection Temperature HDT/A	ISO 75	1.80MPa	°C	-	°F	-
Heat Deflection Temperature HDT/B	ISO 75	0.45MPa	°C	-	°F	-
Maximum Intermittent Service Temperature	-		°C	170	°F	338
Maximum Continuous Service Temperature	-	5000hrs	°C	110	°F	230
Minimum Intermitenet Service Temperature	-		°C	-100	°F	-148
Minimum Continuous Service Temperature	-		°C	-40	°F	-40
Coefficient of Linear Thermal Expansion (TMA)	ISO 11359-2:1999	23°C - 55°C Mean T = 20°C	°C^{-1}	8 x 10^{-5}	°F^{-1}	4.44 x 10^{-5}
Thermal Conductivity	ISO 8301:1991		W/m°C	-	BTU in/ft.hr°F	
Flammability	IEC 60695-11-10:2003-08		-	HB	-	HB
ELECTRICAL						
Dielectric Constant	IEC 60250:1969-01	1 MHz		3.7		3.7
Dielectric Constant (Low Frequency)		100Hz		4		4
Dissipation Factor	IEC 60250:1969-01	100Hz	Hz	-	Hz	-
Dielectric Strength	IEC 60243-1:1998-01		kV/mm	25	kV/in	635
Volume Resistivity	IEC 60093:1980-01		ohm.m	1x10^{13}	ohm.m	3.93x10^{15}
Surface Resistivity ROA	IEC 60093:1980-01		ohm	1 x 10^{12}	ohm	1 x 10^{12}
Comparative Tracking Index	IEC 60112:2003-01		CTI	600	CTI	600

PRODUCT AVAILABILITY	
Rod	10mm-500mm DIA
Tube	50mm-1000mm OD
Plate	8mm-100mm THICKNESS
Custom Castings	Bespoke
Cut to size	Available upon request

NOTES

- All Information contained in this literature correspond with our current knowledge of the products.
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