



FL73D-NY12

Fuel Line Nylon 12 Tubing



Product Description

Grayline FL73D-NY12 is made from an unfilled polyamide 12 compound that is specifically designed for resistance to fuel, lubricants, greases, and solvents. Typical applications include fuel lines, coolant transfer lines, and lubricant lines.

Compared to Nylon 6 & 66, NY12 has very low moisture absorption, and is exceptionally resistant to stress cracking, abrasion, and flexural fatigue.

Standard Packaging: Reels or Cut to Customer Specifications.

Standard Color: Natural

Custom Colors and Sizes Available Upon Request

Specifications

- EU Directive 2000/53/EC (ELV)
- EU Directive 2011/65/EC (RoHS2)
- EU Directive 2015/863 (RoHS3)

Features

- Operating Temperature is -40°C to 95°C
- Fuel & Chemical Resistant
- Lead Free
- Heat & Light Stabilized

PROPERTY	TYPICAL VALUE	TEST METHOD
Durometer Hardness, Shore D	73	ASTM D2240
Tensile Strength @ Yield (psi)	6,800	ISO 527-1/2
Elongation @ Break (%)	>50	ISO 527-1/2
Specific Gravity	1.01	ISO 1183
Taber Abrasion (loss in mg)	12-13	DIN 53754
DIN Abrasion (loss in mm ³)	68	DIN 53516
Volume Resistivity (ohm-cm)	10 ¹⁵	IEC 60093
Electric Strength (V/mil)	660	IEC 60243-1
<i>See Page #2 for Chemical Resistance Chart</i>		

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Chemical Resistance of FL73D-NY12

Test Medium	Test Temperature (°C)	Duration (Hours)	Tensile Modulus ¹⁾ (MPa)	CHARPY notched impact strength ²⁾ (kJ/m ²)	Weight Change ³⁾ (%)
Control Specimen	—	—	1440	18	—
Sulphuric acid, 1/2 mol/l	23	1170	1130	n.b.	+ 0.9
	90	331	830	4.3	+ 1.7
Battery acid, 30%	23	1556	1360	34;5/10 n.b.	+ 1.0
	90	42	870	9.3	+ 3.0
Hydrochloric acid, 1 mol/l	23	226	870	n.b.	+ 0.5
	90	226	840	3.6	+ 1.7
Nitric acid, 1 mol/l	23	1624	1060	n.b.	+ 1.6
	90	21	900	4.4	+ 2.2
Formic acid, 85%	23	761	370	n.b.	+ 26.0
	90	24	—	—	Decomp.
Acetic acid, 2 mol/l	23	1554	960	n.b.	+ 1.9
	90	330	850	1.7	+ 4.5
Sodium hydroxide, 1 mol/l	23	1293	1100	n.b.	+ 0.9
	90	330	860	n.b.	+ 1.3
Chlorine water, 16%	23	1651	1350	70	+ 0.8
Aqueous ammonia, 25%	23	1195	1370	n.b.	+ 1.1
Hexane	23	1200	1380	36	+ 0.4
	68	264	1130	40	+ 1.1
Toluene and benzene	23	1672	910	n.b.	+ 5.9
	70	330	630	n.b.	+ 10.3
Premium fuel	23	1552	1160	n.b.	+ 2.1
	67	432	640	n.b.	+ 7.5
ASTM fuel B	23	1606	1180	43	+ 1.9
	70	331	710	n.b.	+ 5.7
ASTM fuel B + ethanol (80:20 vol %)	23	1672	550	n.b.	+ 14.2
	70	332	400	n.b.	+ 16.7
Methanol	23	1313	530	n.b.	+ 9.7
	64	357	470	n.b.	+ 11.9
Isoamyl alcohol	23	1552	1100	35	+ 2.9
	70	330	450	n.b.	+ 15.9
Methyl ethyl ketone	23	1581	960	n.b.	+ 2.3
	68	300	420	n.b.	+ 5.1
Trichlorethylene	23	1530	560	n.b.	+ 20.3
	66	309	510	n.b.	+ 21.6
Butyl acetate	23	1553	1360	23;6/10 n.b.	+ 1.0
	68	300	570	n.b.	+ 4.4
PYDRAUL150® (Hydraulic Fluid)	23	1528	1800	27;5/10 n.b.	+ 0.5
	90	352	1320	16	+ 2.2
SKYDROL®HT (Hydraulic Fluid)	23	1506	1640	6.0	+ 0.2
	90	331	940	5/10 n.b.	+ 3.5
STOP®HD (Hydraulic Fluid)	23	1581	1480	32;5/10 n.b.	+ 0.7
	90	330	500	n.b.	+ 10.6
GIRLING® (Hydraulic Fluid)	23	1552	1630	32;4/10 n.b.	+ 0
	90	352	690	n.b.	+ 4.9
LOCKHEED® (Hydraulic Fluid)	23	1623	1660	25	+ 0
	90	448	640	n.b.	+ 5.1

1) According to ISO 527-1/-2

2) N.b. = no break; 34;5/10 = 5 of 10 bars not broken, average impact energy of broken bars 34 kJ/m²

3) Maximum value during tests. Differences between rigid and plasticized PA 12 are mainly caused by partial plasticizer extraction.

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