From the Makers of Tygon®

NORPRENE®

Industrial Grade Tubing Formulation A-60-G
Outlasts and Outperforms Neoprene, EPDM and Other Specialty Rubber Tubings

FEATURES/BENEFITS:

- Superior Weathering
- Abrasion Resistant
- Outstanding Flexural Fatigue Resistance
- Wide Temperature Range (-75°F to 275°F)
- Low Gas Permeability Versus Rubber Tubing
- Ozone and UV Light Resistant

TYPICAL APPLICATIONS:

- Soap and Disinfectant Dispensing
- Printing Ink Transfer
- Caustic Dispensing
- Plating and Etching Chemicals
- Wastewater Sampling
- Glass and Window Wash Systems
- Vacuum Pumps
- Cable Insulation
- Abrasion-Resistant Sleeving

FOR EXTENDED SERVICE IN A WIDE VARIETY OF APPLICATIONS, NORPRENE® INDUSTRIAL GRADE TUBING OUTLASTS VIRTUALLY ALL MULTI-SERVICE RUBBER TUBINGS.

ALTERNATIVE TO GENERAL-PURPOSE RUBBER TUBING

Norprene® Industrial Grade Tubing outperforms neoprene, EPDM and other general-purpose tubings in test after test and application after application. It won't weaken or crack after years of exposure to heat and ozone. This provides long service in a wide range of applications such as gasketing, abrasion-resistant sleeving and cable insulation. Performance formulated for on-the-job reliability, Norprene handles temperatures from -75°F (60°C) to 275°F (135°C), allowing the use of one material with a broad range of temperatures. It is heat sealable and can be joined without fittings. It also has excellent resistance to inorganic (acids and bases) fluids.

LONG LIFE IN PERISTALTIC PUMP APPLICATIONS

Peristaltic pumps are used in a wide range of markets and applications. The universal requirement common to these applications is the ability of the tubing to withstand the constant high flexural fatigue exerted by the pump rollers. Norprene outlasts and outperforms virtually all other general service tubing in peristaltic pump applications due to its high flexural fatigue strength.

IDEAL FOR USE IN VACUUM SYSTEMS

Norprene Industrial Grade Tubing is available in standard vacuum sizes that will withstand a full vacuum (29.9" [759 mm] of mercury) at 73°F (23°C). Unlike typical rubber vacuum tubing, Norprene resists the cracking and aging that are frequent causes of vacuum tubing failure.

SEVERAL FORMULATIONS AVAILABLE

The unique properties of Norprene tubing make it desirable for use in many food processing applications. For these applications, always specify Norprene Food Process Tubing Formulation A-60-F.

Where elevated pressure capabilities are required, Norprene Pressure Tubing Formulation A-60-F I.B. is available to withstand five times the pressure of non-reinforced Norprene tubing.

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NORPRENE® A-60-G INVENTORIED SIZES

Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)	Length (feet)	Minimum Bend Radius (inches)	Maximum Working Pressure* at 73°F	Maximum Working Pressure* at 180°F	Vacuum Rating, In. of Mercury at 73°F	Vacuum Rating, In. of Mercury at 180°F
AFL00003	1/16	3/16	1/16	50	1/4	34	21	29.9	29.9
AFL00007	1/8	1/4	1/16	50	1/2	19	12	29.9	29.9
AFL00008**	1/8	3/8	1/8	50	1/2	34	21	29.9	29.9
AFL00012	3/16	5/16	1/16	50	3/4	13	8	29.9	29.9
AFL00013	3/16	3/8	3/32	50	1/2	19	12	29.9	29.9
AFL00015**	3/16	9/16	3/16	50	1/4	34	21	29.9	29.9
AFL00017	1/4	3/8	1/16	50	7/8	10	6	29.9	15.8
AFL00018	1/4	7/16	3/32	50	3/4	15	9	29.9	29.9
AFL00019	1/4	1/2	1/8	50	3/4	19	12	29.9	29.9
AFL00020**	1/4	5/8	3/16	50	1/2	26	16	29.9	29.9
AFL00022	5/16	7/16	1/16	50	1-1/4	8	5	20.2	10.1
AFL00023	5/16	1/2	3/32	50	1	12	7	29.9	25.0
AFL00026**	5/16	13/16	1/4	50	1/2	28	17	29.9	29.9
AFL00027	3/8	1/2	1/16	50	1-3/8	7	4	14.1	7.0
AFL00028	3/8	9/16	3/32	50	1-1/2	10	6	29.9	15.0
AFL00029	3/8	5/8	1/8	50	1-1/8	13	8	29.9	27.7
AFL00031**	3/8	1	5/16	50	3/4	29	18	29.9	29.9
AFL00032	7/16	9/16	1/16	50	2-1/4	6	4	5.0	0.0
AFL00036	1/2	5/8	1/16	50	3	6	3	15.0	0.0
AFL00037	1/2	11/16	3/32	50	2-1/4	8	5	20.0	10.0
AFL00038	1/2	3/4	1/8	50	1-1/8	10	6	29.6	15.6
AFL00045	5/8	13/16	3/32	50	3-1/4	7	4	10.0	5.0
AFL00046	5/8	7/8	1/8	50	2-3/4	8	5	20.0	9.9
AFL00049**	5/8	1-3/8	3/8	50	1/2	22	13	29.9	29.9
AFL00053	3/4	1	1/8	50	3-1/2	7	4	13.9	6.9
AFL00062	1	1-1/4	1/8	50	5	6	3	5.0	5.0

* Working pressures are calculated at a 1:5 ratio relative to burst pressure using ASTM D1599.
** Vacuum Tubing Sizes.

The values listed for working and burst pressures are derived from tests conducted under controlled laboratory conditions. Many factors will reduce the tubing's ability to withstand pressures including temperature, chemical attack, stress, pulsation and the attachment to fittings. It is imperative that the user conduct tests simulating the conditions of the application prior to specifying the tubing for use.

NORPRENE TUBING IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL

Distributed By:

Norprene® is a registered trademark.

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HOW NORPRENE® COMPARES TO NEOPRENE TUBING

The following information is based on tests conducted for 28 days at 73°F, unless otherwise noted. The information is based on reliable test results. Use this as a guide only, taking into account such variables as temperature and fluid contamination in your own application.

Chemical Tested	Performance Norprene®	Performance Neoprene
20% Ammonium Hydroxide	Excellent	Good
10% Sodium Hydroxide	Excellent	Fair
50% Sulfuric Acid	Excellent	Excellent
90% Sulfuric Acid	Fair	Failed
Methanol	Excellent	Excellent
37% Hydrochloric Acid	Excellent	Fair
Ethanol	Good	Good
50% Ethylene Glycol	Excellent	Excellent
Water: 28 days @ 220°F	Excellent	Fair
Air: 7 days @ 275°F	Good	Failed
Ozone: 100pphm, 40°C, 28 days	Excellent	Fair
Fatigue Resistance Ross Flex @ 100CPM	750,000 cycles - 0.1 inch cut growth	2,000 cycles - 1 inch cut growth
Hot Air Aging, 7 days @ 275°F	+22% tensile, +9% elongation	Crumbled
Hot Air 7 days @ 220°F	+15% tensile, +14% elongation	-2% tensile, -75% elongation
	Typical Environmental Resistance	
Ozone	Excellent	Good
Weather (UV)*	Excellent - Good	Good
Acids	Excellent	Good
Alkalis	Excellent	Good
Lubricating Oils	Fair	Fair
Gas Permeability	Fair	Good- Fair

These comparisons are based on published material properties and are not guaranteed for all samples or applications. Actual performance may vary, based on finished part design and requirements.
* UV environmental resistance properties are influenced by additives.

NORPRENE® A-60-G TYPICAL PHYSICAL PROPERTIES

Property	ASTM Method	Value or Rating
Durometer Hardness Shore A, 15 Sec	D2240-97	61
Color	—	Black
Tensile Strength psi (MPa)	D412-98	1,000 (6.9)
Ultimate Elongation, %	D412-98	375
Tear Resistance lb-f/inch (kN/m)	D1004-94	120 (21)
Specific Gravity	D792-98	0.98
Water Absorption, % 24 hrs. @ 23°C	D570-98	0.30
Compression Set Constant Deflection, % @158°F (70°C) for 22 hrs.	D395-98 Method B	27
Brittleness By Impact Temp., °F (°C)	D746-98	-75 (-60)
Maximum Recommended Operating Temp., °F (°C)	—	275 (135)
Dielectric Strength, v/mil (kV/mm)	D149-97	535 (21.1)
Tensile Modulus, psi (MPa) @ 300% Elongation, psi (MPa)	D412-98	410 (2.8) 800 (5.5)
Tensile Set, %	D412-98	47

Unless otherwise noted, all tests were conducted at room temperature (73°F). Values shown were determined on 0.075" thick extruded strip or 0.075" thick molded ASTM plaques or molded ASTM durometer buttons.

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Quality System ISO 9001 Accredited