



CLASSIFIED FOR FLAME AND SMOKE ONLY — NFPA 90A — 1985

**Synflex®**

## "FR" Tubing (Flame Retardant)

### Specifications

The proper letter from the color chart below should be substituted for the "X" in the part number to indicate the color stripe desired. If no color letter is indicated, black will be supplied.

O.D. Inches	I.D. Inches	WALL Inches	NET WT. lbs./100'	UNIT LENGTH Feet	PART NUMBER
5/32	.096	.030	0.57	500	1219-130X4 *
1/4	.170	.040	1.26	250	1219-440X3 *
				500	1219-440X4 *
				1,000	1219-440X5 *
3/8	.250	.062	2.90	250	1219-662X3 *
				500	1219-662X4 *
1/2	.375	.062	4.06	250	1219-862X3 *

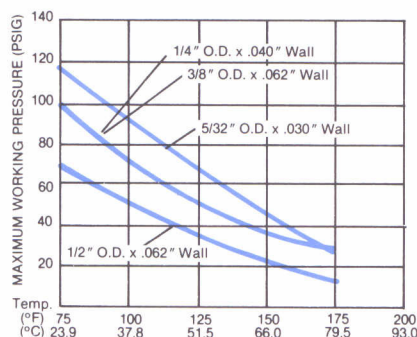
### Physical Properties of "FR" Tubing

PROPERTY	TEST METHOD	UNITS	TYPICAL VALUE
Melt Index (max.)	ASTM D 1238	dg/min.	1.0
Density, 23°C	ASTM D 792	g/c.c.	1.10
Tensile Strength	ASTM D 638	PSI	1900
Elongation (pull at 20" min.)	ASTM D 638	%	400
Flexural Modulus of Elasticity	ASTM D 790	PSI	33,000
Environmental Stress Crack Resistance	ASTM D 1693 See Note	% failures at 48 hrs.	0
Tube Strength (max.)	-	pounds	5/32" tube=14 1/4" tube =30 3/8" tube =67 1/2" tube =95
Minimum Bend Radius	-	inches	5/32" tube = 1/2 1/4" tube = 3/4 3/8" tube = 1-1/2 1/2" tube = 1-7/8
Water Absorption	ASTM D 570	%	.08
Maximum Service Temperature - Black	-	°F	175
Flammability	UL 94 UL 910 UL 1820	-	V-2 Classified/NFPA 90A
Polyethylene Classification	ASTM D 1248	-	Type I Class C Category 4

Note: In addition to the standard stress crack test, a modified version of ASTM D 1693 to evaluate tubing quality is also performed. Sections of tubing are bent to induce severe stress in the tubing wall and then submerged in a 10% solution of Igepal (C0630). The samples and solution are placed in a controlled temperature environment at 50°C. Samples must exhibit no cracking or crazing throughout the duration of the test to be considered satisfactory for extended use.

The material contained in this document is presented in good faith and believed to be reliable and accurate. However, because testing conditions may vary and material quality or information that may be provided in whole or part by others may be beyond our control, no warranty, expressed or implied, is given and Goodrich Sales, Inc. can assume no liability for results obtained or damages incurred through the application of the data and tests presented.

**Synflex 1219 "FR" Tubing**  
MAXIMUM RECOMMENDED WORKING  
PRESSURE VS. TEMPERATURE



Developed specifically for controlling flame spread and smoke generation, Synflex 1219 FR (flame retardant) Tubing can be installed in accordance with NFPA, Standard 90A "Installation of Air Conditioning and Ventilation Systems 1985."

Synflex 1219 FR Tubing is made of an exclusive "linear" low-density polyethylene based formulation that is UL recognized. It combines the physical characteristics and long-term stability of low-density polyethylene with flame retardant properties. Look for UL Classification marking on product.

### Advantages

Synflex 1219 FR Tubing prevents fire propagation, as it rapidly extinguishes after being removed from an open flame. "FR" Tubing is very similar to Synflex "P" Tubing for flexibility, lightweight, abrasion resistance, high tensile strength and rugged environmental performance. To guarantee stress crack resistance, both the standard ASTM D 1693 test for stress cracking of base materials and a modified test on finished tubing are performed.

### Easy to Install

Installation is simple and quick. Being flexible and lightweight, Synflex 1219 FR Tubing can be installed by hand.

### How to Specify

Example: 1219-440B3 Synflex 1219 FR tubing with red stripe, 1/4" O.D. x .040" wall, 250 ft. lengths.

### Availability

Four standard sizes in coils, black or seven standard color stripes and shipped in convenient master pack quantities. 5/32" O.D. tubing supplied in black only.

### Standard Lengths

5/32" - 500-foot lengths  
1/4" - 250-, 500-, and 1,000-foot lengths  
3/8" - 250- and 500-foot lengths  
1/2" - 250-foot lengths

### Note

Authorities having jurisdiction should be consulted before installation.

For more info, contact:



GOODRICH SALES INC.

ON058 Alexander Dr.  
Geneva, IL 60134  
Bus: (800) 522-1662  
Fax: (630) 845-1776