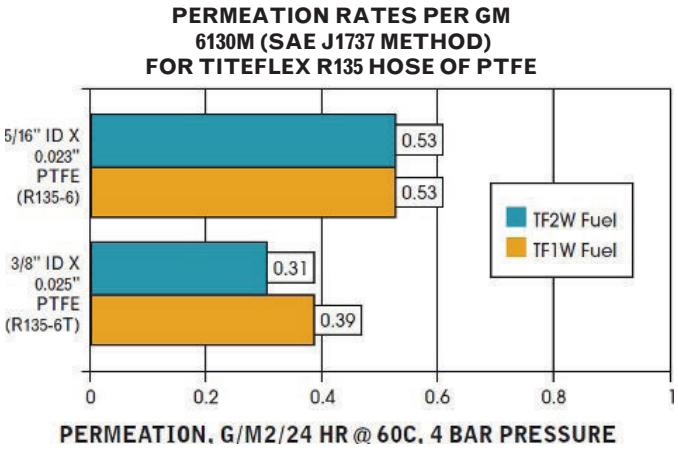
smiths

Fluid Management Systems for Automotive Applications

TITEFLEX
US HOSE

PERMEATION RESISTANCE

The inner core tube is made of virgin polytetrafluoroethylene (PTFE). A nonpolar, thermally stable polymer that is not swollen by hydrocarbons and hydrocarbon materials will not plasticize PTFE.



ELECTROSTATIC DISCHARGE (ESD)

The PTFE inner core tube has a precisely controlled amount of carbon black added to the inner surface, making it electrically conductive. The friction from the transfer of certain fluids through a hose, such as fuels, can lead to the build-up of static charges along the inner surface of the hose. To prevent the condition known as electrostatic discharge, or ESD, the conductive inner core tube safely dissipates static build-up.

ENVIRONMENTAL RESISTANCE

The high molecular weight of PTFE due to long polymer chains increases its load bearing capability, meaning increased resistance to environmental factors such as ozone and heat.

TEMPERATURE RESISTANCE

Hoses of PTFE can operate at transient temperatures from -100°F to +450°F (-73°C to +232°C).

LOW FRICTION

Low pressure drop due to the non-stick properties of PTFE.

FLEXIBLE

PTFE withstands continuous flexing and vibration without failure from flex fatigue.

CHEMICALLY INERT

PTFE will not break down or deteriorate in service with automotive fluids.

NON-AGING

The shelf life of PTFE is unlimited because its properties do not change with age or exposure to weather.

PTFE FLUOROCARBON AS A HOSE MATERIAL

Polytetrafluoroethylene is an engineered fluoropolymer commonly known by PTFE. Outstanding resistance to chemicals is one of its primary attributes. Titeflex has over 65 years of experience processing PTFE to maximize the resistance to permeation and gives superior flex life to the extruded PTFE inner core tube. Braiding the PTFE tube with Stainless Steel wire or Engineered Yarns reinforcement adds strength, flexibility, and corrosion resistance. Originally introduced for demanding Aerospace fluid handling applications, Titeflex Hose of PTFE has been solving critical Automotive fluid handling applications for 45 years.

INNERCORE

PTFE fluorocarbon meets the requirements of:

ASTM D4895 Type 1, Grade 4, Class B

Typical wall thickness range from 0.023" to 0.030" (0.58mm to 0.76mm)

REINFORCEMENT

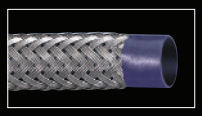
Braid wire meets the requirements of UNS30400 Type 304 Stainless Steel and UNS31600 Type 316 Stainless Steel.

TITEFLEX CUT TO LENGTH AUTOMOTIVE HOSE

Titeflex will cut automotive hose to desired lengths. The cut fuses the stainless wire so it does not flare and separates the PTFE leaving a debris free inside diameter. Ideal for automated assembly system.

R135 SERIES PTFE HOSE

R135 hose has a nominal 0.023" (0.58mm) wall of conductive PTFE innercore and a reduced stainless steel wire braid reinforcement. This combination of reduced PTFE wall and wire coverage creates a cost-effective hose with the permeation resistance of PTFE and the added strength of wire reinforcement. Applications: Fuel, Turbo Oil Drain, Engine Coolant, Hydraulics.

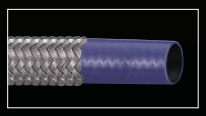


HOSE PART NUMBER	MATES WITH TUBE SIZE		NOMINAL ID		NOMINAL OD		MIN. BURST PRESSURE ROOM TEMPERATURE		MINIMUM BEND RADIUS		HOSE WEIGHT (REF)	
	Inch	mm	Inch	mm	Inch	mm	psi	bar	Inch	mm	lb/ft	kg/m
R135/R335 -5	1/4	6.5	0.255	6.5	0.354	9.0	7,500	517	2.0	50.8	0.075	0.112
R135/R335-6	5/16	8	0.313	8.0	0.428	10.9	7,500	517	2.0	50.8	0.088	0.131
R135/R335-6T	3/8	10	0.384	9.8	0.489	12.4	6,000	414	3.0	76.2	0.109	0.162

*R135-XX braided with Type 304 stainless steel
*R335-XX braided with Type 316 stainless steel

R122/R322 SERIES PTFE HOSE

R122 hose has a nominal 0.030" (0.76mm) wall of conductive PTFE innercore and a stainless steel wire braid reinforcement. Applications: Brake, Traction Control, Stability Control, Fuel, Hydraulic Clutch, Transmission Oil Cooler.

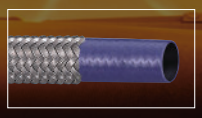


HOSE PART NUMBER	MATES WITH TUBE SIZE		NOMINAL ID		NOMINAL OD		MIN. BURST PRESSURE ROOM TEMPERATURE		MINIMUM BEND RADIUS		HOSE WEIGHT (REF)	
	Inch	mm	Inch	mm	Inch	mm	psi	bar	Inch	mm	lb/ft	kg/m
R122/R322-3	1/8	4	0.139	3.5	0.258	6.6	12,000	828	2.00	51	.050	0.07
R122/R322-4	3/16	5	0.197	5.0	0.312	7.9	12,000	828	2.00	51	.070	0.10
R122/R322-5.6	1/4	6	0.234	5.9	0.351	8.9	12,000	828	3.00	76	.075	0.11
R122/R322-5.6MU	1/4	6	0.228	5.8	0.343	8.7	12,000	828	3.00	76	.075	0.11
R122/R322-5	5/16	6	0.255	6.5	0.370	9.4	12,000	828	3.00	76	.099	0.15
R122/R322-6MM	5/16	6	0.254	6.5	0.359	9.1	12,000	828	3.00	76	.081	0.12
R122/R322-6	5/16	8	0.318	8.1	0.433	11.0	10,000	690	4.00	102	.110	0.16
R122/R322-6T	3/8	10	0.384	9.8	0.499	12.7	9,000	621	5.00	127	.124	0.18
R122/R322-8	1/2	12	0.41	10.4	0.524	13.3	8,000	552	5.25	133	.133	0.20
R122/R322-10	5/8	15	0.504	12.8	0.621	15.8	6,000	414	6.50	165	.154	0.23
R122/R322-12	3/4	20	0.636	16.1	0.763	19.4	4,800	331	7.75	197	.170	0.25

*R122-XX braided with Type 304 stainless steel
*R322-XX braided with Type 316 stainless steel

R149/R349 SERIES PTFE HOSE

R149 hose has the same construction as R122 hose, but it is sized to accommodate the larger outer diameter of nylon coated tube. Applications: Brake, Traction Control, Stability Control, Fuel, Hydraulic Clutch, Transmission Oil Cooler.

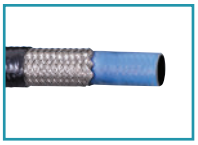


HOSE PART NUMBER	MATES WITH TUBE SIZE		NOMINAL ID		NOMINAL OD		MIN. BURST PRESSURE ROOM TEMPERATURE		MINIMUM BEND RADIUS		HOSE WEIGHT (REF)	
	Inch	mm	Inch	mm	Inch	mm	psi	bar	Inch	mm	lb/ft	kg/m
R149/R349-4	1/4	6	0.210	5.3	0.325	8.3	12,000	828	2.00	51	0.063	0.09
R149/R349-5	5/16	8	0.275	6.9	0.383	9.7	12,000	828	3.00	76	0.081	0.12
R149/R149-6	3/8	10	0.327	8.3	0.442	11.2	10,000	690	4.00	102	0.100	0.15

*R149-XX braided with Type 304 stainless steel
*R349-XX braided with Type 316 stainless steel

117198-SERIES UNI-BRAID® HOSE OF PTFE

117198 hose has a nominal 0.040" wall of conductive PTFE innercore and Uni-Braid® Stainless Steel braid wire reinforcement. The PTFE and innercore are processed for improve the permeation resistance (compared to R122-series hose). The wire reinforcement consists of an innovative, single braid wrap that improves performance without additional wire layers that add bulk and weight. An outer jacket of Hytrel® provides abrasion resistance and a labeling surface. Typical Applications: NGV High Pressure Fuel Feed.



HOSE PART NUMBER	MATES WITH TUBE SIZE		NOMINAL ID		NOMINAL OD (OVER JACKET)		MIN. BURST PRESSURE ROOM TEMPERATURE		MINIMUM BEND RADIUS		HOSE WEIGHT (REF)	
	Inch	mm	Inch	mm	Inch	mm	psi	bar	Inch	mm	lb/ft	kg/m
117198-4	1/4	6	0.222	5.6	0.315	8.0	16,000	1103	1.50	38.1	0.118	0.02
117198-6	3/8	10	0.308	7.8	0.415	10.5	16,000	1103	2.50	63.5	0.184	0.03
117198-8	1/2	12	0.403	10.2	0.630	16.0	16,000	1103	2.87	72.9	0.261	0.04

Hytrel® is a registered trademark of DuPont™

smiths

TITEFLEX
603 Hendee Street
Springfield, MA 01139-0054
T 413-739-5631
T 1-800-765-2525
F 413-788-7593

TITEFLEX.COM

⚠WARNING

These products can be used to convey hazardous fluids, steam, and other dangerous materials which can cause personal injury or property damage if released through misuse, misapplication, or damaged. The user is responsible to analyze each application prior to specifying any product from this catalog. Due to the wide variety of operating conditions and applications, the user, through personal analysis and testing, is solely responsible for final product selection and meeting all performance, safety, and warning requirements.

Careful selection, proper assembly and use of hose fittings and accessories is essential for the safe and warranted operation of the hose assembly.

TITEFLEX US HOSE

MADE IN THE USA

NAHAD Listed Manufacturer

REV. 05-2023