# FLUOROPOLYMER HOSE AND HOSE ASSEMBLIES





## THE JACKSON ADVANTAGE

US Hose is part of the worldwide network of The United Flexible Group of companies. We offer engineered solutions that address vibration, thermal, or pressure-related problems as well as applications involving the transfer of liquids or gases. The hose and fittings included in this catalog are precisely manufactured and coupled to assure unequaled quality and immediate response to your needs.

Rapid quotation and delivery response to even the most difficult applications are our specialties. We stock and supply standard medium pressure, ultra high pressure, convoluted, smooth-bore, rubber-covered, and large bore fluoropolymer hoses with their associated fittings, adapters, and accessories.

This catalog includes our full product line of chemical transfer and smooth bore hoses as well as associated products.

## THE FLUOROPOLYMER ADVANTAGE

Chemical Resistance - Inert to practically all commercial chemicals, acids, alcohols, coolants, elastomers, petroleum compounds, solvents, vinyls, synthetic lubricants, & hydraulic fluids.

**Flex & Shock Resistance** - Not affected by continuous flexing, vibration, or impulse - withstands alternating cold and heat cycling.

**High Flow Rates -** Low coefficient of friction with antistick properties insures continuous lower pressure drop during service with a good pressure rating and full vacuum.

**Light Weight -** Easier to move, handle, and install than rubber hose with a comparable burst pressure rating ideal as pigtail in gas handling and pneumatic systems where dew point must be low.

**Non-Adhesive -** Handles substances such as adhesives, asphalt, dyes, grease, glue, latex, lacquers, and paints - no carbon build up when used as a compressor discharge line.

**Non-Contaminating -** Will not contaminate material, fluid, or gas, non-conductie PTFE is FDA approved for food handling and pharmaceutical applications.

**Resists Deterioration -** Impervious to weather and can be stored for long periods without aging - will not age during service.

**Steam Compatibility -** Absorbs no moisture - rated for steam to 250 psi (406°F) - has low volumetric expansion characteristics - easy to clean and sterilize.

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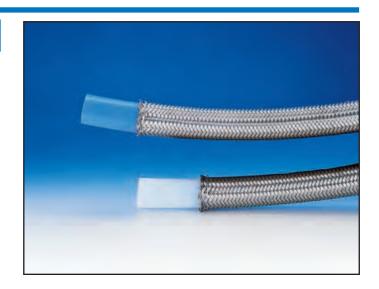


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## Medium Pressure Smooth Bore Hose of PTFE SB Series • SB-SERIES

## Construction

The Jackson smooth bore hose is constructed of an extruded inner-core of virgin PTFE or carbon black static dissipative PTFE with type 304 stainless steel wire braid reinforcement. The braid acts as a pressure carrier and protective covering. Jackson smooth bore hose is found in many of the toughest service applications, handling "problem" fluids such as acids, solvents, fuels, and chemicals of all types. Available with thin or heavy wall tubing of PTFE (polytetrafluoro-ethylene).



## **Applications**

- Chemical and Acid Transfer
- Pharmaceuticals
- Food Products
- Steam Lines/Tire Presses
- High Temperature Hydraulic/ Air Applications
- Pulp and Paper
- Fuel and Lubricant
- Glass Manufacturing
- Waste Water or Slurry

#### **Benefits**

- High working and burst pressures.
- Most economical of all hoses lined with PTFE.
- The low-friction surface of smooth bore hose provides for high flow rates.
- Easily drained and/or cleaned.
- Temperature Rating: -65° F (-54°C) to +450°F (+230°C)

Part N White	lumber Black	Nominal ID	Actu Siz ID		Maximum Working Pressure	Minimum Burst Pressure	Minimum Bend Radius	Approximate Weight/Ft.
S-3	S-3 Blk	3/16"	.125″	.23"	3000 PSI	12000 PSI	2.0"	.050 lbs.
S-4	S-4 Blk	1/4"	.19"	.30″	3000 PSI	12000 PSI	2.0"	.060 lbs.
S-5	S-5 Blk	5/16"	.25"	.37"	3000 PSI	12000 PSI	2.3"	.070 lbs.
S-5ZH		5/16"	.24"	.45"	4350 PSI	17400 PSI	2.5"	.100 lbs.
S-6	S-6 Blk	3/8"	.32"	.40"	2500 PSI	10000 PSI	3.9"	.090 lbs.
S-7*		3/8"	.37"	.50"	2250 PSI	9000 PSI	4.5"	. 105 lbs.
S-8	S-8 Blk	1/2"	.41″	.52"	2000 PSI	8000 PSI	4.7"	.115 lbs.
S-10	S-10 Blk	5/8"	.50"	.59"	1750 PSI	7000 PSI	5.3"	.150 lbs.
S-12	S-12 Blk	3/4"	.62"	.80″	1500 PSI	6000 PSI	6.5"	.225 lbs.
S-14*		3/4"	.77"	.89"	1100 PSI	4400 PSI	7.4"	.225 lbs.
S-16	S-16 Blk	1"	.87"	1.05"	1000 PSI	4000 PSI	7.8"	.285 lbs.
S-16Z	S-16Z Blk	1"	.87"	1.03"	1250 PSI	5000 PSI	9.0"	.475 lbs.
S-18*		1"	1.00"	1.18″	900 PSI	3600 PSI	9.8"	.335 lbs.
S-20Z	S-20Z Blk	1-1/4"	1.13"	1.38"	1000 PSI	4000 PSI	11.0″	.585 lbs.

\*Available only with thin wall tubing.

## MasterCrimp Smooth Bore Fittings

US Hose manufactures and inventories over 500 sizes and styles of fittings. Fitting materials consist of carbon steel, stainless steel, brass, or a combination of materials.

We will manufacture custom fittings to your specifications. Contact our customer service department for more information about this service.

## **PERMANENT CRIMP FITTINGS**

**Male Pipe Brass** 



Male Pipe Fittings - Brass			
Part No. Description-Hose Size			
0304TW 0504TW 0505TW 0305TW 0306TW 0506TW 0508TW 0508TW 0510TW 0512TW 0516TW 0516TW	MNPT (1/8-27) - 4 MNPT (1/4-18) - 4 MNPT (1/4-18) - 5 MNPT (1/8-27) - 5 MNPT (1/4-18) - 6 MNPT (3/8-18) - 6 MNPT (3/8-18) - 8 MNPT (1/2-14) - 8 MNPT (1/2-14) - 10 MNPT (3/4-14) - 12 MNPT (1-11.5) - 16 MNPT (1-11.5) - 16		

**Male Pipe Stainless** 



Male Pip	Male Pipe Fittings - 303 Stainless		
Part No.	Description-Hose Size		
1704TW 2004TW 2005TW 1705TW 1706TW 2006TW 1708TW 2008TW 2010TW 2012TW 2016TW 2016Z 2020Z	MNPT (1/8-27) - 4 MNPT (1/4-18) - 4 MNPT (1/4-18) - 5 MNPT (1/8-27) - 5 MNPT (1/4-18) - 6 MNPT (3/8-18) - 6 MNPT (3/8-18) - 8 MNPT (1/2-14) - 8 MNPT (1/2-14) - 10 MNPT (3/4-14) - 12 MNPT (1-11.5) - 16 MNPT (1-11.5) - 16Z MNPT (11/4-11.5) - 20Z		

316 Stainless Steel also available

#### Male Pipe Carbon



Male Pip	Male Pipe Fittings - Carbon Steel			
Part No.	Description-Hose Size			
0904TW 1004TW 1005TW 0905TW 0906TW 1006TW 0908TW 1008TW 1010TW 1012TW 1016TW 1016Z 1020Z	MNPT (1/8-27) - 4 MNPT (1/4-18) - 4 MNPT (1/4-18) - 5 MNPT (1/8-27) - 5 MNPT (1/4-18) - 6 MNPT (3/8-18) - 6 MNPT (3/8-18) - 8 MNPT (1/2-14) - 8 MNPT (1/2-14) - 10 MNPT (3/4-14) - 12 MNPT (1-11.5) - 16 MNPT (1-11.5) - 16Z MNPT (11/4-11.5) - 20Z			

#### **Female Swivel Brass**



JIC 37° / SAE 45° Female Swivel Fittings			
Part No.	Description-Hose Size		
3404TW 3504TW 3505TW 3506TW 3606TW 3508TW 3510TW 3512TW 3612TW 3612TW 3516TW 3516Z	JIC/SAE SWIVEL (3/8-24) - 3 JIC/SAE SWIVEL (7/16-20) - 4 JIC/SAE SWIVEL (1/2-20) - 5 JIC (9/16-18) - 6 SAE SWIVEL (5/8-18) - 6 JIC/SAE SWIVEL (3/4-16) - 8 JIC/SAE SWIVEL (7/8-14) - 10 JIC (1 1/16-12) - 12 SAE SWIVEL (1 1/16-14) - 12 JIC (15/16-12) - 16 JIC (1 5/16-12) - 16Z		

**Female Swivel Stainless** 



JIC Swivel Fittings - 303 Stainless				
Part No. Description-Hose Size				
4003TW 4303TW 3704TW 4004TW 3905TW 4005TW 4006TW 4010TW 4010TW 4012TW 4016TW 4016Z 4020Z	37 JIC SWIVEL (3/8-24) - 3 37 JIC SWIVEL (7/16-20) - 3 37 JIC SWIVEL (7/16-20) - 4 37 JIC SWIVEL (7/16-20) - 4 37 JIC SWIVEL (7/16-20) - 5 37 JIC SWIVEL (1/2-20) - 5 37 JIC SWIVEL (9/16-18) - 6 37 JIC SWIVEL (3/4-16) - 8 37 JIC SWIVEL (3/4-16) - 8 37 JIC SWIVEL (1/8-14) - 10 37 JIC SWIVEL (1 1/16-12) - 12 37 JIC SWIVEL (1 5/16-12) - 16 37 JIC SWIVEL (1 5/16-12) - 16 37 JIC SWIVEL (1 5/16-12) - 20Z			

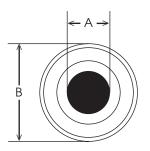
**Female Swivel Carbon** 



JIC S	wivel Fittings - Carbon Steel			
Part No. Description-Hose Size				
3004TW 2905TW 3005TW 3006TW 3007TW 3008TW 3010TW 3016TW 3016TW 3016Z 3020Z 3206TW 3212TW	37 JIC SWIVEL (7/16-20) - 4 37 JIC SWIVEL (7/16-20) - 5 37 JIC SWIVEL (1/2-20) - 5 37 JIC SWIVEL (9/16-18) - 6 37 JIC SWIVEL (9/16-18) - 7N 37 JIC SWIVEL (3/4-16) - 8 37 JIC SWIVEL (1/8-14) - 10 37 JIC SWIVEL (1 1/16-12) - 12 37 JIC SWIVEL (1 5/16-12) - 16 37 JIC SWIVEL (1 5/16-12) - 16 37 JIC SWIVEL (1 5/16-12) - 16 37 JIC SWIVEL (1 5/8-12) - 20Z SAE SWIVEL (5/8-18) - 6 SAE SWIVEL (11/16-14) - 12			

## MasterCrimp Smooth Bore Fittings

## **SANITARY TABLE**



#### **MINI SANITARIES**

Size	Α	В
1/2"	0.375	0.984
3/4"	0.625	0.984

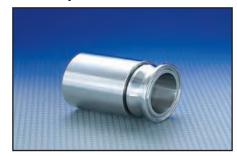
## **SANITARY FITTINGS**

#### **Mini Sanitary**



**Available Materials:** 316 Stainless Steel

#### Sanitary



**Available Materials:** 316 Stainless Steel

# STANDARD SANITARIES

ı	Size	Α	В	Bore Thru
	1/2"	0.875	1.984	0.375
	3/4"	0.875	1.984	0.609
	1"	0.875	1.984	0.844
	1 1/2"	1.375	1.984	1.312
	2″	1.870	2.5	1.75
	3″	2.875	3.576	2.73

A = OPENING ID • B = FACE OD

## CRIMP FITTINGS FOR SMOOTH BORE HOSE

# MasterCrimp Assembly System

Fabricating Smooth Bore PTFE Hose Assemblies Is Now Fast, Easy & Reliable

- Complete fitting alloy selection in stock and ready for fast delivery:
   Carbon Steel Brass Stainless Steel -
- MasterCrimp saves on your inventory costs by offering you a single fitting that will fit both thin and heavy wall smooth bore hose.
- Simple assembly process minimizes tooling & labor costs.



After hose is cut to length, MasterCrimp ferrules are designed to slide on either by hand or with an optional collar assembly tool. One size collar fits both thin and heavy wall hose.



Easy insertion of the barbed hose end by hand. No time is wasted with finding and loading fittings in tool fixtures.



Straight crimp on the entire length of the ferrule. Jackson MasterCrimp filtings have a clean, smooth look that is appealing to all types of customers.

## MasterCrimp Smooth Bore Fittings

## **SPECIAL APPLICATION FITTINGS**

#### **Brass Female Pipe**







Hose	Part	Pipe
Size	No.	Thread
-5	0405TW	1/4" - 18

Hose	Part	Pipe
Size	No.	Thread
-5	2405TW	



Description	Hose	Part	Thread
	Size	No.	Size
Power Trim 45°	-4	PT-45-4	3/8-24
Power Trim 90°	-4	PT-90-4	3/8-24
Power Trim Straight	-4	PT-S-4	3/8-24
Paint Spray Swivel	-5	1505TW	1/4" NPS

Power Trim fittings are available in 304 Stainless Steel. Paint Spray Swivel available in Carbon Steel.



Tube End Fittings - 303 Stainless								
Part No. Description-Hose Size								
4804TW 4806TW 4808TW 4812TW	1/4" OD Tube End - 4 3/8" OD Tube End - 6 1/2" OD Tube End - 8 3/4" OD Tube End - 12							

## **JACKSON SMOOTH BORE ASSEMBLIES**



Our modern production cell for smooth bore assemblies provides fast turnaround and offers tremendous value to our customers business by eliminating the need for users to stock bulk products. Jackson inventories are purposely maintained at high levels so that we can respond in a short time to your installation requirements.

Depending on the application your assemblies can be tested with water or nitrogen gas with a complete certificate of test. Our in house services also include cleaning, tagging and bagging required for high purity transfer conditions.

## 37° JIC to NPT PIPE THREAD ADAPTERS

Adapters are available in brass, carbon steel, and 300 Series Stainless Steel. Additional adapters are available - consult the factory for details.

			30				
Pipe Thread	JIC Straight Thread	JIC Dash Size	Male Adapter Part#	Male 90 Elbow Part #	Male 45 Elbow Part #	Female Adapter Part #	Female 90 Elbow Part #
1/8-27	3/8-24	3	1003-1	9003-1	4503-1	1003-1F	9003-1F
1/8-27	7/16-20	4	1004-1	9004-1	4504-1	1004-1F	9004-1F
1/4-18	7/16-20	4	1004-2	9004-2	4504-2	1004-2F	9004-2F
3/8-18	7/16-20	4	1004-3	9004-3	4504-3	1004-3F	9004-3F
1/8-27	1/2-20	5	1005-1	9005-1	4505-1	1005-1F	9005-1F
1/4-18	1/2-20	5	1005	9005	4505	1005-F	9005-F
3/8-18	1/2-20	5	1005-2	9005-2	4505-2	1005-2F	9005-2F
1/4-18	9/16-18	6	1006-1	9006-1	4506-1	1006-1F	9006-1F
3/8-18	9/16-18	6	1006-2	9006-2	4506-2	1006-2F	9006-2F
1/2-14	9/16-18	6	1006-3	9006-3	4506-3	1006-3F	9006-3F
1/4-18	3/4-16	8	1008	9008	4508	1008-F	9008-F
3/8-18	3/4-16	8	1008-1	9008-1	4508-1	1008-1F	9008-1F
1/2-14	3/4-16	8	1008-2	9008-2	4508-2	1008-2F	9008-2F
3/4-14	3/4-16	8	1008-3	9008-3	4508-3	1008-3F	9008-3F
3/8-18	7/8-14	10	1010-1	9010-1	4510-1	1010-1F	9010-1F
1/2-14	7/8-14	10	1010	9010	4510	1010-F	9010-F
3/4-14	7/8-14	10	1010-2	9010-2	4510-2	1010-2F	9010-2F
1/2-14	1-1/16 - 12	12	1012-1	9012-1	4512-1	1012-1F	9012-1F
3/4-14	1-1/16 - 12	12	1012	9012	4512	1012-F	9012-F
1-11-1/2	1-1/16 - 12	12	1012-2	9012-2	4512-2	1012-2F	9012-2F
3/4-14	1-5/16 - 12	16	1016-1	9016-1	4516-1	1016-1F	9016-1F
1 - 11-1/2	1-5/16 - 12	16	1016	9016	4516	1016-F	9016-F
1-1/4 - 11-1/2	1-5/16 - 12	16	1016-2	9016-2	4516-2	1016-2F	9016-2F
1 - 11-1/2	1-5/8 - 12	20	1020-1	9020-1	4520-1	1020-1F	9020-1F
1-1/4 - 11-1/2	1-5/8 - 12	20	1020	9020	4520	1020-F	9020-F
1-1/2 - 11-1/2	1-5/8 - 12	20	1020-2	9020-2	4520-2	1020-2F	9020-2F
1-1/2 - 11-1/2	1-7/8 - 12	24	1024	9024	4524	1024-F	9024-F
2 - 11-1/2	2-1/2 - 12	32	1032	9032	4532	1032-F	9032-F

Prefix Part Number "B" for Brass, "C" for Carbon Steel, and "S" for 300 Series Stainless Steel. Please consult the factory for additional sizes, shapes, and materials.

# **DENSE-PAC HOSE** • Ultra High Pressure Hose PTFE



## Construction

The Jackson Dense-Pac (1000 Series) hose is constructed of an inner core of carbon black static dissipative PTFE. A multitude of stainless steel wires are braided together, forming a single braid of protection. In larger sizes (-12 through -24), an additional layer of braid is added between the PTFE inner core and the outer braid. The post-sintered tube increases its density, reducing effusion in pneumatic applications. NEW - For liquid and hydraulic applications, a non-sintered PTFE tube provides lower costs without sacrificing performance.

Fittings: Jackson's Dense-Pac comes standard with 300 series stainless steel JIC 37° female swivels. Jackson offers a wide selection of other styles for OEM and compressed gas applications.

## **Applications**

- High Temperature Hydraulics Steel Mills
- High Pressure Chemical Transfer
- Two Part Reaction Injection Molding
- Hot Melt Glue (Boxes & Packaging)
- High Pressure Gas (Pigtail)
- Life Support System
- Oil Field Applications
- High Temperature Heated Hose Applications
- Urethane Transfer Applications

#### **Benefits**

- Extreme high pressure hose.
- Smooth bore improves flow rates.
- Resists kinking in service.
- High durability and unlimited shelf life.
- Sizes up to 1-1/2" I.D.
- Lightweight with tight bend radius.
- Meets requirements of SAE 100R8 and 100R9.
- Temperature Rating: -65°F (-54°C) to +400°F (+204°C).

## Please notify the factory if this hose will be used in a moisture-sensitive application.

Part #	Nominal I.D.		rual ze O.D.	Max. Working Pressure*	Test Pressure	Min. Burst Pressure*	High Temp. Burst Pressure	Min. Bend Radius	Approx. Weight Per. Foot
S-4DP	1/4″	.22"	.39″	5000 PSI	10000 PSI	16000 PSI	12000 PSI	1.50″	.10 lbs.
S-6DP	3/8"	.31"	.49"	5000 PSI	10000 PSI	16000 PSI	12000 PSI	2.50"	. 16 lbs.
S-8DP	1/2"	.40"	.62″	5000 PSI	10000 PSI	16000 PSI	12000 PSI	2.88"	.23 lbs.
S-10DP	5/8"	.50"	.73″	5000 PSI	10000 PSI	16000 PSI	12000 PSI	3.25"	.32 lbs.
S-12DP	3/4"	.62"	.99″	5000 PSI	10000 PSI	16000 PSI	12000 PSI	3.88″	.66 lbs.
S-16DP	1"	.87"	1.27"	5000 PSI	10000 PSI	16000 PSI	9000 PSI	5.00"	1.02 lbs.
S-20DP	1-1/4"	1.12"	1.66"	5000 PSI	10000 PSI	16000 PSI	9000 PSI	12.00"	1.85 lbs.
S-24DP	1-1/2"	1.38"	1.90"	4000 PSI	8000 PSI	12000 PSI 9000 PSI		14.00"	1.91 lbs.

<sup>\*</sup>Minimum burst pressures calculated at 70°F. \*Non-Impulse Applications. For impulse applications, working pressure is 3000 PSI. High temperature pressures calculated at 400°F; working pressure drops to 3000 PSI. Please contact the factory. For gas and breathing air applications specify DP post-sintered hose only.

## Construction

58 Series hose is constructed of carbon black static dissipative innercore of PTFE with layers of spiral wrap between two layers of braid, which make this hose the premiere in heavy-duty ultra high pressure hose. The post-sintered tube increases its density, reducing effusion in pneumatic applications.

Jackson 58 Series comes standard with type 300 stainless steel JIC swivels. Male or female NPT adapters are available. Solid female NPT fittings in 1/4" are also an option.



## **Applications**

- High Temperature Hydraulics
- High Pressure Phosphate Ester Applications
- High Pressure Chemical Transfer
- Two Part Epoxy (RIMM)
- Hot Melt Glue (Boxes & Packaging)
- High Pressure Gas Applications (Pigtail)
- Life Support Systems
- Oil Field Applications
- High Temperature Heated Hose Applications

- Extreme high pressure hose.
- Smooth bore improves flow rates.
- Resists kinking in service.
- Unlimited shelf life.
- Suitable for impulse service.
- Meets requirements of SAE 100R8 and 100R9.
- Temperature Rating: -65°F (-54°C) to +400°F (+204°C)

Part #	Nominal I.D.	Act Hose I.D.		Max. Working Pressure	Working Test		Min. Bend Radius	Approx. Weight Per. Foot
S-4HP	1/4"	.23"	.50"	6000 PSI	9000 PSI	24000 PSI	3.00"	.24 lbs.
S-6HP	3/8"	.30"	.62"	6000 PSI	9000 PSI	24000 PSI	5.00"	.40 lbs.
S-8HP	1/2"	.40"	.74"	6000 PSI	9000 PSI	24000 PSI	5.75"	.49 lbs.

<sup>\*</sup>Minimum burst pressures calculated at 70°F. S-4 through S-8 are rated at 400°F. S-10 through S-16: at 400°F, working pressure is reduced to 3000 PSI. For high temperature pressures, please contact the factory.

## **NEW** • Ultra Extra High Pressure Fluoropolymer Hose



## Construction

Ultra Series extra high pressure hose is constructed with Fluoropolymer innercores of nonconductive ETFE or PFA. Unlike other types of hose that use multiple layers of stainless steel wire reinforcement, Ultra incorporates the use of one braided layer of high tensile aramid fiber and one layer of stainless steel. This value engineered construction reduces weight and improves bend radius while increasing burst pressure. An integral abrasion resistant Hytrel jacket protects the exterior braid and has a smooth finished appearance.



#### **Basic Design**

- 1. PFA or ETFE Inner Tubing
- 2. Kevlar Braid
- 3. Interlayer PTFE Tape
- 4. Stainless Steel Braid
- 5. Hytrel Jacket

## **Applications**

- Compressed Gas Cylinder Filling
- Nitrogen Purging
- Life Support Packs
- Hydraulic Phosphate Ester Transfer
- High Pressure Paint Equipment
- Epoxy/Adhesive Systems
- High Pressure Sanitary Service

- Extra Long Continuous Lengths Up to 150 Feet
- Low Effusion PFA & ETFE Fluoropolymer Innercore
- Proprietary Jackson Engineered HRSA
   Fitting Design Assures Integrity Of Hose
   To Fitting Joint
- Temperature Rating: -50°F to +275°F
- Fast Turnaround On Custom Made Assemblies
- Each Assembly Fully Pressure Tested (see table below)

Part Number	ID Inch	Nominal Size	Working Pressure	Burst Pressure	Hydro- static** Pressure Test	Nitrogen** Pressure Test	OD Inch	Minimum Bend Radius (Inch)	
S-4 PFA Ultra	0.22	1/4	6,000 PSI	24,000 PSI	9,000 PSI	6,000 PSI	.46	1.0	
S-6 PFA Ultra	0.31	3/8	6,000 PSI	24,000 PSI	9,000 PSI	6,000 PSI	.54	2.0	
S-8 PFA Ultra	0.40	1/2	6,000 PSI	24,000 PSI	9,000 PSI	6,000 PSI	.71	2.3	

- \*For oxygen service use Ultra PFA, Ultra ETFE is not recommended for oxygen service.
- \*\* For gas applications assemblies are pressure tested with nitrogen at 6000 PSI, for fluid transfer each hose assembly is
  pressure tested at 9000 PSI.

## Construction

Jack-Chem has been custom engineered for lasting service in the most demanding applications. Jack-Chem starts with a smooth; non-stick FDA approved white FEP fluoropolymer, PTFE and PFA liners can be custom ordered. Two plies of synthetic rubber reinforced with horizontal fabric braid are permanently bonded to the FEP tube. A wire helix is included to support the shape in full vacuum service and to prevent kinking. This provides a grounding path for electrical charges through the exterior body of the hose. For materials that create static buildup on the inner FEP liner, a black conductive FEP is required to dissipate the charge. The entire hose is protected by an abrasion resistant rubber cover that will not fade or discolor with age and is also weather resistant.



New-FEP Liner flared over flange retainer face for continuous smooth media contact with FEP liner

\*White Fluoropolymers are FDA approved, black conductive materials are not.

## **Applications**

- Chemical Transfer
- Acid Transfer
- Pharmaceutical Manufacturing
- Photo Emulsions
- Food Processing
- Large Diameter Smooth Bore
- Tank Truck
- Slurry/Waste

- Smooth bore up to 4" I.D.
- Less turbulence created by smooth bore provides better flow rates.
- Thermal insulation.
- Easily drained/steam cleanable.
- Feel of a rubber hose versus handling braided wire.
- Rated up to 550 PSI working pressure.
- Temperature Rating: -40°F (-40°C) to +300°F (+148°C). Contact the factory for temps over 300°F.

Part N White	umber Black	Nominal Hose Size I.D. O.D.		Maximum Working Pressure*	Minimum Burst Pressure	Vacuum Rating *	Minimum Bend Radius	Approximate Weight per Ft.
JC-08	JCB-08	0.50"	0.87"	550 PSI	2200 PSI	Full	3.0"	.33 lbs.
JC-12	JCB-12	0.75"	1.25"	450 PSI	1800 PSI	Full	3.5″	.60 lbs.
JC-16	JCB-16	1.00"	1.50"	450 PSI	1800 PSI	Full	4.0"	.73 lbs.
JC-24	JCB-24	1.50"	2.00"	400 PSI	1600 PSI	Full	8.5″	1.20 lbs.
JC-32	JCB-32	2.00"	2.50"	375 PSI	1500 PSI	Full	10.5″	1.45 lbs.
JC-48	JCB-48	3.00"	3.50"	175 PSI	700 PSI	Full	25.0"	2.40 lbs.
JC-64	JCB-64	4.00″**	4.50"	150 PSI	600 PSI	Full	42.0″	3.55 lbs.

<sup>\*</sup> All pressures and vacuum ratings calculated at 70°F.

<sup>\*\* 4&</sup>quot; is available with a 300-400 ft minimum run.

## PWCO/PBCO SERIES • Polypropylene Braided Convoluted PTFE Hose



## Construction

The PWCO series has been designed for use where hose flexibility is required but stainless steel braid is unsuitable. The PWCO series is constructed of vacuum-formed white, helical, open-pitch convoluted PTFE tubing which is reinforced with a polypropylene overbraid. The PBCO series has a black conductive inner tubing which serves to dissipate electrostatic charges.

## **Applications**

- Exotic Chemical transfer
- Metering or weighing applications
- Soda bottle filling
- Applications requiring frequent handling
- Potable water
- Applications with exposure to salt water
- Applications requiring high flexibility

## **Benefits**

- User-friendly braid.
- Braid is compatible with chlorinated solvents and salt water.
- Will not conduct electricity.
- Light weight per foot.
- Very flexible, requiring very little force to deflect.
- Polypropylene braid compatible with chemicals which attack stainless steel.
- Temperature Rating: -65°F (-54°C) to +250°F (+120°C)

Part Number		Hos	minal se Size	Max. Working	Min. Burst	Vacuum Rating	Bend	Approx. Weight
White	Black	ID	OD	Pressure	Pressure	HG	Radius	Per Foot
PWCO-12	PBCO-12	.75″	1.30″	250 PSI	1000 PSI	CF*	2.5"	.20 lbs.
PWCO-16	PBCO-16	1.00"	1.60"	250 PSI	1000 PSI	CF*	4.0"	.24 lbs.
PWCO-24	PBCO-24	1.50"	2.13"	200 PSI	800 PSI	CF*	6.5"	.43 lbs.
PWCO-32	PBCO-32	2.00"	2.73"	200 PSI	800 PSI	CF*	8.0"	.66 lbs.
PWCO-48	PBCO-48	3.00"	4.13"	120 PSI	480 PSI	CF*	10.0"	1.24 lbs.

All pressures and vacuum ratings calculated at 70°F. \*Contact the factory for vacuum rating.

# Open Pitch Extruded Convoluted Hose of PTFE • WCO/BCO SERIES

## Construction

The WCO series is constructed of **extruded seamless** vacuum-formed white tube of open-pitch convoluted PTFE. The BCO series consists of black conductive tubing for static dissipative purposes. Both are protected by high coverage stainless steel braid. The internal profile of the hose has been formed to support high flow rates and the helical design aids in self draining. All fittings have been specially designed for use on the hose to increase the service life of the assembly.



## **Applications**

- Chemical Transfer
- Acid Transfer
- Thermal cycling or steam applications
- Tire mold equipment
- Steam
- Fill Lines
- Air compressors
- Applications requiring high flexibility
- Tank Truck
- Impulse applications

#### **Benefits**

- Open pitch aids self-draining and cleaning of hose.
- Suitable for thermal cycling or steam applications - will not delaminate.
- Flexible design for easy installation.
- Steam cleanable.
- Light weight per foot.
- Can be autoclaved.
- High pressure ratings.
- Long life impulse.
- Temperature Rating: -65°F (-54°C) to +450°F (+230°C)

<sup>\*</sup>All pressures and vacuum ratings calculated at 70°F. \*Consult factory for vacuum ratings at higher temperatures. For applications involving higher temperatures, please consult the factory.

Part Number White Black		Nominal Hose Size ID OD		Max. Working Pressure	Min. Burst Pressure	Vacuum Rating*	Min. Bend Radius	Approx. Weight Per Foot
WCO-06	BCO-06	0.37"	0.56"	1850 PSI	7400 PSI	28″	2.0"	.23 lbs.
WCO-08	BCO-08	0.50"	0.75"	1500 PSI	6000 PSI	28″	3.0"	.27 lbs.
WCO-12	BCO-12	0.75"	1.01"	1300 PSI	5200 PSI	28″	3.5"	.43 lbs.
WCO-16	BCO-16	1.00"	1.30″	1000 PSI	4000 PSI	28″	4.0"	.63 lbs.
WCO-20	BCO-20	1.25"	1.57"	900 PSI	3600 PSI	28″	4.5"	.75 lbs.
WCO-24	BCO-24	1.50″	1.89″	700 PSI	2800 PSI	28″	4.5"	.88 lbs.
WCO-32	BCO-32	2.00"	2.38″	500 PSI	2000 PSI	28″	5.0"	1.11 lbs.

WCO-48 and WCO-64 — Contact Factory for Details and Availability

## **CONVOLUTED & JACK-CHEM FITTINGS**

## **THREADED FITTINGS**

#### Male Pipe Hex



Part # 10 20

Fitting Material Carbon Steel Stainless Steel





Part # Fitting Material 30 Carbon Steel 40 Stainless Steel

**Butt Weld/Victaulic\*\*** 



**Part #** Fitting Material Stainless Steel

US Hose manufactures and inventories over 500 sizes and styles of fittings. Fitting materials consist of carbon steel, stainless steel, combination, and polypropylene.

We will manufacture custom fittings to your specifications. Contact our customer service department for more information about this service.

## **I-LINE FITTINGS**

#### Male I-Line



**Part #** 98

Fitting Material Stainless Steel

#### Female I-Line

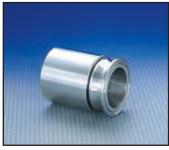


**Part** # 99

Fitting Material Stainless Steel

## **SANITARY**

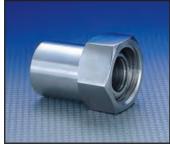
#### Sanitary



**Part #** 70

Fitting Material Stainless Steel

**Bevel Seat Sanitary** 



**Part** # 69

Fitting Material Stainless Steel

Mini Sanitary



**Part #** 71

Fitting Material Stainless Steel

Other sanitary fittings available - contact the factory for additional fitting information.

<sup>\*\*</sup>Pipe is standard, tube available. Please specify.

<sup>\*</sup>Special Fittings - Please consult the factory for pricing and availability.

## **CONVOLUTED & JACK-CHEM FITTINGS**

## **CAM & GROOVE**

#### Male C & G



Part # 73

**Fitting Material** Stainless Steel





Part # 83

**Fitting Material** Stainless Steel

#### **Encapsulated C & G**



Part #

88

Fitting Material Stainless Steel

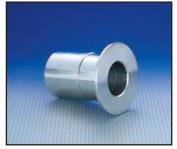


Part # 85

**Fitting Material** Stainless Steel

## **FLANGES**

## Flange Retainer



Part # 50

**Fitting Material** Stainless Steel

#### **PFA Encapsulated** Flange Retainer

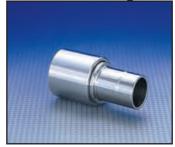


Part # 60

**Fitting Material** Stainless Steel

## **COMPRESSION**

## Tube Stub for Instrumentation Fitting\*



Part # 48

**Fitting Material** 

Stainless Steel

\*Please consult the factory for pricing & availability.

## **SEALS**

#### Super PFA Seal



Part # **PFA** 88 Encapsulated Viton

\*Please consult with factory for sizes, o-ring material and availability.

## POLYPROPYLENE FITTINGS

#### Male Pipe



Part # **Fitting Material** P20 Polypropylene Stainless Steel Collar

## Sanitary



Part # **Fitting Material** P70 Polypropylene Stainless Steel Collar

#### Female C & G



Part # **Fitting Material** P83 Polypropylene Stainless Steel Collar

#### Male C & G



Part # **Fitting Material** P73 Polypropylene Stainless Steel Collar

Polypropylene fittings have a pressure rating of 120 PSI and temperature rating of up to 180°F.

## JACK-FLEX • Heavy Wall Hose of Convoluted PTFE with Flared-Tube



## Construction

Jack-Flex is constructed from convoluted, heavy wall, seamless extruded white or black conductive PTFE tubing locked in a stainless steel braid. It offers the latest in hoses lined with PTFE with flared tubing. In this process, the convoluted tubing is passed through the flange retainer, and flared over the face of the flange, effectively isolating the flange from the transfer chemical. Jack-Flex is ideal for situations where internal corrosion of the fitting and contamination of the chemical is not tolerable.

## **Applications**

- Thermal Cycling
- Transfer of almost all chemicals
- Acid Transfer
- Vibration Elimination
- Sanitary Applications
- Short Assembly Specification
- Applications requiring high flexibility

Available as factory-built and tested assemblies only.

Polypropylene braid cover and polypropylene flanges are also available. Please contact the factory for additional information.

#### **Benefits**

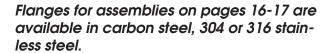
- Internal corrosion of fittings eliminated.
- No metallic contamination of transfer chemical from fitting.
- Simplified installation no gaskets required. Seal is made on flare.
- Helical design of hose aids draining and cleaning.
- Suitable for thermal cycling or steam applications - will not delaminate.
- Reduced energy losses through fitting gives higher flow rates.
- Eliminates crevice corrosion from flange insert in hose.
- Temperature Rating: -65° F (-54°C) to +450°F (+230°C)

Part Number White Black		Nominal Hose Size I.D. O.D.		Maximum Working Pressure	Minimum Burst Pressure	Minimum Bend Radius
JF-12	JFB-12	0.78"	1.08"	425 PSI	1700 PSI	3.0″
JF-16	JFB-16	0.97"	1.36"	350 PSI	1400 PSI	4.0″
JF-20	JFB-20	1.32"	1.70"	330 PSI	1350 PSI	5.5″
JF-24	JFB-24	1.49"	1.85"	275 PSI	1100 PSI	7.0″
JF-32	JFB-32	1.92"	2.43"	250 PSI	1000 PSI	8.5″
JF-48	JFB-48	2.91" 3.80"		100 PSI	400 PSI	12.0″
JF-64	JFB-64	3.92″	4.95"	100 PSI	400 PSI	18.0″

All pressures calculated at 70°F. For applications involving higher temperatures, please contact the factory.

## Construction

The construction of an MTLC hose begins with flanged metal hose braided with stainless steel. A smooth inner liner of extruded PTFE is inserted into the hose, locked in place, and flared over the flange faces. This PTFE liner is stationary and will not move within the hose. Vent holes in the ends prevent gas build-up between layers.





## **Applications**

- Acid Transfer
- Chemical Transfer
- Generally suitable for in-plant applications
- Vibration elimination in piping systems
- Large diameter smooth bore
- Slight misalignment in plastic or lined piping systems

Available as factory-built and tested assemblies only.

- PTFE protection against chemical attack throughout the entire assembly length.
- Smooth liner no entrapment areas.
- High flow rates.
- Easily cleaned.
- Long flexing life.
- Offers ruggedness in service.
- Temperature Rating: -65°F (-54°C) to +350°F (+176°C)

Part Number	Nominal Hose Size I.D. O.D.		Max. Working Pressure*	Min. Burst Pressure	Vacuum Rating (HG)*	Approx. Weight Per Foot
MTLC-16	1.00" 1.64"		500 PSI	2000 PSI	26"	2.00 lbs.
MTLC-24	1.50" 2.33"		400 PSI	1600 PSI	26″	3.86 lbs.
MTLC-32	2.00" 2.88"		300 PSI	1200 PSI	24"	5.00 lbs.
MTLC-48	3.00"	3.94"	200 PSI	800 PSI	24"	5.25 lbs.
MTLC-64	4.00"	4.98"	150 PSI	600 PSI	20"	5.60 lbs.
MTLC-96	6.00"	7.00"	150 PSI	600 PSI	20"	13.00 lbs.
MTLC-128	8.00"	9.10"	125 PSI	500 PSI	20"	20.00 lbs.
MTLC-160	10.00" 11.20"		100 PSI 400 PSI		20"	26.00 lbs.
MTLC-192	12.00"	13.22″	90 PSI	360 PSI	20″	34.50 lbs.

<sup>\*</sup>All pressures and vacuum ratings calculated at 70°F. Please consult factory regarding flexibility restrictions

## PROTECTIVE HOSE COVERINGS

Jackson offers several types of protective hose coverings to help extend the service life of our Fluoropolymer hoses.





#### **SPRING GUARD**

To prolong the life of hose lines that are exposed to rugged operating conditions, such as severe flexing, Spring Guard reduces kinking and protects the hose from abrasion and rough handling.

#### SILICONE FIRESLEEVE

This fiberglass sleeving has a coating of silicone rubber bonded to it which offers flame resistance that will protect the hose from extreme temperature conditions.

#### **HEAT SHRINK TUBING**

To minimize hose O.D., heat shrinkable tubing is used in applications where cleanliness is essential, such as food and pharmaceutical processing. This provides easy cleaning of the outer hose surface.





#### **ARMOR**

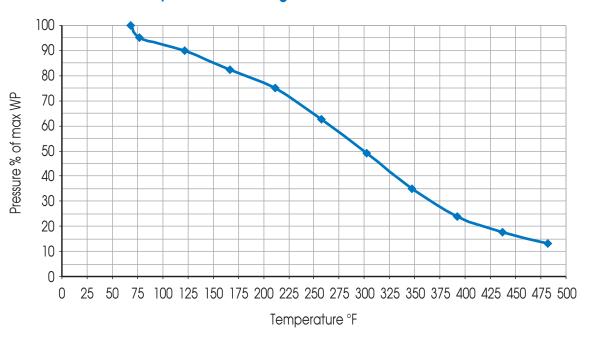
A highly flexible heavy duty metal casing to protect the hose against severe handling abuse and overbending. This can be applied over the entire length or in short sections at the end connection.

#### **NYLON**

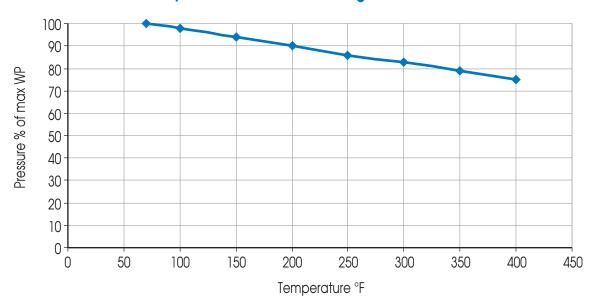
Woven from thousands of nylon filaments into an abrasion-resistant sleeve, the nylon cover extends individual hose life in severe abrasive environments. As it is scuffed and worn, its filaments frizz, forming an even thicker, more protec-tive shield.

Contact Customer Service for more information about protective hose coverings.

## **Temperature Derating Curve For Smoothbore Hose**



## Temperature Pressure Derating For DP & HP Hose



Material Compatibility Key: 1. Excellent

2. Acceptable

3. Not Recommended

0. No Information, Test Before Using

			Fitting	Materia	ı					Fitting I	Materia	ıl	
Chemical	Hose	CS	304SS	31688	Brass	Effusion	Chemical	Hose	CS	304SS	316SS	Brass	Effusion
Acetaldehyde	1	1	1	1	1	В	Beet Sugar Liquors	1	1	1	1	0	
Acetic Acid Glacial	1	0	2	2	0		Benzene	1	1	1	1	1	
Acetic Acid 30%	1	3	2	2	3		Benzenesulfonic Acid	0	3	0	2	0	
Acetic Anhydride	1	3	2	2	3		Benzaldehyde	1	1	0	0	0	
Acetone	1	1	1	1	1		Benzine	1	1	1	1	1	В
Acetylene	1	0	1	1	2	С	Benzyl Alcohol	1	1	1	1	0	
Acrylonitrile	1	1	1	1	0		Benzyl Benzoate	1	1	1	1	0	
Alum Ammonium or							Benzyl Chloride	1	1	0	0	0	
Potassium	1	3	2	2	3		Bismuth Carbonate	1	1	1	1	0	
Aluminum Acetate	1	0	1	1	3		Black Sulphate Liquor	1	1	1	1	0	
Aluminum Bromide	1	3	2	2	3		Blast Furnace Gas	1	1	1	1	1	С
Aluminum Chloride	1	3	2	2	3		Borax	1	1 2	1	1	2	C
Aluminum Fluoride	1	3	2	2	3		Bordeaux Mixture	1	0	1	1	0	
Aluminum Hydroxide	1	0	1	1	1		Boric Acid	1	3	2	1	3	
Aluminum Nitrate	1	3	1	1	0			1	1	1	1	1	
Aluminum Salts	1	0	2	2	0		Bunker Oil	ı	ı	l	'	ı	
Alaminam Sans	'	O	2	۷	O		Butadiene	1	0	1	1	1	
Aluminum Sulfate	1	3	3	2	3		Butane	1	1	1	1	1	С
Ammonia, Anhydrous	1	1	1	1	0		Butter Oil	1	1	1	1	1	
Ammonia, Aqueous	1	0	1	1	3		Butyric Acid	1	3	1	1	2	
Ammonium Carbonate	0	1	1	1	0		Butyl Acetate	1	2	1	1	1	
Ammonium Chloride	1	0	2	2	3		·						
							Butyl Alcohol	1	1	1	1	1	
Ammonium Hydroxide	1	2	1	1	3		Butyl Amine	0	1	1	1	1	
Ammonium Metaphosphate		1	1	1	0		Butyl Carbitol	1	1	1	1	1	
Ammonium Nitrate	1	1	1	1	3		Butyl Stearate	1	1	1	1	1	
Ammonium Nitrite	0	0	1	1	0		Butyl Mercapatan	1	0	1	1	0	
Ammonium Persulfate	0	0	1	1	0		Butyraldehyde	1	0	0	0	1	
Ammonium Phosphate	1	3	2	1	0		Calcium Acetate	1	1	1	1	1	
Ammonium Sulphate	1	1	1	1	3		Calcium Bisulfate	i	0	2	1	3	
Ammonium Thiocyanate	1	1	i	1	0		Calcium Bisulfite	i	0	1	1	0	
Amyl Acetate	1	3	1	1	1		Calcium Carbonate	1	1	1	1	1	
Amyl Alcohol	1	1	1	1	1						·		
				_			Calcium Chlorate	1	0	2	1	0	
Amyl Chloride	1	0	1	1	0		Calcium Chloride	1	3	2	1	2	
Amyl Chloronaphthalene	1	0	1	1	0		Calcium Hydroixe	1	3	3	1	2	
Amyl Naphthalene	1	0	1	1	0		Calcium Hypochlorite	1	0	3	2	3	
Aniline	1	2	1	1	3		Calcium Nitrate	1	1	1	1	1	
Aniline Dyes	1	3	1	1	0		Calcium Silicate	1	1	1	1	1	В
Aniline Hydrochloride	1	0	3	3	3		Calcium Sulfate	1	1	1	1	1	
Animal Fats	1	1	1	1	0		Calcium Sulfide	1	1	1	1	0	
Aqua Regia	1	0	3	3	0		Cane Sugar Liquors	1	1	1	1	2	
Arsenic Acid	1	2	0	1	0		Carbolic Acid	1	3	1	1	3	
Askarel	0	1	1	1	1								
							Carbon Dioxide	1	1	1	1	1	Α
Asphalt	1	1	1	1	2		Carbon Disulfide	0	2	1	1	2	
Barium Carbonate	1	2	1	1	1		Carbonic Acid	1	3	1	1	3	
Barium Chloride	1	3	1	1	2		Carbon Monxide	1	1	1	1	1	С
Barium Hydroxide	1	2	1	1	0		Carbon Tetrachloride	1	3	2	2	2	
Barium Sulfate	1	1	1	1	2		Carston C!I	,	,	,	,	1	
Barium Sulfide	1	3	1	1	3		Castor Oil Caustic Soda	] ]	1 2	1	] ]	1 3	
Beer	1	2	1	1	1		Cellosolve, Acetate	1	1	1	1	0	
5001	'			'			Concooled, Acerdie	1	'		'		

Material Compatibility Key: 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test Before Using

Celicockye, Burly   Celicockye, Charles	Fitti		Fitting Material						Fitting Material					
Callubbe   Chloride, Gareoux, Dn*   1	Chemical	Hose	CS	30455	31688	Brass	Effusion	Chemical	Hose	CS	304SS	316SS	Brass	Effusion
Chlorine, Grascoux, Mert	Cellosolve, Butyl	1	1	1	1	0		Dioctyl Phthlatate	1	1	1	1	1	
Chlorine, Gaspous, Wet*	Cellulube	1	1	1	1	1		Dioxane	1	1	1	1	1	
Chlorina Trifluoride		*	2	3	3	2	С		1	1	1	1	1	
Chloroacetic 1 3 3 3 3 2 Ethyl Acetaocetate	Chlorine, Gaseous, Wet*	*		3		3			1					
Chlorobernomethane	Chlorine Trifluoride	0	3	0	0	0	С	Ethyl Acetate	1	1	1	1	1	
Chlorobromomethane		1		3	3	2								
Chlororform		1		1	1	1			0	1	1	1		
C-Chloronaphthalene					1				1					
Chlorofoluene		1		1				•	1					
Chromic Acid	O-Chloronaphthalene	1	1	1	1	1		Ethyl Cellulose	1	1	1	1	1	
Circle Acid	Chlorotoluene	1	1	1	1	1			1		1	1	2	
Cod Liver Oil   Coke Over Gas		1							1		1			
Coke Over Gas		1	3	3	1	3			1		0			В
Copper Chloride								•	1	2	1	1	1	
Copper Chanide	Coke Over Gas	1	1	1	1	0		Ethyl Silicate						
Corpor Sulfate		1							·					
Corn Oil   Corn Syrup		1			1				1	0	0		0	
Corn Syrup		1	3	1	1	3			1		0		1	
Cattonseed Oil Creosote									1					
Creosote	Corn Syrup	1	1	1	1	0		Fatty Acids	1	0	1	1	0	
Cresol	Cottonseed Oil								1		3			
Crude Wax         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1		1			1				1		1	1		
Cutting Oil         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         1         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 <th< td=""><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td></th<>					1				1					
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Cyclohexanone         1         0         1         1         0         0         1         1         0         1         1         0         1         1         0         1         1         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         0         A           Diacetone         1         1         1         1         1         1         1         1         0         A           Diacetone Alcohol         1         1         1         1         1         1         1         2         2         2         1         1         0         1         1         0         1         1         0         1         1         0         1         1         1         1	Cutting Oil	1	1	1	1	1		Ferrous Nitrate	1	0	1	1	0	
Cymene         1         0         0         0         1         Flormaldehyde         1         0         1         1           Decalin         1         0         0         0         1         Formic Acid         1         3         1         2         1           Denatured Alcohol         1         1         1         1         1         1         1         0         A           Diacetone Alcohol         1         1         1         1         1         1         1         1         0         A           Diacetone Alcohol         1         1         1         1         1         1         1         1         1         1         0         A           Diacetone Alcohol         1         1         1         1         1         1         1         1         1         0         0         0         1         1         0         0         0         1         1         0         0         0         1         1         0         0         1         1         1         1         1         1         1         1         1         1         1         1         1		1							1					
Decalin									1					
Denatured Alcohol	The state of the s								1					
Diacetone   1									1					
Diagolar   Diagolar	Denatured Alcohol	1	1	1	1	1		Freon 12	2	3	1	1	0	Α
Dibenzyl Ether         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1									_	_	1			А
Dibutyl Ether         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         <									'					
Dibutyl Phthalate         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         0         1         1         1         1         0         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1														
Dibutyl Sebacate         1         1         1         1         1         1         1         0         1         1         1         0         1         1         1         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1														
Dichlorobenzene         1         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1	Dibutyl Phthalate	1	1	1	1	1		Fufural	1	2	1	1	1	
Diesel Oil         1         1         1         1         1         1         1         1         0         1         1         1         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1		1										·		
Diethylamine         1         3         0         2         3         Glucose         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1		1									1	·		
Diethyl Ether         1         1         1         1         1         1         1         1         2         1         1         3           Diethyl Phthalate         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1												·		
Diethylene Glycol         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1		1												
Diethyl Phthalate         1         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1	Diethyl Ether	1	1	1	1	1	В	Glue	1	2	1	1	3	
Diethyl Sebacate         1         0         1         1         1         Green Sulfate Liquor         1         1         1         1         0           Di-Isobutylene         0         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1		1						•	1					
Di-Isobutylene         0         0         1         1         1         n-Hexaldehyde         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 </td <td></td> <td>1</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td>1</td> <td>·</td> <td></td> <td></td>		1			1				1		1	·		
Di-Isopropyl Keytone         1         0         1         1         1         Hexane         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 <td>· ·</td> <td></td>	· ·													
Dimethyl Aniline         1         0         0         0         1         Hexene         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1		0		1	1			n-Hexaldehyde	1					
Dimethyl Formamide         0         1         1         1         0         Hexyl Alcohol         1         1         1         2         0	Di-Isopropyl Keytone	1	0	1	1	1		Hexane	1	1	1	1	1	
									1					
Dimethyl Phthalate 1 0 0 0 1 Hydraulic Oil, Petroleum 1 1 1 1 1								•	1	·				
	Dimethyl Phthalate	I	0	0	0			Hydraulic Oil, Petroleum	I	I		I		

Material Compatibility Key: 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test Before Using

		Fitting Material			ıl					Fitting Material				
Chemical	Hose	CS	304SS	316SS	Brass	Effusion	Chemical		Hose	CS	304SS	31688	Brass	Effusion
Hydrochloric Acid, 15%	1	3	3	3	3	В	Monoethanolan	nine	0	1	1	1	1	
Hydrochloric Acid, 37%	1	3	3	3	3	В	Naphtha		1	2	1	1	1	
Hydrocarbon Acid	1	3	1	1	3		Naphthalene		1	0	1	1	0	
Hydrofluoric Acid,							Napthenic Acid		1	0	2	1	0	
Concentrated	1	3	3	3	3		Natural Gas		1	1	1	1	2	
Hydrofluosilicic Acid	1	0	3	3	3		NU L LA L L		,	,	,	,	,	
	*	,	,	,	,	0	Nickel Acetate Nickel Chloride		1	1 3	1 2	1 2	1 3	
Hydrogen, Gaseous Hydrogen Peroxide, 70%	1	1 3	1 2	1	1 3	С	Nickel Sulfate		1	0	2	1	3	
Hydrogen Sulfide, Gaseous		3	2	1	3		Niter Coke		0	3	2	1	0	
Hydroquinone	0	1	0	1	0		Nitric Acid, All		U	O	_	'	O	
Isobutyl Alcohol	1	i	1	1	2		Concentration	ns	1	3	2	2	3	
10000 at y 17 til Corton	,	'	'	'					·					
Iso Octane	1	1	1	1	1		Nitric Acid, Red I	Fuming	1	3	2	2	3	
Isopropyl Acetate	1	1	1	1	1		Nitrobenzene		1	1	]	1	1	
Isopropyl Alcohol	1	1	1	1	2		Nitroethane		1	0	]	]	]	^
Isopropyl Ether	1	1	1	1	1		Nitrogen, Gasea		1	1 0	1 0	1 2	1	Α
Kerosene	1	1	1	1	1		Nitrogen Tetroxic	ae	0	U	U	2	0	
Lacquers	1	3	3	1	1		n-Octane		0	1	1	1	1	
Lacquer Solvents	1	3	3	1	1	В	Octyl Alcohol		1	1	1	1	2	
Lactic Acid	1	3	2	1	2		Oil, SAE		1	1	1	1	1	
Lard	1	1	1	1	3		Oleic Acid		1	2	2	1	2	
Lead Acetate	1	2	1	1	1		Olive Oil		1	2	2	1	2	
Lead Nitrate	0	1	1	1	0		Oxalic Acid		1	3	2	1	3	
Lime Bleath	0	3	2	1	0		Oxygen, Gaseou	US	1	1	1	1	1	Α
Linoleic Acid	1	0	0	0	0		Ozone		1	1	1	1	1	
Linseed Oil	1	2	1	1	2		Paint		1	0	1	1	1	
Lubricating Oils, Petroleum	1	1	1	1	1		Palmitic Acid		1	1	2	1	3	
Magnesium Chloride	1	3	2	1	2		Peanut Oil		1	1	1	1	1	
Magnesium Hydroxide	1	1	1	1	0		Perchloric Acid		1	0	2	1	0	
Magnesium Sulfate	1	2	1	1	1		Perchlorethylene	Э	1	1	1	1	1	
Molic Acisd	1	2	2	1	0		Petroleum		1	1	1	1	1	
Mercuric Chloride	1	3	1	1	3		Phenol		1	3	1	1	3	
Mercury	1	1	1	1	3		Phorone 1		1	1	1	1	1	
Mesityl Oxide	1	1	1	1	1		Piric Acid		1	3	1	1	3	
Methyl Acetate	1	1	1	1	1		Pinene		1	1	1	1	1	
Methyl Atrylote	0	1	1	1	1		Pine Oil	01	1	1	1	1	0	
Methyl Alcohol	1	1	1	1	2		Plating Solution,	Chrome	1	0	3	3	0	
Methyl Bromide	1	1	1	1	1	В	Potassium Aceto		1	0	1	1	0	
Methyl Butyl Ketone	0	1	1	1	1		Potassium Chlori		1	2	2	1	3	
Methyl Chloride	1	1	1	1	1	В	Potassium Cyani		]	2	]	1	3	
Methylene Chloride	1	1	1	1	1		Potassium Dichro		1	0	]	1	0	
Methyl Ethyl Ketone (MEK)	1	1	1	1	1		Potassium Hydrox	kide, 30%	1	3	1	1	3	
Methyl Formate	1	1	1	1	1	В	Potassium Nitrate		1	3	1	1	2	
Methyl Isobutyl Ketone	1	1	1	1	1		Potassium Sulfate	е	1	2	1	1	2	
Methyl Methacrylate	1	1	1	1	1		Propane Propane		1	1	]	]	1	Α
Methyl Salicylate	1	1	1	1	1		Propyl Alashal		0	1	1	]	1	
Milk	1	3	1	1	3		Propyl Alcohol		1	1	1	1	2	
Mineral Oil	1	1	1	1	1		Pyricine, 50%		1	0	1	1	1	
Monochlorobenzene	1	1	1	1	1		Red Oil		1	2	2	1	2	

Material Compatibility Key: 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test Before Using

Chemical											Materia		
	Hose	CS	304\$\$	31688	Brass	Effusion	Chemical	Hose	CS	304SS	31688	Brass	Effusion
Salicylic Acid	0	0	1	1	0		Sulfur Trioxide	1	2	2	2	0	В
Salt Water	1	2	1	1	3		Sulfuric Acid,10%	1	3	3	2	3	
Sewage	1	3	1	1	1		Sulfuric Acid, 98%	1	2	3	2	3	
Silicone Greases	0	1	1	1	1		Sulfuric Acid, Fuming	1	2	0	1	3	
Silcone Oils	0	1	1	1	1		Sulfurous Acid, 10%	1	3	2	1	3	
Silver Nitrate	1	2	1	1	2		Sulfurous Acid, 75%1	1	3	3	2	3	
Skydrol 500 & 7000	1	1	1	1	0		Tonnic Acid, 10%	1	2	1	1	3	
Soap Solutions	1	1	1	1	1		Tar, Bituminous	1	1	1	1	2	
Soda Ash	1	1	1	1	2		Tartaric Acid	1	0	2	2	0	
Sodium Acetate	1	1	1	1	1		Terpineol	1	0	0	0	0	
Sodium Bicarbonate	1	2	1	1	2		Titanium Tetrachloride	0	1	2	2	3	
Sodium Bisulfite	1	1	1	1	0		Toluene	1	1	1	1	1	
Sodium Borate	1	1	1	1	0		Toluene Diisocyanote	0	0	0	0	0	
Sodium Chloride	1	2	2	1	3		Transformer Oil	1	1	1	1	1	
Sodium Cyanide	1	2	1	1	3		Transmission Fluid, Type A	1	1	1	1	1	
Sodium Hydroxide, 40%	1	2	1	1	3		Tributoxyethyl Phosphate	1	1	0	0	0	
Sodium Hypochlorite	1	3	3	2	3		Tributyl Phosphate	1	1	0	0	0	
Sodium Metaphosphate	1	3	1	1	3		Trichlorethylene	1	3	0	1	1	
Sodium Nitrate	1	1	2	2	2		Tricresyl Phospahte	1	1	0	2	0	
Sodium Perborate	1	3	1	1	3		Tung Oil	1	1	1	1	1	
Sodium Peroxide	1	3	1	1	3		Turpentine	1	0	1	1	2	
Sodium Phosphate	1	0	1	1	3		Urea Solution, 50%	1	1	1	1	0	
Sodium Thiosulfate	1	3	1	1	3		Varnish	0	2	1	1	2	
Soybean Oil	1	1	1	1	0		Vegetable Oils	1	1	1	1	0	
Stannic Chloride	1	3	0	0	3		Versilube	1	1	1	1	1	
Steam	1	1	1	1	2	А	Vinegar	1	3	2	1	3	
Stearaic Acid	1	3	2	1	3		Vinyl Chloride	1	2	1	1	3	С
Stoddard Solvent	1	2	1	1	1		Water	1	2	1	1	1	
Styrene	1	2	0	2	2		Whiskey, Wines	1	3	2	1	3	
Sucrose Solution	1	1	1	1	0		Xylene	1	2	2	2	0	
Sulfur, 200degrees F	1	2	2	1	3		Zinc Acetate	1	1	1	1	1	
Sulfur Chloride	1	3	3	2	3		Zinc Chloride	1	3	2	1	3	
Sulfur Dioxide	1	2	1	1	1	С	Zinc Sulfate	1	3	2	1	3	

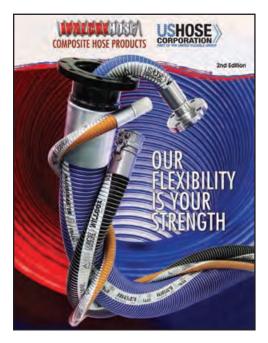
#### **Effusion Chart Key:**

- A. Effusion will occur with potential to displace breathable air in an enclosed environment. For further information contact factory.
- B. These compounds have the capability to effuse and with certain atmospheric conditions can corrode metallic components such as braid and fittings.

  Applications with these compounds require using hose assemblies only in well ventilated spaces, please consult factory with questions.
- C. Chemicals in this catagory are in a gas phase at atmospheric pressures and at tempratures of 56°F or less. For further information on compatibility please consult factory.

# Worldwide Leader for Hose of...

## Willcox Hose®



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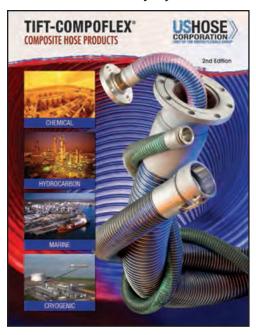
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## Fluoropolymer



## TIFT-Compoflex®



## Metal

