



TUBING SELECTION GUIDE



INDUSTRIAL & CONSUMER SOLUTIONS



ABOUT US

Saint Gobain's Industrial & Consumer Solutions (ICS) is a diverse business in terms of markets served, supporting dispensing and processing applications in a variety of industries including food and beverage, chemical processing, and more. Featuring one of the market's strongest brands, Tygon®, we excel in technically demanding applications where premium and consistent performance is critical.

Our key values are highlighted by our material expertise, co-developed solutions, as well as custom formulation and compounding.

MARKETS

FOOD AND BEVERAGE

Our tubing is used for numerous applications in food and beverage transfer.

- Fountain drink machines
- Vending machines
- General dispensing machines
- Other dispensing machines for soft drinks, coffee, tea, smoothies, beer, yogurt, cheese, ketchup

For your needs, we also have tubing used for raw milk collection.



TYGON®
Excellence By Design

Precision-designed tubing for peak performance and regulatory compliance, across a range of specialized fluid transfer applications.

ICS-RS01-0911-SGLS

VERSILON™
Fluid Performance

Premium quality tubing, hoses and fittings fulfilling a range of demanding certification, performance and safety standards.

INDUSTRIAL CLEANING

Our tubing is used for transferring, sanitizing, and cleaning chemicals, or with peristaltic pumps to dispense sanitizing and cleaning chemicals.

- Hospitality industry such as hotels, resorts, restaurants, bars, cafeterias
- Healthcare industry such as hospitals, nursing homes, adult day care center
- Education institutes such as universities, schools, day care centers



SMALL ENGINE FLUID TRANSFER

Our tubing is used for transferring specific liquid in small engines.

- From tanks, carburetor, fuel system engines
- Fuel line
- Return line
- Vent line



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TUBING SELECTION GUIDE

Food and Beverage



Product	Materials	Features	Pump Tubing/ Transfer Tubing	Food Contact*									Food Contact Compliance**						Bend Radius	Pump Life	Durometer, Shore A (ASTM D2240)	Opacity	Relative Working Pressure Rating	Working Temperature Range, °F (°C)					
				Hot Beverages	Carbonated Drinks	Acidic Foods	Oil- Based or Fatty Foods	Beer <7% Ethanol	Alcohol Beverages >7% Ethanol	Dairy- Based Foods	Frozen Foods and Beverages	Hydration	US FDA	EU	China	Japan	NSF-51	NSF-61											
Tygon® E-65-F	Thermoplastic Elastomer	Taste and Odor Free, Long Life Tubing	Pump Tubing	G	G	E	U	G	E	E	E	E	E	Yes	Yes	No	No	Yes	No	Best	Best	65	Opaque	Low	-112 to 275 (-80 to 135)				
Versilon™ SPX-60 FB	Peroxide-Cured	Silicone Tubing for Food and Beverage Applications	Pump Tubing	E	G	G	E	U	U	E	G	G	G	No	Yes	No	No	Yes	No	Better	Good	60	Translucent	Low	-112 to 400 (-80 to 204)				
Tygon S3™ B-44-3	Phthalate-Free Thermoplastic Elastomer	Flexible Tubing for Beverage Transfer	Transfer Tubing	U	E	G	U	G	U	G	U	E	E	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Best	Better	66	Transparent	Medium	-49 to 165 (-45 to 74)
Tygon S3™ B-44-4X	Phthalate-Free Thermoplastic Elastomer	Food & Beverage Dispensing Tubing	Transfer Tubing	U	G	G	U	E	U	E	U	G	G	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Best	Better	66	Transparent	Medium	-49 to 165 (-45 to 74)
Tygon S3™ B-44-5X IB	Phthalate-Free Thermoplastic Elastomer	Reinforced Pressure Tubing for Cold Beverage Dispensing	Transfer Tubing	U	E	G	U	G	U	E	E	G	G	Yes	Yes	No	No	Yes	Yes	Good	N/A	66	Transparent - Braided	High	-32 to 165 (-36 to 74)				
Versilon™ FEP-F	Fluoropolymer	Clear, High-Temperature Flexible Tubing	Transfer Tubing	E	G	G	G	G	G	G	G	G	G	Yes	Yes	No	No	No	No	Better	N/A	D55	Transparent	High	-400 to 400 (-240 to 205)				
Versilon™ PFA-F	Fluoropolymer	High Purity, Flexible Tubing	Transfer Tubing	E	G	G	G	G	E	G	G	G	G	Yes	Yes	No	No	No	No	Better	N/A	D60	Translucent	High	-400 to 500 (-240 to 260)				
Versilon PTFE-F	Fluoropolymer	High Temperature Resistance	Transfer Tubing	E	G	G	G	G	G	G	G	G	G	Yes	Yes	No	No	No	No	Better	N/A	64	Translucent	High	-450 to 500 (-268 to 260)				

*Food Contact Ratings: E Excellent
G Good
U Unsatisfactory

**See Related Datasheets or Ask Your RS Contact for More Details



TUBING SELECTION GUIDE

Cleaning Chemicals



Chemical Compatibility (for reference only)*

Product	Materials	Recommended Applications	Pump Tubing/ Transfer Tubing	Acids			Bases			Alcohols	Caustic Soda, 10-15% in w	Soda Ash, 7% in w	Sodium Hypochlorite, 5.5%	Peracetic Acid, 6%	Surfactant	Fluorosilicic Acid, 25% in w	Glycolic Acid, 70% in w	Pump Life (hrs, 0 psi)**	Pump Life (hrs, 10 psi)**	Durometer, Shore A (ASTM D2240)	Color	Translucency	Relative Working Pressure Rating	Working Temperature Range, °F (°C)
				conc	med	weak	conc	med	weak															
Tygon® A-60-C	Thermoplastic Elastomer	Soap and Disinfectant Dispensing, Wastewater, Wash Systems	Pump Tubing	U	F	F	F	E	E	F	E	E	E	F	G	E	G	1000+	1000	61	Cream	Opaque	Low	-75 to 275 (-60 to 135)
Tygon® A-60-G	Thermoplastic Elastomer	Soap and Disinfectant Dispensing, Wastewater, Wash Systems	Pump Tubing	U	F	F	F	E	E	F	E	E	E	F	G	E	G	1000+	1000	61	Black	Opaque	Low	-75 to 275 (-60 to 135)
Tygon® Chemical	Co-Extruded Thermoplastic Elastomer	Sanitizers, Cleaners, Harsh Chemicals	Pump Tubing	F	E	E	E	E	E	F	E	E	E	U	E	E	E	800	500	61	Cream	Opaque	Medium	-75 to 165 (-60 to 74)
Tygon® XL-60	Thermoplastic Elastomer	High Temperature Dishwashing and Ware Washing	Pump Tubing	G	G	E	G	G	E	G	E	E	E	-	G	E	G	500+	500	60	Clear	Translucent	Low	-87 to 250 (-66 to 121)
Versilic	Peroxyde-Cured Silicone	Soap and Detergent Dispensing	Pump Tubing	U	U	U	U	F	F	F	G	E	E	-	G	U	E	-	160***	62	Clear	Translucent	Low	-58 to 392 (-50 to 200)
Versilon™ 2001	Polyolefin	Soap, Detergent, and Polar Solvent Dispensing, Caustic and Acid Based Chemical Transfer for Water Purification	Pump Tubing	F	E	E	F	E	E	E	E	E	E	-	E	E	E	100	70	69	Clear	Translucent	Medium	-108 to 135 (-78 to 57)
Versilon™ F-5500-A	Fluoroelastomer	Caustic, Corrosive Chemicals	Pump Tubing	E	E	E	U	F	F	F	E	E	E	-	E	E	X	150	90	60	Black	Opaque	Low	-60 to 400 (-51 to 204)
Tygon® 2375	Polyolefin	Aggressive Acid and Caustic Detergent Transfer	Transfer Tubing	F	E	E	E	E	E	E	E	E	E	E	E	E	E	N/A	N/A	75	Clear	Translucent	Medium	-103 to 130 (-75 to 54)
Versilon™ FEP	Fluoropolymer	Harsh Cleaning Chemicals and Ozone Transfer	Transfer Tubing	E	E	E	E	E	E	E	E	E	E	-	E	E	U	N/A	N/A	55-56 Shore D	Clear	Translucent	High	-400 to 400 (-240 to 205)
Versilon™ PFA	Fluoropolymer	Harsh Cleaning Chemicals and Ozone Transfer	Transfer Tubing	E	E	E	E	E	E	E	E	E	E	-	E	E	U	N/A	N/A	55 Shore D	Clear	Translucent	High	-400 to 500 (-240 to 260)
Versilon™ PTFE	Fluoropolymer	Harsh Cleaning Chemicals and Ozone Transfer	Transfer Tubing	E	E	E	E	E	E	E	E	E	E	-	E	E	U	N/A	N/A	55 Shore D	White	Opaque / Translucent	High	-450 to 500 (-268 to 260)
Versilon™ SE-200	Fluoropolymer Lined PVC	Harsh Cleaning Chemicals	Transfer Tubing	E	E	E	E	E	E	E	E	E	E	-	E	E	U	N/A	N/A	66	Clear	Translucent	Medium	- 32 to 165 (-36 to 74)

Chemical Ratings: E Excellent
G Good
F Fair
U Unsatisfactory
- Not Tested

* See complete [Chemical Resistance Guide](#) for full compatibility ratings.
** 1/4" ID X 3/8" OD, 3-roller pump head, 600 rpm, 73°F
^ 1/4" ID x 7/16" OD, 3-roller pump head, 600 rpm, 73°F, 0 & 15 psi bp
^^ 1/4" ID x 7/16" OD, 3-roller pump head, 200 rpm, 73°F
*** 1/4 ID x 7/16 " OD, 3-roller pump head, 300 rpm, 73°F



TUBING SELECTION GUIDE

Fuel and Lubricant



Small Engine Others

Fuel Compatibility (for reference only)*

Regulatory Information

Product	Materials	Features	Recommended Applications	Fuel Compatibility (for reference only)*						Regulatory Information			Durometer, Shore A (ASTM D2240)	Color	Relative Working Pressure Rating	Working Temperature Range, °F (°C)
				Gasoline	Kerosene	Heating Oils	Cutting Compounds	Glycol-Based Coolants	100% Ethanol	EPA B1-15	CARB	ANSI B175.1 Annex D				
Tygon® F-4040-A	Thermoplastic Elastomer	Submersible, Highly Flexible	Lubricant and Fuel Transfer	G	G	G	E	E	G	No	No	No	57	Yellow	Medium	-35 to 165 (-37 to 74)
Tygon® LP-1200	Fluoropolymer	Submersible, Low Temperature Flexibility	Fuel Transfer	E	E	E	E	E	E	Yes	Yes	Yes	78	Translucent	Medium	-40 to 180 (-40 to 82)
Versilon™ C-210-A	Thermoplastic Elastomer	Abrasion Resistance, Plasticizer-Free	Oil, Fuel and Grease Transfer	G	G	G	E	E	U	No	No	No	82	Clear	Medium	-100 to 175 (-73-79)

*Fuel Contact Ratings: E Excellent
G Good
U Unsatisfactory

Others

Recommended Applications*

Product	Materials	Features	Pump Tubing/Transfer Tubing	Recommended Applications*					Durometer, Shore A (ASTM D2240)	Color	Relative Working Pressure Rating	Working Temperature Range, °F (°C)
				Food & Beverage	Cleaning Chemicals	Environmental Sampling & Laboratory Analysis	Fuel & Oil	Digital Printing				
Tygon® E-3603	Thermoplastic Elastomer	Formulated for Resistance to Flex-Fatigue and Abrasion	Pump Tubing	Y	N	Y	N	N	56	Clear	Medium	-51 to 165 (-46 to 74)
Versilon™ Iso-Versinic	Fluoroelastomer	Outstanding Chemical Resistance, Flame Resistant	Pump Tubing	N	Y	Y	Y	Y	60/70	Black	Medium	-4 to 392 (-20 to 200)
Versilon™ GA	Natural Rubber	Excellent Elongation, Good Resistance to Abrasion	Transfer Tubing	N	N	Y	N	N	40	Light Brown	Low	-40 to 158 (-40 to 70)
Versilon™ GSR	Natural Rubber	Flexible and Chemical Resistant	Transfer Tubing	N	N	Y	N	N	45	Red	Low	-40 to 158 (-40 to 70)
Versilon™ C-544-A IB	Thermoplastic Elastomer	Multi-Purpose, Abrasion Resistant Tubing	Transfer Tubing	N	N	N	Y	N	85	Transparent	High	-100 to 180 (-74 to 82)

* Ratings: Y Yes
N No





How to Choose Wisely?

When choosing the correct tubing for your application, there are several factors to consider.

Listed on the right are questions which will help direct you in the selection of the proper tubing for your specific application.

It is required to test tubing under the actual service conditions prior to specifying a particular tubing formulation.

Assistance in tubing selection is available from RS, our authorized worldwide tubing distributor.

For more information, reach out to a technical contact from RS.

Questions to Answer

1	What fluid(s) is to be transported?
2	What range of temperatures will the tubing be subjected to?
3	What is the maximum line pressure or vacuum rating?
4	What degree of tubing flexibility is desired?
5	What are the conditions of the ambient environment?
6	Will the tubing be used in a peristaltic pump?
7	Is clarity of tubing important?
8	What compliance documentation is needed (EU Regulation 1935/2004, FDA, NSF)?



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Fluid Performance
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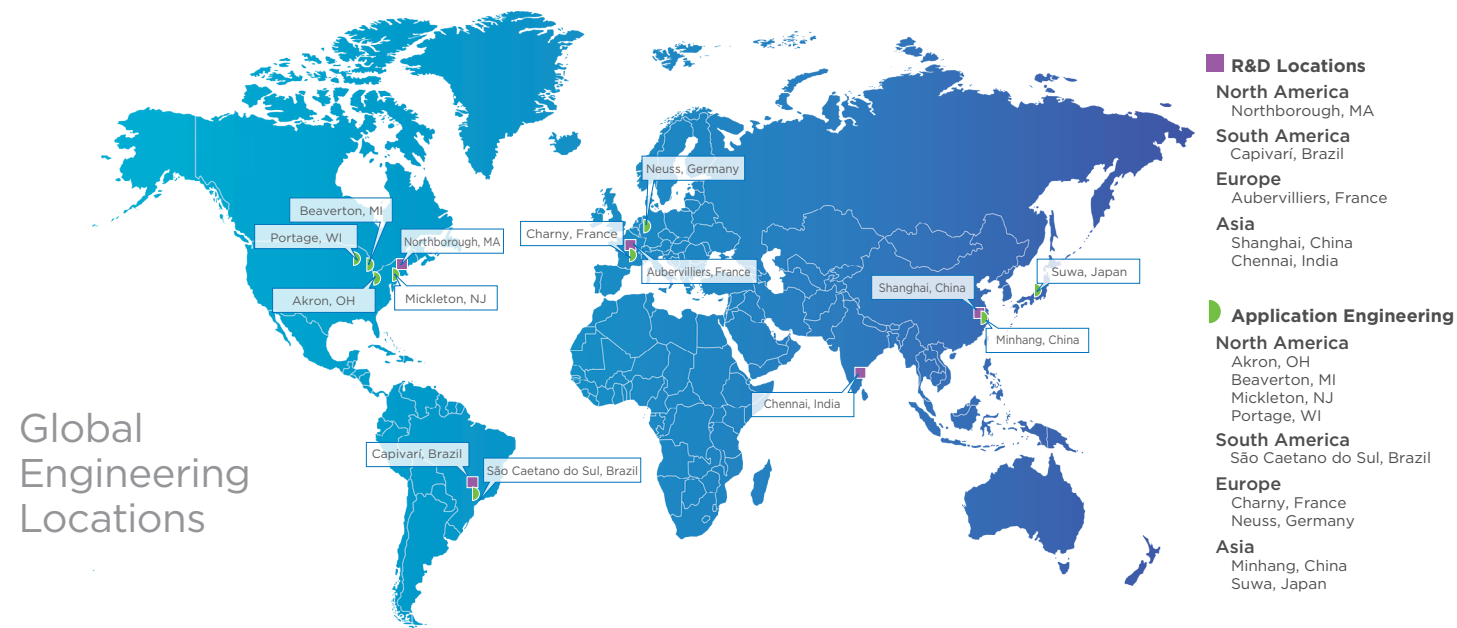
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Saint-Gobain
Life Sciences
www.linkedin.com/showcase/saint-gobain-life-sciences/

WARNING: The content of Saint-Gobain tubing materials is not certified by the FDA for implant devices and is neither designed nor intended to be used in medical applications involving permanent implantation in the human body or permanent contact with body fluids or tissues. Failure to comply with this warning may lead to serious bodily injury or death.

IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Saint-Gobain materials for all intended uses. Laboratory, field or clinical tests must be conducted in accordance with applicable requirements in order to determine the safety and effectiveness for use of materials in any particular application. If intended for medical use, it is the user's responsibility to ensure that the materials to be used comply with all applicable medical regulatory requirements.



Limitation of Liability

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