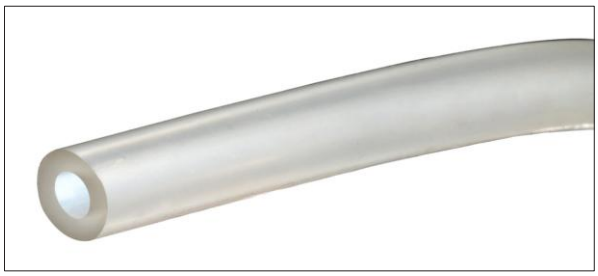


C-Flex® 374

Heat-weldable hose for advanced biotechnological applications

Material: translucent special TPE (thermoplastic elastomer)
Hardness: 60 Shore (A)
Density: 0.89 g/cm^3
Working temperature: from -45°C to +135°C

A unique, very light, translucent flexible hose made of patented C-Flex material® - a thermoplastic elastomer. Designed to the critical requirements of pharmaceutical and biotechnological applications, with excellent capability for sterile hose sealing and joining by welding (*Pharma Tube Sealing and Welding)*. Aseptic disconnection of line elements and aseptic connection is widely used in pharmaceutical and biotechnological processes. Applications include single-use hose sections, pinch valves, buffer preparation, cell and fermentation cultures, vaccines, botanical products, high-purity water, reagent dispensing, laboratory and research work. Chemically resistant, including to concentrated acids and bases (see table).
Biocompatible – meets the requirements of USP Class VI, ISO 10993-3 *(Ames Genotoxicity)*, ISO 10993-4 (*Hemolisis, Indirect)*, ISO 10993-5 (*Cytotoxicity, In-Vitro*), ISO 10993-11 (*Systemic Toxicity, In-Vivo*), European Pharmacopoeia 3.2.9. (*Rubber Closures for Containers*) and others. Hygienic properties are confirmed by a BPOG extractables report and Saint-Gobain's validation guide for this hose. Compliant with RoHS 2011/65/EU and REACH 1907/2006/EU.
Possible **sterilisation** by autoclave steam (1 x 30 min, 1 bar, +121°C), gamma radiation or X-rays (up to 5 Mrad / 50kGy). Repeated steam sterilisation destroys the hose, so for the C-Flex hose® radiation sterilisation is particularly recommended.
Pressure safety factor 3:1. Recommended **assembly** with special biopharmaceutical ends and connectors, e.g. Pure-Fit®, welding or special systems, e.g. Bio-Simplex® (see later in this chapter).

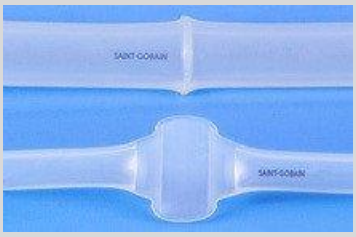
Chemical resistance of C-Flex® (for preliminary selection – verify in the manufacturer's tables or confirm with Tubes International):

acids dilute / weak	**acids** strong / concentrated	**bases** dilute / weak	**bases** strong / concentrated	**salts**	**water high purity**	**oils / water** emulsion	**solvents organic, alcohols**
V	V	V	V	V	V	requires testing	not recommended

index	diameter inner [mm]	diameter outer [mm]	wall wall [mm]	pressure working 20°C [bar]	pressure burst 20°C [bar]	weight [kg/m]	length standard [m]
VE-374-125-2	3,2	6,4	1,6	1,7	5,1	0,022	15
VE-374-188-2	4,8	8	1,6	1,5	4,5	0,029	15
VE-374-188-3	4,8	9,5	2,4	2,1	6,3	0,047	15
VE-374-250-2	6,4	9,5	1,6	1,1	3,3	0,034	15
VE-374-250-3	6,4	11,2	2,4	1,5	4,5	0,059	15
VE-374-250-4	6,4	12,7	3,2	2,1	6,3	0,084	15
VE-374-313-3	7,9	12,7	2,4	1,4	4,2	0,069	15
VE-374-375-2	9,6	12,7	1,6	0,9	2,7	0,048	15
VE-374-375-3	9,6	14,3	2,4	1,2	3,6	0,079	15
VE-374-375-4	9,6	15,9	3,2	1,4	4,2	0,112	15
VE-374-500-3	12,7	17,4	2,4	1,5	4,5	0,099	15
VE-374-500-4	12,7	19,1	3,2	1,1	3,3	0,142	15
VE-374-625-4	15,9	22,2	3,2	0,9	2,7	0,168	15
VE-374-750-4	19,0	25,4	3,2	0,8	2,4	0,199	4,5
VE-374-750-6	19,0	28,3	4,8	1,4	4,2	0,307	4,5
VE-374-750-8	19,0	31,7	6,4	1,4	4,2	0,450	4,5
VE-374-1000-6	25,4	34,9	4,8	1,0	3,0	0,400	4,5
VE-374-1000-8	25,4	38,1	6,4	1,1	3,3	0,563	4,5

Notes: Minimum order quantities may apply – contact Tubes International.

Other types of C-Flex hose are also available on special order: C-Flex 082 and C-Flex 072 opaque – type 072 for light-sensitive substances and with extended service life in peristaltic pumps.



A special thermoplastic elastomer (C-Flex®) enables hose connections to be made by thermal welding, achieving leak-tight, sterile joints.

Making leak-tight welds on the hose (to seal off) is also widely used to sterilely disconnect parts of the hose system.

Special welders are intended for welding hoses.