

Food hoses made of TPE (thermoplastic elastomer)



PHARMASTEEL

TPE hose with steel spiral for food, pharmaceutical and cosmetic substances

Hose material: Transparent TPE-S
Reinforcement: stainless steel spiral
 AISI 302
Operating temp: -30°C to +100°C
 (temperature-dependent operating pressure)

A flexible suction and delivery hose designed for transfer of food, pharmaceutical and cosmetic substances: water, fruit juices, beer, wine, vinegar, alcohols with a concentration of up to 96%, milk and milk products, creams, soaps, aromatic substances, pigments and others. Resistant to fats and oils within the standard range of use. Good chemical resistance to light chemicals - acid and alkaline solutions.

The extruded, completely smooth inner and outer surface of the hose facilitates flow and cleaning. Reinforcement with a stainless steel wire spiral embedded in a TPE-S wall provides good resistance to vacuum and hose kinking. The transparent wall allows easy visual inspection of the flow. The hose material is non-vulcanised, clean (no vulcanising additives), hydrolysis-resistant, does not promote bacterial growth, low porosity and low permeability. Completely neutral in terms of taste and odour, does not alter the organoleptic properties of the medium. Resistant to ageing, atmospheric conditions and UV radiation.

Hose cleaning, disinfection or sterilisation strictly according to the recommendations given. Cleaning by the SIP method, which clearly shortens the service life, is not recommended. Use with high alcohol (its vapours or other flammable substances) requires consideration of static electricity hazards.

As a hose reinforced only with a helix (no braid), it is characterised by a certain elongation under pressure, which is why the maximum operating pressure of the hose is low (safety factor of 1:5).

Cleaning:

hot water	water vapour*	chlorine	sodium hydroxide		nitric acid	
		max 1%	2%	5%	0,1%	3%
max 65°C / 20 min	max 121°C / 30 min (1bar)	max 65°C / 20 min	max 75°C / 20 min	max 20°C / 20 min	max 75°C / 20 min	max 20°C / 20 min

* - permissible (not recommended) - reduces service life

Standards and requirements:

Food industry, food contact: complies with European requirements 1935/2004/EC and 10/2011/EU (simulants A, B, C, D1, D2), 2023/2006/EC (GMP) and US FDA 21 CFR 177.2600 "e".

Pharmaceutical industry: USP CLASS VI.

index	internal diameter [mm]	external diameter [mm]	wall thickness [mm]	Operating pressure 20°C [bar]	Burst pressure 20°C [bar]	vacuum 20°C [bar]	bend radius [mm]	mass [kg/m]	Roll length [m]
IP-PHARMASTEEL-13	13	19	3	1,5	7,5	0,83	60	0,17	60
IP-PHARMASTEEL-16	16	22,4	3,2	1,3	6,5	0,83	70	0,22	60
IP-PHARMASTEEL-19	19	26	3,5	1,3	6,5	0,83	90	0,27	60
IP-PHARMASTEEL-25	25	33	4	1	5	0,83	110	0,40	60
IP-PHARMASTEEL-32	32	40,4	4,2	1	5	0,83	140	0,52	60
IP-PHARMASTEEL-38	38	47	4,5	1	5	0,83	170	0,64	30
IP-PHARMASTEEL-51	51	61	5	1	5	0,78	230	1,05	30

Note: indexes highlighted in colour - most commonly used

Approximate temperature dependence of burst pressure and working pressure for typical TPE hoses	temperature	20°C	40°C	60°C	80°C	100°C	120°C
	pressure	100%	98%	81%	57%	40%	0%