Hoses with an inner layer of polyethylene (UPE) - for many aggressive chemicals

SUPERTOP UPE®

Tried-and-tested delivery hose for acids and alkalis **Lining:** white creamy polyethylene UPE
Reinforcement: synthetic cord
Outer layer: Black EPDM rubber **Operating temp:** -40°C to +100°C

A robust delivery hose with an inner layer of chemically resistant ultra-high molecular weight polyethylene (UPE, UHMWPE). The inner layer is resistant to most acids and alkalis and many other aggressive chemicals (at elevated, but not very high temperatures), making the hose widely used in the chemical and petrochemical industries. The UPE inner layer also complies with the requirements for food hoses, is free of phthalates and polycyclic aromatic hydrocarbons (PAH), and has a low coefficient of friction during flow and prevents the medium from depositing on the walls. This makes cleaning considerably easier and also allows use in the cosmetic, pharmaceutical and food industries. Reinforced with synthetic cord, integrated copper lines to dissipate electrostatic charges. Outer layer of chemically resistant EPDM rubber, abrasion, ozone and weather resistant. Compliant with EN 12115:2011 (type M, resistance between cable ends R ≤ 100 Ω, guaranteed for cable lengths of up to 40 m).

Cleaning (food industry):

hot water	steam	hydrogen peroxide		peracetic acid		phosphoric acid	chlorine	sodium hydroxide		nitric acid	
		1%	3%	0,1%	0,5%	5%	1%	2%	5%	0,1%	3%
90°C / 12 h	130°C / 30 min	max 80°C / 30 min	max 50°C / 30 min	max 70°C / 30 min	max 50°C / 30 min	max 80°C / 30 min	max 80°C / 30 min	max 80°C / 30 min	max 50°C / 30 min	max 80°C / 30 min	max 50°C / 30 min

Standards and requirements:

Chemical hoses: EN 12115:2011 Food industry, food contact (inner layer): 1935/2004/EC, 2023/2006/EC (GMP), 10/2011/EU (simulation fluids A, B, D2), FDA 21 CFR 177.1520, BfR III.

Verification of chemical resistance: UPE chemical resistance table (pre-selection), confirmation of resistance and conditions of use by Tubes International (especially for temperatures above 50ºC).

Fitting: use spigot ("tail" to hose) ends that are smooth and do not have sharp or high notches that could cut or damage the UPE inner layer when clamped. The diameter of the spigot should be exactly matched to the diameter of the hose to ensure tightness. The copper lines should be correctly connected to the ferrules. Mount with collets or shell clamps.

SUPERTOP UPE DN76 hose with AISI 316 stainless steel TANKWAGEN end, fitted with an aluminium shell bracket.

index	internal diameter [mm]	external diameter [mm]	wall thickness [mm]	working pressure [bar]	Bursting pressure [bar]	vacuum [bar]	mass [kg/m]	Roll length [m]
IV-SUPUPE-013	13	25	6	16	64	*	0,41	60
IV-SUPUPE-019	19	31	6	16	64	*	0,54	60
IV-SUPUPE-025	25	37	6	16	64	*	0,66	60
IV-SUPUPE-032	32	45	6,5	16	64	*	0,86	60
IV-SUPUPE-038	38	52	7	16	64	*	1,10	60
IV-SUPUPE-051	51	67	8	16	64	*	1,62	60
IV-SUPUPE-063	63,5	79	7,75	16	64	*	1,90	60
IV-SUPUPE-076	76	92	8	16	64	*	2,35	60
IV-SUPUPE-102	102	118	8	16	64	*	2,96	60

Notes: indexes highlighted in colour - most commonly used.
* - Despite the lack of a steel spiral, the rigidity of the UPE means that the hose can be used to a certain extent for vacuum, which needs to be confirmed operationally.