

PVC food hoses



CRISTALLO

Unreinforced PVC hose for food substances Hose

material: Transparent PVC
Operating temp: -5°C to +60°C
Operating pressure: low - up to several bar (temperature dependent)

All-purpose, highly flexible, non-reinforced hose designed for non-pressurised (or very low pressure) transfer of water, beer, wine, spirits up to 20%, juices, beverages, other food liquids. Not recommended for milk and dairy products and for oils and fatty food substances. Also used for liquids in general industrial applications, for light chemicals (e.g. dilute acids and bases) and as a covering for pipes, hoses, cables, etc.

Standards and requirements:

Food industry, food contact: compliant with European requirements 1935/2004/EC and 10/2011/EU (simulants A, B and C), 2023/2006/EC (GMP).

index	internal diameter d [mm].	Outer diameter D [mm].	wall thickness s t [mm].	mass [kg/m]	Roll length [m]
ME-CRISTALLO-03X06	3	6	1,5	0,03	200
ME-CRISTALLO-04X06	4	6	1	0,02	200
ME-CRISTALLO-04X07	4	7	1,5	0,03	200
ME-CRISTALLO-05X08	5	8	1,5	0,04	200
ME-CRISTALLO-06X09	6	9	1,5	0,05	200
ME-CRISTALLO-07X10	7	10	1,5	0,05	100
ME-CRISTALLO-08X12	8	12	2	0,08	100
ME-CRISTALLO-10X14	10	14	2	0,10	100
ME-CRISTALLO-12X17	12	17	2,5	0,14	100
ME-CRISTALLO-13X19	13	19	3	0,19	100
ME-CRISTALLO-14X19	14	19	2,5	0,16	100
ME-CRISTALLO-16X22	16	22	3	0,22	100
ME-CRISTALLO-18X25	18	25	3,5	0,29	50
ME-CRISTALLO-20X27	20	27	3,5	0,32	50
ME-CRISTALLO-22X30	22	30	4	0,40	50
ME-CRISTALLO-25X34	25	34	4,5	0,50	50
ME-CRISTALLO-30X40	30	40	5	0,68	30
ME-CRISTALLO-35X45	35	45	5	0,76	30
ME-CRISTALLO-40X50	40	50	5	0,90	30
ME-CRISTALLO-50X60	50	60	5	1,20	30

typical PVC hose, 20°C		
d [mm]	D [mm].	Working pressure * [bar]
3	6	3,60
4	6	2,31
4	7	3,05
5	8	2,63
6	9	2,31
7	10	2,05
8	12	2,31
10	14	1,95
12	17	2,01
13	19	2,17
14	19	1,78
16	22	1,85
18	25	1,90
20	27	1,75
22	30	1,80
25	34	1,79
30	40	1,68
35	45	1,48
40	50	1,32
50	60	1,08

Note: indexes highlighted in colour - most commonly used

* - Indicative value of the recommended operating pressure at a safety factor of 5:1.

For unreinforced hoses, manufacturers usually do not specify the working pressure or burst pressure due to the less clear-cut nature of hose bursting, preceded by permanent deformation. The values given were calculated using Lame's formula: working pressure= (S/n)x(D²-d²)/(D²+d²), assuming S = 3 MPa (material stress at permanent deformation) and n=5 (safety factor). These are indicative values for a typical plasticised PVC hose. The use of a hose for a specific operating pressure should be preceded by a test under operating conditions.

Temperature dependence of burst pressure and working pressure for typical PVC hoses	temperature	20°C	30°C	40°C	50°C	60°C	70°C
	pressure	100%	74%	55%	40%	30%	22%



For gravity flow of the medium or very low pressure, a well-fitted, large-notched nozzle pressed into a soft PVC hose is the simplest solution and does not need to be secured with a band (CRISTALLO DN8 hose with PVDF plastic nozzle fitted (EM-PWB3T-06-08-PV)).