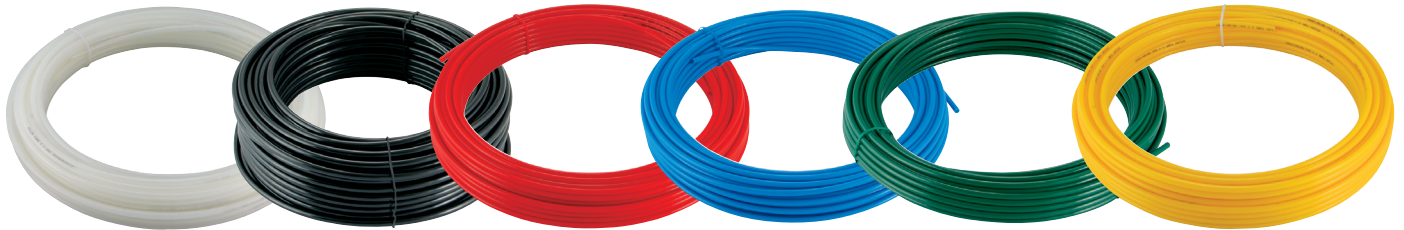
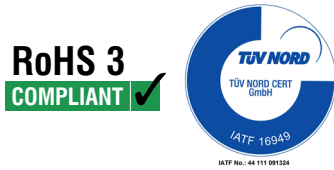


Polyamide 12 Tubes

BS 5409, DIN 73378 and DIN 74324



GAPEX®



Raw Material Properties

- Density: 1,02 g/cm³
- Shore/Hardness: 65 D
- Melting point: 173°C
- Water absorption: % 1,4
- Humidity absorption: % 0,7

Physical Properties

- High impact resistance at low temperatures
- UV and heat stability
- High pressure resistance
- Weathering resistance
- Easy to use with fittings
- Hydrolysis resistance
- Excellent diameter sensitivity
- Zinc chloride resistance
- High resistance for fuel, oil and grease oil (see over page)

ID mm	Wall Thickness mm	OD mm	Tolerance mm	Max. Working Pressure			Bending Radius mm	Burst Pressure Bar
				-10°C Bar	+20°C Bar	+50°C Bar		
1.5	0.75	3.0	± 10	42.0	27.0	20.0	15	127
2.0	1.00	4.0	± 10	42.0	27.0	20.0	15	127
2.5	0.75	4.0	± 10	31.0	20.0	15.0	20	93
3.0	1.00	5.0	± 10	31.0	20.0	15.0	30	93
4.0	1.00	6.0	± 10	29.0	18.0	14.0	35	81
6.0	1.00	8.0	± 10	21.0	13.0	10.0	55	63
7.0	1.50	10.0	± 10	24.0	14.0	11.0	50	71
8.0	1.00	10.0	± 10	16.0	10.0	7.5	85	48
9.0	1.50	12.0	± 10	21.0	13.0	10.0	80	63
10.0	1.00	12.0	± 10	12.0	7.0	6.0	120	36
11.0	1.50	14.0	± 10	16.0	10.0	7.5	120	48
13.0	1.50	16.0	± 10	12.0	7.0	6.0	130	36



Chemical Resistance Table

	PA	PE	PVC	PUR		PA	PE	PVC	PUR
	Polyamide	Polyethylene	Polyvinyl chloride soft	Polyurethane		Polyamide	Polyethylene	Polyvinyl chloride soft	Polyurethane
1 Acetic acid	4	2	3	3	100 Lemon juice	1	1	1	1
2 Acetic acid anhydride	1	3	4	4	101 Linseed oil	1	1	3	1
3 Acetone	1	1	5	4	102 Liquors	1	1	2	1
4 Aluminium salts, aq	1	4	1	2	103 Magnesium salts, aq	1	1	1	1
5 Alums, aq	1	1	1	1	104 Margarine	1	3	1	1
6 Aminobenzoic acid	2	1	3	4	105 Mercury	1	1	3	1
7 Ammonia, aq	1	1	1	4	106 Mercury salts, aq	1	1	3	1
8 Ammonia, g	1	1	1	1	107 Methanol	1	1	3	2
9 Ammonium acetate, aq	1	1	1	4	108 Methyl ethyl ketone	1	4	3	4
10 Ammonium carbonate, aq	1	1	1	4	109 Methylene chloride	3	4	4	4
11 Ammonium chloride, aq	1	1	1	1	110 Milk	1	1	1	1
12 Ammonium nitrate, aq	1	1	1	1	111 Mustard	1	1	1	1
13 Ammonium phosphate, aq	1	1	1	1	112 Nail varnish	1	1	4	4
14 Ammonium sulfate, aq	1	1	1	1	113 Nail varnish remover	1	1	4	4
15 Amyl alcohol	1	1	1	2	114 Naphthalin	1	4	2	1
16 Antifreeze	1	1	1	2	115 Nickel salts, aq	1	1	1	1
17 Barrium salts	1	1	1	1	116 Nitric acid (up to 25 %)	4	2	1	5
18 Battery acid	3	1	3	1	117 Nitrobenzoic acid	2	4	4	4
19 Beef tallow	3	1	2	1	118 Octane	1	1	4	1
20 Beer	1	1	1	1	119 Oil no. 3 (ASTM D390-59)	1	3	2	1
21 Benzaldehyde	1	1	3	3	120 Oleic acid	2	2	2	1
22 Benzoic acid	1	1	3	4	121 Olive oil	1	1	2	1
23 Benzoic acid, aq	1	1	1	4	122 Oxalic acid, aq	2	1	3	4
24 Bone fat	1	2	3	1	123 Ozone (<0.5 ppm)	1	4	3	1
25 Boric acid	1	1	1	1	124 Palm oil	1	4	3	2
26 Brake fluid	1	3	3	4	125 Paraffin	1	3	1	2
27 Bromine, aq	4	4	4	4	126 Paraffin ether	1	4	3	1
28 Bromine, l	4	4	4	4	127 Paraffin oil	1	3	1	2
29 Butane, g	1	4	1	1	128 Paraffin oil (petroleum jelly)	1	3	2	2
30 Butane, l	1	1	2	1	129 Pectin	1	1	1	1
31 n-Butanol	1	4	3	4	130 Pepper	1	1	1	1
32 n-Butyl alcohol	1	4	4	4	131 Peppermint oil	1	3	2	1
33 Butylacetate (acetic acid butyl ester)	4	4	5	4	132 Perfume	1	1	4	1
34 Butylacetate	1	2	4	4	133 Phenol	4	4	4	4
35 Calcium chloride, aq	1	1	1	1	134 Phosphone acid	4	4	1	3
36 Calcium nutrate, aq	1	1	1	1	135 Phosphorus pentoxide	3	1	1	2
37 Carbon disulfide	1	4	4	3	136 Pine needle oil	1	2	2	2
38 Carbon tetrachloride	1	4	4	3	137 Potassium carbonate	1	1	1	3
39 Carnation oil	1	4	2	1	138 Potassium chlorate, aq	2	1	1	2
40 Chlorine, g	4	4	4	4	139 Potassium chloride, aq	1	1	1	1
41 Chlorine, l	4	4	4	4	140 Potassium chromate, aq	3	1	1	1
42 Chlorobenzoic acid	3	4	4	3	141 Potassium hydroxide, aq	1	1	2	1
43 Chloroform	3	4	4	4	142 Potassium iodine, aq	1	1	1	2
44 Chlorosulfonic acid	4	4	4	4	143 Potassium nitrate, aq	1	1	1	2
45 Chrome bath	4	1	1	3	144 Potassium permanganese, aq	3	1	1	3
46 Chromic acid	4	2	3	4	145 Potassium sulfate	1	1	1	1
47 Chromosulfuric acid	4	1	2	3	146 Propane, g	1	3	1	2
48 Chromium salts	4	1	1	3	147 Propane, l	1	4	1	2
49 Citric acid	1	1	1	2	148 Pyridine	1	1	4	5
50 Cleaner	1	1	1	1	149 Rum	1	1	2	1
51 Coca-Cola	1	1	1	1	150 Sea water	1	1	1	1
52 Cocoa	1	1	1	1	151 Shampoo	1	1	1	1
53 Coconut oil	1	2	1	1	152 Silicon oil	1	1	4	1
54 Cod-liver	1	1	4	1	153 Silver salts, aq	1	1	1	1
55 Coffee	1	1	1	1	154 Soapy water	1	1	1	2
56 Cooking oil, animal	1	3	2	2	155 Soda	1	1	1	1
57 Cooking oil, vegatable	1	4	2	2	156 Sodium bicarbonate, aq	1	1	1	1
58 Corn oil	1	4	1	2	157 Sodium bisulfite, aq	1	1	1	2
59 Cresol	4	4	4	4	158 Sodium carbonate (borax), aq	1	1	1	1
60 Cresol, aq	3	4	4	4	159 Sodium carbonate, aq	1	1	1	1
61 Cyclohexane	1	1	1	2	160 Sodium chlorate	2	1	1	2
62 Cyclohexanol	1	1	5	4	161 Sodium chloride, aq	1	1	1	1
63 Cyclohexanone	1	4	5	1	162 Sodium hydroxide (caustic soda)	1	4	4	4
64 Decalin	1	1	1	2	163 Sodium hydroxide, aq	1	1	1	2
65 Detergent	1	1	2	1	164 Sodium hypochlorite	3	1	3	4
66 Dibutyl phtalate	1	3	3	3	165 Sodium nitrate, aq	1	1	1	1
67 Diesel fuel	1	2	2	1	166 sodium nitrite, aq	2	1	1	1
68 Dimethylether	1	2	2	2	167 Sodium perborate, aq	1	1	3	2
69 Dimethylformamide	1	1	4	4	168 Sodium phosphate, aq	1	1	1	2
70 1,4-Dicxane	1	1	4	4	169 Sodium silicate	1	1	1	3
71 Engine oil	1	3	3	2	170 Sodium sulfate, aq	1	1	1	1
72 Ethanol	1	1	3	1	171 Sodium sulfide, aq	1	1	1	1
73 Ether	1	4	3	3	172 Sodium sulfite, aq	1	1	1	1
74 Ethyl acetate	1	2	5	4	173 Sodium thiosulfate	1	1	1	2
75 Ethylene chloride	3	4	4	2	174 Sodium thiosulfate (antichlor),aq	1	1	1	2
76 Ethylhexanol	1	4	4	4	175 Soybean oil	1	4	2	2
77 Ferric salts	1	1	1	2	176 Spruce needle oil	1	2	3	2
78 Fizzy drink	1	1	1	1	177 Starch	1	1	1	1
79 Formaldehyde, aq	3	1	3	2	178 Stearic acid	2	4	1	1
80 Formaline	3	1	2	2	179 Sugar, aq	1	1	1	1
81 Formic acid	4	2	4	4	180 Sulfur	1	4	4	1
82 Fruit juice	1	1	1	1	181 Sulfuric acid (concentrated)	4	4	4	4
83 Fuel	1	4	4	2	182 Sulfuric acid (up to 50 %)	4	1	3	2
84 Fuel oil	1	3	4	1	183 Sulfur dioxide, g	1	1	2	3
85 Gin	1	1	2	1	184 Tar (hot tar)	1	3	3	4
86 Glycerine	1	1	1	1	185 Tartaric acid, aq	1	1	1	1
87 Glycol	1	1	1	2	186 Tea	1	1	1	1
88 Heptane	1	1	1	2	187 Tetrahydrofuran	1	3	4	4
89 Hexane	1	1	1	2	188 Tetralin (tetrahydronaphthalene)	1	4	1	2
90 Honey	1	1	1	1	189 Tin dichloride	1	1	1	1
91 Hydrochloric acid (up to 20 %)	4	1	2	2	190 Toluene	1	4	4	4
92 Hydrockloride, g	4	1	2	2	191 Trichloroethylene	2	4	4	4
93 Hydrogen preoxide, aq	2	1	3	2	192 Turpentine (oil of)	1	3	3	4
94 Ink	1	1	1	1	193 Urea, aq	1	1	1	1
95 Isooctane	1	4	1	1	194 Vanilla	1	1	1	1
96 Isoprapanol	1	1	3	3	195 Vaseline	1	3	2	1
97 Jelly	1	1	1	1	196 White spirit	1	4	3	1
98 Lactic acid	2	2	3	3	197 Wine	1	1	1	1
99 Lanolin	1	3	2	1	198 Xylene	1	4	4	4

- 1** Resistant **2** Resistant in general **3** Fairly resistant **4** Non-resistant **5** Liable to dissolve

This table has been compiled on the basis of in-house tests, the recommendations of our raw material suppliers and customer experiences. Difference in user environments will affect the performance characteristics of the product in different ways. The ratings given are therefore approximate only.