

INDUSTRIAL HOSE CATALOGUE

2008

Sales area

NA	North America
LA	Latin America
NEU	North Europe
CEU	Center Europe
SA	South Africa
AP	Asia Pacific
AU	Australia

Chart symbols

	Internal diameter
	Outside diameter
	Maximum working pressure
	Minimum bend radius
	Vacuum
	Weight

Since ALFAGOMMA continually examines ways to improve products, we reserve the right to alter specifications without prior notice.

Weights and dimensions are nominal.

Pictures shown are for illustration purpose only. Actual hose construction might be different.

Refer to local price list for items available in the different sales area, included available lengths and stock lengths.

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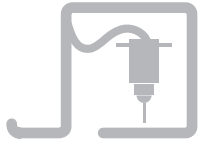
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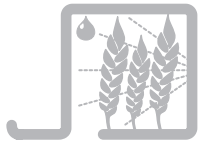
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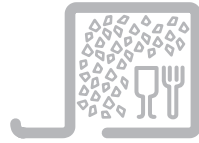
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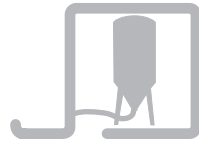
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DUCTING & VENTILATION

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
20	13/16					20	0,75	50	0,130	0,087			
25	1					25	1,00	50	0,170	0,115			
30	1 3/16					30	1,25	50	0,210	0,140			
32	1 1/4					32	1,25	50	0,230	0,155			
35	1 3/8					35	1,50	50	0,250	0,170			
38	1 1/2					38	1,50	40	0,290	0,195			
40	1 9/16					40	1,50	40	0,300	0,200			
45	1 3/4					45	1,75	40	0,350	0,235			
51	2					51	2,00	40	0,440	0,300			
60	2 3/8					60	2,50	40	0,520	0,350			
63	2 1/2					63	2,50	40	0,560	0,380			
70	2 3/4					70	2,75	40	0,630	0,420			
76	3					76	3,00	40	0,700	0,470			
80	3 1/8					80	3,00	40	0,760	0,510			
90	3 1/2					90	3,50	40	0,850	0,570			
102	4					102	4,00	40	0,990	0,670			
110	4 5/16					110	4,25	40	1,100	0,740			
120	4 3/4					120	4,75	40	1,200	0,810			
127	5					127	5,00	40	1,270	0,850			
140	5 1/2					140	5,50	35	1,450	0,970			
152	6					152	6,00	35	1,700	1,140			
160	6 5/16					160	6,25	35	1,850	1,240			
180	7 1/16					180	7,00	30	2,200	1,480			
203	8					203	8,00	30	2,450	1,650			
254	10					254	10,00	10	3,600	2,420			
305	12					305	12,00	10	4,500	3,020			
NA		LA		NEU		CEU		SA		AP		AU	

**161BL****Air ducting****UL 94 V2**

Construction: Grey PVC - abrasion and ozone resistant - self extinguishing

Reinforcement: White shock resistant rigid PVC

Use: Air, gas, fumes extraction. Air conditioning-ventilation

Temperature: -10 °C +60 °C (+14 °F +140 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
20	13/16					20	0,75	50	0,180	0,120			
25	1					25	1,00	50	0,230	0,155			
28	1 1/8					28	1,25	50	0,250	0,170			
32	1 1/4					32	1,25	50	0,300	0,200			
38	1 1/2					38	1,50	50	0,380	0,255			
51	2					102	4,00	50	0,700	0,470			
NA		LA		NEU		CEU		SA		AP		AU	

**163AL****General purpose**

Construction: Black PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: General purpose designed for gas vent, air seeder and marine bilge pump applications - ID 51 mm according to AS 1425/2.22

Temperature: -10 °C +60 °C (+14 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 9/16					20	0,75		0,100	0,067
51	2					25	1,00		0,125	0,085
60	2 3/8					30	1,25		0,145	0,097
70	2 3/4					35	1,50		0,165	0,110
76	3					40	1,50		0,180	0,120
80	3 1/8					40	1,50		0,190	0,128
90	3 1/2					45	1,75		0,215	0,145
102	4					50	2,00		0,280	0,190
120	4 3/4					60	2,50		0,325	0,220
127	5					63	2,50		0,345	0,230
140	5 1/2					70	2,75		0,380	0,255
152	6					75	3,00		0,410	0,275
160	6 5/16					80	3,00		0,450	0,300
180	7 1/16					90	3,50		0,505	0,340
203	8					100	4,00		0,570	0,380
254	10					125	5,00		0,795	0,530
305	12					150	6,00		0,955	0,640
NA		LA		NEU		CEU		SA	AP	AU



174BB

Air ducting - high temperature +100 °C (+212 °F)

UL 94 V0

Construction: Textile fabric coated with flame resistant PVC

Reinforcement: Steel helix wire

Use: Hot air, gas, fumes extraction. Air conditioning-ventilation

Temperature: -20 °C +100 °C (-4 °F +212 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 9/16					34	1,50	20	0,175	0,118
51	2					43	1,75	20	0,225	0,150
60	2 3/8					51	2,00	20	0,245	0,165
63	2 1/2					54	2,25	20	0,275	0,185
70	2 3/4					60	2,50	20	0,425	0,285
76	3					65	2,50	20	0,460	0,310
80	3 1/8					68	2,75	20	0,485	0,330
90	3 1/2					77	3,00	20	0,550	0,370
102	4					85	3,25	15	0,580	0,390
110	4 5/16					94	3,75	15	0,615	0,410
120	4 3/4					102	4,00	10	0,680	0,460
127	5					108	4,25	10	0,765	0,510
140	5 1/2					119	4,75	10	0,860	0,580
152	6					129	5,00	10	0,930	0,630
160	6 5/16					136	5,25	10	1,025	0,690
180	7 1/16					153	6,00	5	1,310	0,880
203	8					173	6,75	5	1,485	1,000
254	10					216	8,50	5	1,940	1,300
305	12					259	10,25	5	2,390	1,610
355	14					303	12,00	5	2,790	1,880
406	16					345	13,50	5	3,195	2,150
NA		LA		NEU		CEU		SA	AP	AU



178AA

Air ducting - high temperature +120 °C (+248 °F)

Construction: Black EPDM/PP fully recyclable and halogens/phtalates free

Reinforcement: Steel helix wire

Use: Hot air, gas, fumes extraction-ventilation where high temperature resistance is required

Temperature: -40 °C +120 °C (-40 °F +248 °F)

DUCTING & VENTILATION

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 9/16					44	1,75	35	0,170	0,115
45	1 3/4					49	2,00	35	0,190	0,128
51	2					55	2,25	25	0,220	0,150
60	2 3/8					64	2,50	25	0,250	0,170
63	2 1/2					67	2,75	25	0,270	0,180
70	2 3/4					74	3,00	25	0,330	0,220
76	3					80	3,00	25	0,350	0,235
80	3 1/8					84	3,25	20	0,370	0,250
90	3 1/2					94	3,75	20	0,420	0,280
102	4					106	4,25	10	0,470	0,320
110	4 5/16					114	4,50	10	0,510	0,340
120	4 3/4					124	5,00	10	0,550	0,370
127	5					132	5,25	10	0,780	0,520
130	5 1/8					135	5,25	10	0,800	0,540
140	5 1/2					145	5,75	10	0,860	0,580
152	6					157	6,25	10	0,930	0,630
160	6 5/16					165	6,50	6	0,980	0,660
180	7 1/16					185	7,25	6	1,100	0,740
203	8					209	8,25	6	1,240	0,830
254	10					260	10,25	2	1,740	1,170
305	12					311	12,25	2	2,090	1,400
355	14					362	14,25	2	2,440	1,640
406	16					412	16,25	2	2,780	1,870
NA		LA		NEU		CEU		SA	AP	AU



17100

Air ducting - polyurethane - gauge 0,4 mm

Construction: Transparent polyurethane - abrasion and ozone resistant

Reinforcement: Copper plated steel helix wire

Use: Air, gas, fumes extraction - ventilation. Also suitable for abrasive material suction - good oil mist resistance

Temperature: -40 °C +85 °C (-40 °F +185 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 9/16					46	1,75	55	0,310	0,210
51	2					57	2,25	40	0,390	0,260
63	2 1/2					69	2,75	40	0,480	0,320
76	3					82	3,25	40	0,560	0,380
80	3 1/8					88	3,50	35	0,610	0,410
102	4					109	4,25	30	0,910	0,610
127	5					134	5,25	30	1,130	0,760
140	5 1/2					147	5,75	30	1,240	0,830
152	6					160	6,25	30	1,440	0,970
160	6 5/16					168	6,75	25	1,520	1,020
203	8					210	8,25	25	1,920	1,290
254	10					262	10,25	15	2,400	1,610
305	12					313	12,25	15	2,870	1,930
315	12 3/8					323	12,75	15	2,970	2,000
NA		LA		NEU		CEU		SA	AP	AU



17200

Air ducting - polyurethane - gauge 0,8 mm

Construction: Transparent polyurethane - abrasion and ozone resistant

Reinforcement: Copper plated steel helix wire

Use: Air, gas, fumes extraction - ventilation. Also suitable for abrasive material suction - good oil mist resistance

Temperature: -40 °C +85 °C (-40 °F +185 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2					59	2,25	60	0,630	0,420
63	2 1/2					71	2,75	60	0,770	0,520
76	3					86	3,50	60	0,930	0,630
80	3 1/8					90	3,50	50	0,980	0,660
102	4					112	4,50	40	1,240	0,830
152	6					162	6,50	40	1,840	1,240
203	8					213	8,50	30	2,440	1,640
254	10					265	10,50	25	3,940	2,650
305	12					316	12,50	25	4,720	3,170
355	14					373	14,75	25	5,500	3,700
NA		LA		NEU		CEU		SA	AP	AU



17300

Air ducting - polyurethane - gauge 1,2 mm

Construction: Transparent polyurethane - abrasion and ozone resistant

Reinforcement: Copper plated steel helix wire

Use: Air, gas, fumes extraction - ventilation. Also suitable for abrasive material suction - good oil mist resistance

Temperature: -40 °C +85 °C (-40 °F +185 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 9/16					52	2,00	75	0,580	0,390
51	2					63	2,50	65	0,730	0,490
63	2 1/2					75	3,00	65	0,890	0,600
76	3					88	3,50	65	1,190	0,800
102	4					114	4,50	45	1,580	1,060
127	5					139	5,50	45	1,950	1,310
152	6					164	6,50	45	2,330	1,570
NA		LA		NEU		CEU		SA	AP	AU



17700

Air ducting - polyurethane - gauge 1,7 mm

Construction: Transparent polyurethane - abrasion and ozone resistant

Reinforcement: Copper plated steel helix wire

Use: Air, gas, fumes extraction - ventilation. Also suitable for abrasive material suction - good oil mist resistance

Temperature: -40 °C +85 °C (-40 °F +185 °F)

GAS & WELDING



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	48	2,00		0,145	0,097	
8	5/16	15	0,59	20	300	64	2,50		0,175	0,118	
10	3/8	17	0,67	20	300	80	3,00		0,205	0,138	
NA		LA		NEU		CEU		SA		AP	
										AU	



081AE

Oxygen 20 bar (300 psi)

Tube: Black synthetic elastomer
Reinforcement: High tensile textile cords
Cover: Blue synthetic elastomer - abrasion and ozone resistant
Use: Oxygen
Safety factor: 3:1
Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	48	2,00		0,145	0,097	
8	5/16	15	0,59	20	300	64	2,50		0,175	0,118	
10	3/8	17	0,67	20	300	80	3,00		0,205	0,138	
NA		LA		NEU		CEU		SA		AP	
AU											



081AH

Acetylene 20 bar (300 psi)

Tube: Black synthetic elastomer
Reinforcement: High tensile textile cords
Cover: Red synthetic elastomer - abrasion and ozone resistant
Use: Acetylene
Safety factor: 3:1
Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	25	375	48	2,00		0,140	0,095	
8	5/16	15	0,59	25	375	64	2,50		0,170	0,115	
10	3/8	17	0,67	25	375	80	3,00		0,200	0,135	
NA		LA		NEU		CEU		SA		AP	AU



088AI

LPG-natural gas 25 bar (375 psi)

Tube: Black synthetic elastomer
Reinforcement: High tensile textile cords
Cover: Orange synthetic elastomer - abrasion and ozone resistant
Use: LPG-natural gas
Safety factor: 3:1
Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
8	5/16	13	0,51	10	150	64	2,50		0,115	0,077	
NA		LA		NEU		CEU		SA		AP	



089AE

LPG-natural gas 10 bar (150 psi) UNI CIG 7140

Tube: Black synthetic elastomer
Reinforcement: High tensile textile cords
Cover: Blue synthetic elastomer - abrasion and ozone resistant
Use: Domestic gas
Safety factor: 3:1
Temperature: -10 °C +80 °C (+14 °F +176 °F)

IMQ approved

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	20	0,79	10	150	104	4,00		0,255	0,170	
NA		LA		NEU		CEU		SA		AP	



089AL

LPG-natural gas 10 bar (150 psi) UNI CIG 7140

Tube: Black synthetic elastomer
Reinforcement: High tensile textile cords
Cover: White synthetic elastomer - abrasion and ozone resistant
Use: Domestic gas
Safety factor: 3:1
Temperature: -10 °C +80 °C (+14 °F +176 °F)

IMQ approved

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	60	2,50		0,150	0,100	
8	5/16	15	0,59	20	300	80	3,00		0,180	0,120	
10	3/8	17	0,67	20	300	100	4,00		0,210	0,140	
NA		LA		NEU		CEU		SA		AP	AU



076AE

Oxygen welding 20 bar (300 psi)
EN 559

Tube: Black SBR
Reinforcement: High tensile textile cords
Cover: Blue SBR/EPDM - abrasion and ozone resistant
Use: Oxygen welding
Safety factor: 3:1
Temperature: -25 °C +80 °C (-13 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	60	2,50		0,150	0,100	
8	5/16	15	0,59	20	300	80	3,00		0,180	0,120	
9	23/64	16	0,63	20	300	90	3,50		0,200	0,135	
10	3/8	17	0,67	20	300	100	4,00		0,210	0,140	
NA		LA		NEU		CEU		SA		AP	AU



076AH

Acetylene welding 20 bar (300 psi)
EN 559

Tube: Black SBR
Reinforcement: High tensile textile cords
Cover: Red SBR/EPDM - abrasion and ozone resistant
Use: Acetylene welding
Safety factor: 3:1
Temperature: -25 °C +80 °C (-13 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	60	2,50		0,150	0,100	
8	5/16	15	0,59	20	300	80	3,00		0,180	0,120	
10	3/8	17	0,67	20	300	100	4,00		0,210	0,140	
NA		LA		NEU		CEU		SA		AP	AU



076AI

LPG welding 20 bar (300 psi)
EN 559

Tube: Black NBR
Reinforcement: High tensile textile cords
Cover: Orange SBR/EPDM - abrasion and ozone resistant
Use: LPG welding
Safety factor: 3:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	12	0,47	20	300	50	2,00		0,280	0,190	
6	1/4	13	0,51	20	300	60	2,50		0,300	0,200	
6+8	1/4+5/16	13+15	0,51+0,59	20	300	80	3,00		0,330	0,220	
6+9	1/4+23/64	16	0,63	20	300	90	3,50		0,450	0,300	
8	5/16	15	0,59	20	300	80	3,00		0,360	0,240	
10	3/8	17	0,67	20	300	100	4,00		0,420	0,280	
NA		LA		NEU		CEU		SA	AP	AU	



076EH

Oxygen/acetylene twin welding 20 bar (300 psi)
EN 559

Tube: Black SBR
Reinforcement: High tensile textile cords
Cover: Blue, red SBR/EPDM - abrasion and ozone resistant
Use: Oxygen/Acetylene twin welding
Safety factor: 3:1
Temperature: -25 °C +80 °C (-13 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	60	2,50		0,300	0,200	
8	5/16	15	0,59	20	300	80	3,00		0,360	0,240	
10	3/8	17	0,67	20	300	100	4,00		0,420	0,280	
NA		LA		NEU		CEU		SA		AP	AU



076EI

Oxygen/LPG twin welding 20 bar (300 psi)
EN 559

Tube: Black SBR
Reinforcement: High tensile textile cords
Cover: Blue, orange SBR/EPDM - abrasion and ozone resistant
Use: Oxygen/LPG twin welding
Safety factor: 3:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	12	0,47	12	180	50	2,00		0,140	0,095	
10	3/8	19	0,75	12	180	100	4,00		0,290	0,195	
NA		LA		NEU		CEU		SA		AP	AU



071AE

Oxygen welding 12 bar (180 psi)
AS 1335

Tube: Black SBR
Reinforcement: High tensile textile cords
Cover: Blue SBR/EPDM - abrasion and ozone resistant
Use: Oxygen welding
Safety factor: 3:1
Temperature: -25 °C +80 °C (-13 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	12	0,47	12	180	50	2,00		0,140	0,095	
NA		LA		NEU		CEU		SA		AP	AU



071AH

Acetylene welding 12 bar (180 psi)
AS 1335

Tube: Black SBR
Reinforcement: High tensile textile cords
Cover: Red SBR/EPDM - abrasion and ozone resistant
Use: Acetylene welding
Safety factor: 3:1
Temperature: -25 °C +80 °C (-13 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	12	0,47	26	390	50	2,00		0,140	0,095	
NA		LA		NEU		CEU		SA		AP	AU



078AI

LPG-natural gas 26 bar (390 psi)
AS/NZS 1869/C

Tube: Black NBR
Reinforcement: High tensile textile cords
Cover: Orange SBR/EPDM - abrasion and ozone resistant
Use: LPG - natural gas
Safety factor: 4:1
Temperature: -20 °C +65 °C (-4 °F +149 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	12	0,47	12	180	50	2,00		0,280	0,190	
NA		LA		NEU		CEU		SA		AP AU	



071EH

Oxygen/acetylene twin welding 12 bar (180 psi)
AS 1335

Tube: Black SBR
Reinforcement: High tensile textile cords
Cover: Blue, red SBR/EPDM - abrasion and ozone resistant
Use: Oxygen/Acetylene twin welding
Safety factor: 3:1
Temperature: -25 °C +80 °C (-13 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	12	0,47	26	390	50	2,00		0,280	0,190	
NA		LA		NEU		CEU		SA		AP AU	

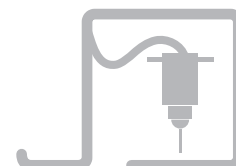


078EI

Oxygen/LPG 26 bar (390 psi)
AS/NZS 1869/C

Tube: Black SBR
Reinforcement: High tensile textile cords
Cover: Blue, orange SBR/EPDM - abrasion and ozone resistant
Use: Oxygen/LPG twin welding
Safety factor: 4:1
Temperature: -20 °C +65 °C (-4 °F +149 °F)

COMPRESSED AIR



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	10	0,39	20	300	24	1,00		0,065	0,044
8	5/16	12	0,47	20	300	32	1,25		0,080	0,054
10	3/8	15	0,59	20	300	40	1,50		0,110	0,075
13	1/2	19	0,75	20	300	52	2,00		0,180	0,120
16	5/8	23	0,91	20	300	64	2,50		0,260	0,175
19	3/4	26	1,02	20	300	76	3,00		0,300	0,200
25	1	33	1,30	20	300	100	4,00		0,440	0,300

NA	LA	NEU	CEU	SA	AP	AU
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195AT

Compressed air 20 bar (300 psi) - polyurethane pneumatic tools

Tube: Black polyurethane - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Light blue synthetic elastomer - abrasion and ozone resistant

Use: Compressed air. Specially designed for pneumatic tools and paint spray

Safety factor: 3:1

Temperature: -20 °C +60 °C (-4 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	12	0,47	20	300	48	2,00		0,115	0,077
8	5/16	14	0,55	20	300	64	2,50		0,140	0,095
10	3/8	16	0,63	20	300	80	3,00		0,170	0,115
13	1/2	19	0,75	20	300	104	4,00		0,205	0,138
19	3/4	27	1,06	20	300	152	6,00		0,370	0,250
25	1	34	1,34	20	300	200	8,00		0,530	0,360

NA	LA	NEU	CEU	SA	AP	AU
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191AK

Compressed air 20 bar (300 psi) - PVC exceeds AS/NZS 2554/B

Tube: Black PVC - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Yellow ribbed PVC with longitudinal blue stripes - abrasion and ozone resistant

Use: Compressed air and general industrial applications.

Also suitable for crop spraying of fertilizers, pesticides and weed killers

Safety factor: 3,2:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
8	5/16	14	0,55	16	240	40	1,50		0,145	0,097	
10	3/8	16	0,63	16	240	50	1,50		0,170	0,115	
13	1/2	19	0,75	16	240	65	2,50		0,210	0,140	

NA	LA	NEU	CEU	SA	AP	AU
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192AE

Compressed air 16 bar (240 psi) - PVC AS/NZS 2554/B

Tube: Black PVC - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Blue PVC - abrasion and ozone resistant

Use: Compressed air and general industrial applications.

Good flexibility at low temperature

Safety factor: 4:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch		kg/m	lb/ft
5	3/16	10	0,39	20	300	40	1,50		0,085	0,057
6	1/4	11	0,43	20	300	48	2,00		0,090	0,060
8	5/16	13	0,51	20	300	64	2,50		0,105	0,070
10	3/8	15	0,59	20	300	80	3,00		0,130	0,087
13	1/2	19	0,75	20	300	104	4,00		0,210	0,140
16	5/8	23	0,91	20	300	128	5,00		0,300	0,200
19	3/4	27	1,06	20	300	152	6,00		0,405	0,270
25	1	34	1,34	20	300	200	8,00		0,580	0,390
NA		LA		NEU		CEU		SA	AP	AU



180AA

Compressed air 20 bar (300 psi)

Tube: Black synthetic elastomer - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black synthetic elastomer - abrasion and ozone resistant

Use: Compressed air and general industrial applications.

Also suitable for crop spraying of fertilizers, pesticides and weed killers

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch		kg/m	lb/ft
6	1/4	13	0,51	20	300	48	2,00		0,145	0,097
8	5/16	15	0,59	20	300	64	2,50		0,175	0,118
10	3/8	17	0,67	20	300	80	3,00		0,205	0,138
13	1/2	21	0,83	20	300	104	4,00		0,300	0,200
16	5/8	25	0,98	20	300	128	5,00		0,395	0,265
19	3/4	29	1,14	20	300	152	6,00		0,465	0,350
25	1	36	1,42	20	300	200	8,00		0,640	0,480
NA		LA		NEU		CEU		SA	AP	AU



185AA

Compressed air 20 bar (300 psi) - standard duty exceeds DIN 20018/1

Tube: Black synthetic elastomer - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black synthetic elastomer with longitudinal yellow stripes - abrasion and ozone resistant

Use: Compressed air and general industrial applications

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch		kg/m	lb/ft
6	1/4	13	0,51	20	300	48	2,00		0,145	0,097
8	5/16	15	0,59	20	300	64	2,50		0,175	0,118
10	3/8	17	0,67	20	300	80	3,00		0,205	0,138
13	1/2	21	0,83	20	300	104	4,00		0,300	0,200
16	5/8	25	0,98	20	300	128	5,00		0,395	0,265
19	3/4	29	1,14	20	300	152	6,00		0,465	0,350
25	1	36	1,42	20	300	200	8,00		0,640	0,480
NA		LA		NEU		CEU		SA	AP	AU



185AH

Compressed air 20 bar (300 psi) - standard duty

Tube: Black synthetic elastomer - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Red synthetic elastomer - abrasion and ozone resistant

Use: Compressed air and general industrial applications

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch		kg/m	lb/ft
13	1/2	21	0,83	20	300	104	4,00		0,300	0,200
19	3/4	29	1,14	20	300	152	6,00		0,465	0,350
25	1	36	1,42	20	300	200	8,00		0,640	0,480
NA		LA		NEU		CEU		SA	AP	AU



185AK

Compressed air 20 bar (300 psi) - standard duty

Tube: Black synthetic elastomer - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Yellow synthetic elastomer - abrasion and ozone resistant

Use: Compressed air and general industrial applications

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch		kg/m	lb/ft
6	1/4	14	0,55	20	300	48	2,00		0,185	0,125
8	5/16	17	0,67	20	300	64	2,50		0,260	0,175
10	3/8	19	0,75	20	300	80	3,00		0,300	0,200
13	1/2	23	0,91	20	300	104	4,00		0,415	0,280
14	9/16	23	0,91	20	300	112	4,50		0,355	0,240
16	5/8	26	1,02	20	300	128	5,00		0,450	0,300
19	3/4	30	1,18	20	300	152	6,00		0,575	0,390
25	1	37	1,46	20	300	200	8,00		0,775	0,520
NA		LA		NEU		CEU		SA	AP	AU



186AA

Compressed air 20 bar (300 psi) - heavy duty

Tube: Black synthetic elastomer - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black synthetic elastomer - abrasion and ozone resistant

Use: Compressed air and general industrial applications

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
6	1/4	13	0,51	20	300	48	2,00		0,160	0,108			
8	5/16	15	0,59	20	300	64	2,50		0,190	0,128			
10	3/8	17	0,67	20	300	80	3,00		0,220	0,150			
13	1/2	21	0,83	20	300	104	4,00		0,310	0,210			
16	5/8	25	0,98	20	300	128	5,00		0,430	0,290			
19	3/4	29	1,14	20	300	152	6,00		0,550	0,370			
25	1	35	1,38	20	300	200	8,00		0,690	0,460			
NA		LA		NEU		CEU		SA		AP		AU	



175AA

Compressed air 20 bar (300 psi) - standard duty

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black SBR - abrasion and ozone resistant

Use: Compressed air and general industrial applications

Safety factor: 3:1

Temperature: -25 °C +80 °C (-13 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	16	0,63	20	300	48	2,00		0,240	0,160
8	5/16	16	0,63	20	300	64	2,50		0,210	0,140
10	3/8	18	0,71	20	300	80	3,00		0,270	0,180
13	1/2	22	0,87	20	300	104	4,00		0,370	0,250
16	5/8	25	0,98	20	300	128	5,00		0,450	0,300
19	3/4	29	1,14	17	250	152	6,00		0,570	0,380
25	1	36	1,42	14	200	200	8,00		0,760	0,510
NA		LA	NEU	CEU		SA		AP	AU	



175AH

Compressed air 20 bar (300 psi) - standard duty

Tube: Black EPDM - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Red EPDM - abrasion and ozone resistant

Use: Compressed air and general industrial applications

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
10	3/8	17	0,67	20	300	80	3,00		0,220	0,150			
13	1/2	21	0,83	20	300	104	4,00		0,310	0,210			
19	3/4	29	1,14	20	300	152	6,00		0,550	0,370			
25	1	35	1,38	20	300	200	8,00		0,690	0,460			
NA		LA		NEU		CEU		SA		AP		AU	



175AK

Compressed air 20 bar (300 psi) - standard duty

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Yellow SBR - abrasion and ozone resistant

Use: Compressed air and general industrial applications

Safety factor: 3:1

Temperature: -25 °C +80 °C (-13 °F +176 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
6	1/4	14	0,55	20	300	48	2,00		0,190	0,128			
8	5/16	17	0,67	20	300	64	2,50		0,260	0,175			
10	3/8	19	0,75	20	300	80	3,00		0,300	0,200			
13	1/2	23	0,91	20	300	104	4,00		0,410	0,275			
16	5/8	26	1,02	20	300	128	5,00		0,480	0,320			
19	3/4	30	1,18	20	300	152	6,00		0,620	0,420			
25	1	37	1,46	20	300	200	8,00		0,850	0,570			
NA		LA		NEU		CEU		SA		AP		AU	



176AA

Compressed air 20 bar (300 psi) - heavy duty

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black SBR - abrasion and ozone resistant

Use: Compressed air designed for heavy duty applications

Safety factor: 3:1

Temperature: -25 °C +80 °C (-13 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
30	1 3/16	42	1,65	10	150				0,960	0,650	
32	1 1/4	44	1,73	10	150				1,020	0,690	
35	1 3/8	47	1,85	10	150				1,110	0,750	
38	1 1/2	50	1,97	10	150				1,190	0,800	
40	1 9/16	52	2,05	10	150				1,240	0,830	
48	1 7/8	60	2,36	10	150				1,460	0,980	
51	2	63	2,48	10	150				1,560	1,050	

NA	LA	NEU	CEU	SA	AP	AU
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154AA

Air-water delivery 10 bar (150 psi)

Tube: Black SBR

Reinforcement: High tensile textile cords

Cover: Black SBR - abrasion and ozone resistant

Use: Compressed air and water delivery

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	20	300				0,540	0,360	
22	7/8	32	1,26	20	300				0,610	0,410	
25	1	35	1,38	20	300				0,680	0,460	
28	1 1/8	38	1,50	20	300				0,780	0,520	
30	1 3/16	42	1,65	20	300				1,010	0,680	
32	1 1/4	44	1,73	20	300				1,060	0,710	
35	1 3/8	47	1,85	20	300				1,140	0,770	
38	1 1/2	50	1,97	20	300				1,240	0,830	
40	1 9/16	52	2,05	20	300				1,290	0,870	
45	1 3/4	57	2,24	20	300				1,440	0,970	
51	2	65	2,56	20	300				1,630	1,100	
55	2 1/6	69	2,72	20	300				1,730	1,160	
60	2 3/8	76	2,99	20	300				2,160	1,450	
63	2 1/2	79	3,11	20	300				2,250	1,510	
76	3	92	3,62	20	300				2,750	1,850	
90	3 1/2	106	4,17	20	300				3,180	2,140	
102	4	118	4,65	20	300				3,600	2,420	
152	6	170	6,69	20	300				6,100	4,100	

NA	LA	NEU	CEU	SA	AP	AU
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155AA

Compressed air 20 bar (300 psi) - heavy duty

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black SBR - abrasion and ozone resistant

Use: Compressed air designed for heavy duty applications

Safety factor: <= 51 mm 3:1 >= 55 mm 2,5:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	21	0,83	20	300				0,320	0,215	
19	3/4	29	1,14	20	300				0,560	0,380	
25	1	35	1,38	20	300				0,700	0,470	
32	1 1/4	44	1,73	20	300				1,090	0,730	
38	1 1/2	50	1,97	20	300				1,260	0,850	
51	2	65	2,56	20	300				1,660	1,120	
63	2 1/2	79	3,11	20	300				2,300	1,550	
76	3	92	3,62	20	300				2,810	1,890	
102	4	118	4,65	20	300				3,670	2,470	

NA	LA	NEU	CEU	SA	AP	AU
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155AK

Compressed air 20 bar (300 psi) - heavy duty

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Yellow SBR - abrasion and ozone resistant

Use: Compressed air designed for heavy duty applications

Safety factor: <= 51 mm 3:1 >= 63 mm 2,5:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	25	0,98	40	600	65	2,50		0,650	0,440	
19	3/4	31	1,22	40	600	95	3,75		0,810	0,540	
25	1	37	1,46	40	600	125	5,00		1,010	0,680	
32	1 1/4	44	1,73	40	600	160	6,25		1,240	0,830	
38	1 1/2	52	2,05	40	600	190	7,50		1,660	1,120	
51	2	65	2,56	40	600	255	10,00		2,350	1,580	
63	2 1/2	83	3,27	30	450	315	12,50		3,570	2,400	
76	3	96	3,78	30	450	380	15,00		4,260	2,860	
102	4	122	4,80	30	450	510	20,00		6,150	4,130	
NA		LA		NEU		CEU		SA		AP	AU



130AK

Compressed air 40 bar (600 psi) steel reinforced

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile steel cords

Cover: Yellow SBR - abrasion and ozone resistant - pin pricked

Use: High pressure compressed air designed for heavy duty mine and quarry applications where long service life and maximum safety is required

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	40	600	125	5,00		0,780	0,520	
38	1 1/2	52	2,05	40	600	190	7,50		1,440	0,970	
51	2	65	2,56	40	600	225	9,00		2,190	1,470	
63	2 1/2	81	3,19	40	600	315	12,50		3,500	2,350	
76	3	94	3,70	40	600	380	15,00		4,150	2,790	
NA		LA		NEU		CEU		SA		AP	AU



133AK

Compressed air 40 bar (600 psi) high temperature - steel reinforced

Tube: Black chlorobutyl - oil mist and high temperature resistant

Reinforcement: High tensile steel cords

Cover: Yellow EPDM - abrasion and ozone resistant - pin pricked

Use: High pressure compressed air designed for heavy duty mine and quarry applications where long service life and maximum safety is required

Safety factor: 4:1

Temperature: -40 °C +150 °C (-40 °F +300 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	70	2,76	80	1200	255	10,00		3,100	2,080	
NA		LA		NEU		CEU		SA		AP	
										AU	



132AE

Compressed air 80 bar (1200 psi) high temperature - steel braided

Tube: Black chlorobutyl - oil mist and high temperature resistant

Reinforcement: High tensile steel wire braids

Cover: Blue EPDM - abrasion and ozone resistant - pin pricked

Use: High pressure compressed air designed for heavy duty mine and quarry applications where long service life and maximum safety is required.

Designed for use of EN 853 2ST fittings

Safety factor: 4:1

Temperature: -40 °C +150 °C (-40 °F +300 °F)
with peaks of 232 °C (450 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	12	0,47	20	300	36	1,50		0,140	0,095	
10	3/8	16	0,63	20	300	60	2,50		0,185	0,125	
13	1/2	19	0,75	20	300	78	3,00		0,235	0,160	
16	5/8	23	0,91	20	300	96	3,75		0,325	0,220	
19	3/4	26	1,02	20	300	114	4,50		0,370	0,250	
NA		LA		NEU		CEU		SA		AP	ALI



179AA

Push-loc/push-on

Tube: Black NBR/SBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black SBR/CR - oil, abrasion and ozone resistant

Use: "Push-on" compressed air in automotive assembly lines and general industrial applications

Safety factor: 4:1

Temperature: -20 °C +70 °C (-4 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	12	0,47	20	300	36	1,50		0,140	0,095	
10	3/8	16	0,63	20	300	60	2,50		0,185	0,125	
13	1/2	19	0,75	20	300	78	3,00		0,235	0,160	
16	5/8	23	0,91	20	300	96	3,75		0,325	0,220	
NA		LA		NEU		CEU		SA		AP	



179AB

Push-loc/push-on

Tube: Black NBR/SBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Grey SBR/CR - oil, abrasion and ozone resistant

Use: "Push-on" compressed air in automotive assembly lines and general industrial applications

Safety factor: 4:1

Temperature: -20 °C +70 °C (-4 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
11	7/16	18	0,71	10	150	70	2,75		0,210	0,140	
13	1/2	25	0,98	10	150	100	4,00		0,470	0,320	
NA		LA		NEU		CEU		SA		AP	



165AA

Air brake 10 bar (150 psi)

DIN 74310

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Black EPDM - abrasion and ozone resistant

Use: Air brake hose

Safety factor: 2,5:1

Temperature: -40 °C +70 °C (-40 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
10,0	3/8	19,0	0,75	20	300	90	3,50		0,280	0,190	
14,5	37/64	25,5	1,00	20	300	115	4,50		0,450	0,300	
NA		LA		NEU		CEU		SA		AP	



166AA

Air brake 20 bar (300 psi)

SAE J1402

Tube: Black NBR

Reinforcement: High tensile textile cords

Cover: Black NBR - abrasion and ozone resistant

Use: Air brake hose

Safety factor: 3:1

Temperature: -40 °C +70 °C (-40 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	25	0,98	20	300	75	3,00		0,470	0,320	
20	13/16	34	1,34	20	300	100	4,00		0,820	0,550	
22	7/8	36	1,42	20	300	100	4,00		0,890	0,600	
30	1 3/16	46	1,81	20	300	150	6,00		1,110	0,750	
35	1 3/8	53	2,09	20	300	250	10,00		1,460	0,980	
NA		LA		NEU		CEU		SA		AP	
										AU	



160AA

Railway air brake 20 bar (300 psi)

BS 3682/1 AS 2435 UNE 25289 UIC 830-1/V

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile braids

Cover: Black SBR/NBR - abrasion and ozone resistant

Use: Railway air brake

Safety factor: 4:1

Temperature: -25 °C +65 °C (-13 °F +150 °F)

HOT AIR



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	67	2,64	10	150	255	10,00		1,510	1,010	
63	2 1/2	79	3,11	10	150	315	12,00		1,890	1,220	
76	3	92	3,62	10	150	380	15,00		2,350	1,580	
NA		LA		NEU		CEU		SA		AP	AU



952AA

Hot air blower 10 bar (150 psi) - soft wall external textile braid

Tube: Black EPDM - heat resistant

Reinforcement: High tensile textile braids

Use: Hot air connection from volumetric compressor to bulk food/material road tanker

Safety factor: 3:1

Temperature: -40 °C +180 °C (-40 °F +356 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	67	2,64	10	150	255	10,00		1,630	1,100	
60	2 3/8	76	2,99	10	150	300	12,00		1,960	1,320	
76	3	92	3,62	10	150	380	15,00		2,510	1,690	
NA		LA		NEU		CEU		SA		AP	AU



952LA

Hot air blower 10 bar (150 psi) - soft wall external textile braid

Tube: White EPDM - heat resistant

Reinforcement: High tensile textile braids

Use: Hot air connection from volumetric compressor to bulk food/material road tanker

Safety factor: 3:1

Temperature: -40 °C +180 °C (-40 °F +356 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	67	2,64	10	150	255	10,00		1,620	1,090	
76	3	92	3,62	10	150	380	15,00		2,280	1,530	
NA		LA		NEU		CEU		SA		AP	AU



952LE

Hot air blower 10 bar (150 psi) - soft wall

Tube: White EPDM - heat resistant

Reinforcement: High tensile textile cords

Cover: Blue EPDM - heat, abrasion and ozone resistant

Use: Hot air connection from volumetric compressor to bulk food/material road tanker

Safety factor: 3:1

Temperature: -40 °C +180 °C (-40 °F +356 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	63	2,48	10	150	153	6,00	100	1,480	0,990	
51	2	67	2,64	10	150	153	6,00	100	1,740	1,170	
63	2 1/2	77	3,03	10	150	189	7,50	100	1,970	1,320	
76	3	90	3,54	10	150	228	9,00	90	2,340	1,570	
76	3	92	3,62	10	150	228	9,00	90	2,690	1,810	
102	4	116	4,57	10	150	306	12,00	90	3,220	2,160	
NA		LA		NEU		CEU		SA	AP		AU

NA	LA	NEU	CEU	SA	AP	AU
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902AA

Hot air blower 10 bar (150 psi) - hard wall

Tube: Black EPDM - heat resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black EPDM - heat, abrasion and ozone resistant

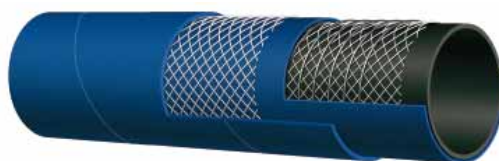
Use: Hot air connection from volumetric compressor to bulk food/material road tanker. Special light weight and flexible construction

Safety factor: 3:1

Temperature: -40 °C +180 °C (-40 °F +356 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	90	3.54	10	150	228	9.00	90	2,260	1,520	

NA	LA	NEU	CEU	SA	AP	AU
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902AE

Hot air blower 10 bar (150 psi) - hard wall

Tube: Black EPDM - heat resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Blue EPDM - heat, abrasion and ozone resistant

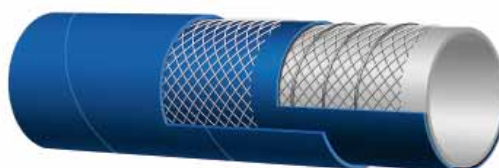
Use: Hot air connection from volumetric compressor to bulk food/material road tanker. Special light weight and flexible construction

Safety factor: 3:1

Temperature: -40 °C +180 °C (-40 °F +356 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
42	1 5/8	54	2,13	10	150	126	5,00	100	1,280	0,860
51	2	63	2,48	10	150	153	6,00	100	1,510	1,010
53	2 1/8	65	2,56	10	150	159	6,25	100	1,560	1,050
63	2 1/2	77	3,03	10	150	189	7,50	90	2,310	1,550
76	3	90	3,54	10	150	228	9,00	90	2,740	1,840
90	3 1/2	104	4,09	10	150	270	10,50	90	3,350	2,250

NA	LA	NEU	CEU	SA	AP	AU
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902LE

Hot air blower 10 bar (150 psi) - hard wall

Tube: White EPDM - heat resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Blue EPDM - heat, abrasion and ozone resistant

Use: Hot air connection from volumetric compressor to bulk food/material road tanker. Special light weight and flexible construction

Safety factor: 3:1

Temperature: -40 °C +180 °C (-40 °F +356 °F)

WATER & LIQUIDS



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	17	0,67	5	75				0,115	0,077
16	5/8	20	0,79	5	75				0,140	0,095
19	3/4	24	0,94	5	75				0,210	0,140
25	1	31	1,22	5	75				0,360	0,240
30	1 3/16	38	1,50	3	45				0,530	0,360
32	1 1/4	40	1,57	3	45				0,590	0,400
NA		LA		NEU		CEU		SA	AP	AU



292AK

Garden irrigation - PVC

Tube: Black PVC

Reinforcement: High tensile textile cords

Cover: Yellow PVC - abrasion and ozone resistant

Use: General purpose irrigation

Safety factor: <= 25 mm 2,5:1 >=30 mm 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	17	0,67	4	60				0,100	0,067
16	5/8	20	0,79	4	60				0,130	0,087
19	3/4	24	0,94	4	60				0,200	0,135
25	1	31	1,22	4	60				0,325	0,220
NA		LA		NEU		CEU		SA	AP	AU



292GG

Garden irrigation - PVC

Tube: Green transparent PVC

Reinforcement: High tensile textile cords

Cover: Green transparent PVC - abrasion and ozone resistant

Use: General purpose irrigation

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
12,5	1/2	16,5	0,65	10	150				0,130	0,087
15,0	19/32	19,0	0,75	8	120				0,160	0,108
19,0	3/4	24,4	0,96	7	100				0,250	0,170
25,0	1	30,4	1,20	6	90				0,390	0,260
NA		LA		NEU		CEU		SA	AP	AU



291KG

Antitorsion garden irrigation - PVC

Tube: Yellow non-toxic PVC

Reinforcement: High tensile knitted textile cords

Cover: Green PVC - abrasion and ozone resistant

Use: General purpose irrigation.

Special knitted construction

Safety factor: 2,5:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
12,5	1/2	17,1	0,67	12	180				0,140	0,095
15,0	19/32	20,2	0,80	10	150				0,175	0,118
19,0	3/4	26,4	1,04	9	135				0,270	0,180
25,0	1	33,0	1,30	8	120				0,420	0,280
NA		LA		NEU		CEU		SA	AP	AU



293LK

Premium antitorsion garden irrigation - PVC

Tube: White non-toxic PVC

Reinforcement: High tensile knitted textile cords

Cover: Yellow PVC - abrasion and ozone resistant

Use: General purpose irrigation

Special heavy duty knitted construction

Safety factor: 2,5:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
3	1/8	5	0,20							0,020	0,013
4	5/32	6	0,24							0,020	0,013
5	3/16	8	0,31							0,040	0,027
6	1/4	9	0,35							0,045	0,030
7	9/32	11	0,43							0,070	0,047
8	5/16	12	0,47							0,080	0,054
10	3/8	14	0,55							0,095	0,064
12	15/32	16	0,63							0,110	0,075
14	9/16	19	0,75							0,160	0,108
16	5/8	22	0,87							0,220	0,150
18	23/32	24	0,94							0,245	0,165
20	13/16	26	1,02							0,265	0,180
22	7/8	28	1,10							0,290	0,195
25	1	32	1,26							0,415	0,280
NA	LA	NEU	CEU	SA	AP	AU					



49000

General purpose tubing - PVC
FDA 90/128/EC A+B+C AS 2070

Tube: Transparent non-toxic PVC
Use: General purpose food quality tubing
 Sterilize with 5% soda solution
Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
5	3/16	10	0,39	20	300					0,075	0,050
6	1/4	11	0,43	20	300					0,080	0,054
6	1/4	12	0,47	15	225					0,100	0,067
8	5/16	13	0,51	15	225					0,095	0,064
8	5/16	14	0,55	15	225					0,115	0,077
10	3/8	15	0,59	15	225					0,115	0,077
10	3/8	16	0,63	15	225					0,135	0,090
13	1/2	19	0,75	10	150					0,165	0,110
13	1/2	20	0,79	10	150					0,215	0,145
16	5/8	22	0,87	10	150					0,215	0,145
16	5/8	23	0,91	10	150					0,260	0,175
19	3/4	26	1,02	10	150					0,300	0,200
19	3/4	27	1,06	10	150					0,350	0,235
22	7/8	29	1,14	10	150					0,335	0,225
25	1	33	1,30	10	150					0,415	0,280
25	1	35	1,38	10	150					0,555	0,370
30	1 3/16	38	1,50	7	100					0,520	0,350
32	1 1/4	42	1,65	7	100					0,690	0,460
38	1 1/2	48	1,89	7	100					0,820	0,550
51	2	63	2,48	6	90					1,320	0,890
NA	LA	NEU	CEU	SA	AP	AU					



49100

IANESCO approved

General purpose food quality - PVC
FDA 90/128/EC A+B+C AS 2070

Tube: Transparent non-toxic PVC
Reinforcement: High tensile textile cords
Cover: Transparent PVC with longitudinal red stripes - abrasion and ozone resistant
Use: General purpose food quality. Also suitable for compressed air. Oil mist resistant.
 Sterilize with 5% soda solution
Safety factor: 3:1
Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
10	3/8	17	0,67	10	150	80	3,00			0,205	0,138
13	1/2	19	0,75	10	150	104	4,00			0,205	0,138
16	5/8	23	0,91	10	150	128	5,00			0,295	0,200
19	3/4	26	1,02	10	150	152	6,00			0,345	0,230
22	7/8	30	1,18	10	150	176	7,00			0,455	0,310
25	1	33	1,30	10	150	200	8,00			0,510	0,340
32	1 1/4	44	1,73	7	100	256	10,00			0,955	0,640
NA	LA	NEU	CEU	SA	AP	AU					



284AA

Water delivery 10 bar (150 psi)

Tube: Black synthetic elastomer - oil mist resistant
Reinforcement: High tensile textile cords
Cover: Black synthetic elastomer with longitudinal green stripes - abrasion and ozone resistant
Use: Air and water delivery
Safety factor: 3:1
Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
13	1/2	19	0,75	10	150	104	4,00			0,205	0,138
19	3/4	26	1,02	10	150	152	6,00			0,345	0,230
25	1	33	1,30	10	150	200	8,00			0,510	0,340
NA	LA	NEU	CEU	SA	AP	AU					



284AH

Water delivery 10 bar (150 psi)

Tube: Black synthetic elastomer - oil mist resistant
Reinforcement: High tensile textile cords
Cover: Red synthetic elastomer - abrasion and ozone resistant
Use: Air and water delivery
Safety factor: 3:1
Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2			5	75				0,210	0,140	
51	2			5	75				0,270	0,180	
63	2 1/2			4	60				0,380	0,255	
76	3			4	60				0,530	0,360	
102	4			4	60				0,710	0,480	
152	6			3	45				1,180	0,790	
203	8			3	45				1,800	1,210	

NA	LA	NEU	CEU	SA	AP	AU
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286EE

Water discharge - PVC - lay flat - standard duty

Tube: Blue PVC

Reinforcement: High tensile textile cords

Cover: Blue PVC - abrasion and ozone resistant

Use: Lay flat water discharge

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			10	150				0,190	0,128	
32	1 1/4			9	135				0,240	0,160	
38	1 1/2			8	120				0,300	0,200	
45	1 3/4			8	120				0,350	0,235	
51	2			8	120				0,410	0,275	
63	2 1/2			8	120				0,560	0,380	
76	3			8	120				0,680	0,460	
102	4			7	100				1,000	0,670	
152	6			4	60				1,650	1,110	

NA	LA	NEU	CEU	SA	AP	AU
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288HH

Water discharge - PVC - lay flat - heavy duty

Tube: Red PVC

Reinforcement: High tensile textile cords

Cover: Red PVC - abrasion and ozone resistant

Use: Lay flat water discharge

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
51	2	59	2,32	5	75					0,700	0.470
63	2 1/2	71	2,80	5	75					0,850	0.570
76	3	84	3,31	5	75					1,230	0.830
102	4	110	4,33	5	75					1,660	1,120
152	6	160	6,30	5	75					2,420	1,630
203	8	213	8,39	5	75					3,570	2,400
254	10	264	10,39	5	75					4,390	2.950

NA	LA	NEU	CEU	SA	AP	AU
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250AA

Water discharge 5 bar (75 psi) - lay flat

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Black EPDM - abrasion and ozone resistant

Use: Lay flat water discharge

Safety factor: ≤ 102 mm 3:1 ≥ 152 mm 2:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
30	1 3/16	38	1,50	10	150				0,430	0,290
32	1 1/4	40	1,57	10	150				0,460	0,310
35	1 3/8	43	1,69	10	150				0,510	0,340
38	1 1/2	46	1,81	10	150				0,540	0,360
40	1 9/16	48	1,89	10	150				0,570	0,380
45	1 3/4	53	2,09	10	150				0,660	0,440
51	2	59	2,32	10	150				0,730	0,490
60	2 3/8	68	2,68	10	150				0,860	0,580
63	2 1/2	71	2,80	10	150				0,890	0,600
70	2 3/4	78	3,07	10	150				1,190	0,800
76	3	84	3,31	10	150				1,280	0,860
90	3 1/2	98	3,86	10	150				1,490	1,000
102	4	110	4,33	10	150				1,770	1,190
127	5	137	5,39	10	150				2,400	1,610
152	6	162	6,38	10	150				2,970	2,000
168	6 5/8	178	7,01	10	150				3,230	2,170
203	8	215	8,46	10	150				4,290	2,880
254	10	270	10,63	10	150				7,620	5,120
305	12	319	12,56	10	150				7,950	5,340

NA	LA	NEU	CEU	SA	AP	AU
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253AA

Water discharge 10 bar (150 psi) - lay flat

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Black EPDM - abrasion and ozone resistant

Use: Lay flat water discharge

Safety factor: 3:1 ≥ 203 mm 2:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	21	0,83	10	150				0,320	0,215
16	5/8	24	0,94	10	150				0,370	0,250
19	3/4	27	1,06	10	150				0,420	0,280
25	1	33	1,30	10	150				0,530	0,360
32	1 1/4	42	1,65	10	150				0,820	0,550
38	1 1/2	48	1,89	10	150				0,960	0,650
51	2	61	2,40	10	150				1,270	0,850
63	2 1/2	75	2,95	10	150				1,890	1,270
76	3	88	3,46	10	150				2,270	1,530
102	4	114	4,49	10	150				3,060	2,060
115	4 1/2	127	5,00	10	150				3,400	2,280
152	6	166	6,54	10	150				4,600	3,090
203	8	219	8,62	10	150				6,820	4,580
NA		LA		NEU		CEU		SA	AP	AU



254AA

Air-water delivery 10 bar (150 psi)

Tube: Black SBR

Reinforcement: High tensile textile cords

Cover: Black SBR - abrasion and ozone resistant

Use: Air and water delivery

Safety factor: 3:1 = 203mm 2:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
32	1 1/4	42	1,65	10	150				0,840	0,560
35	1 3/8	45	1,77	10	150				0,910	0,610
38	1 1/2	48	1,89	10	150				0,980	0,660
40	1 9/16	50	1,97	10	150				1,030	0,690
45	1 3/4	55	2,17	10	150				1,140	0,770
51	2	61	2,40	10	150				1,300	0,870
63	2 1/2	75	2,95	10	150				1,920	1,290
76	3	88	3,46	10	150				2,300	1,550
90	3 1/2	102	4,02	10	150				2,700	1,810
102	4	114	4,49	10	150				3,100	2,080
NA		LA		NEU		CEU		SA	AP	AU



254AH

Air-water delivery 10 bar (150 psi)

Tube: Black SBR

Reinforcement: High tensile textile cords

Cover: Red SBR - abrasion and ozone resistant

Use: Air and water delivery

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	61	2,40	18	270				1,070	0,720
60	2 3/8	72	2,83	18	270				1,380	0,930
70	2 3/4	82	3,23	18	270				1,600	1,080
76	3	88	3,46	18	270				1,720	1,160
80	3 1/8	92	3,62	18	270				1,870	1,260
90	3 1/2	102	4,02	18	270				2,060	1,380
102	4	114	4,49	18	270				2,350	1,580
120	4 3/4	132	5,20	18	270				2,860	1,920
152	6	168	6,61	18	270				4,880	3,280
NA		LA		NEU		CEU		SA	AP	AU



256AA

Water-irrigation 18 bar (270 psi) - heavy duty

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Black EPDM - abrasion and ozone resistant

Use: Heavy duty water discharge.

Specially designed for high pressure irrigation systems

Safety factor: 2,5:1 152 mm 2:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
20	13/16			7	100	110	4,25	60	0,200	0,135	
25	1			7	100	138	5,50	60	0,250	0,170	
32	1 1/4			6	90	176	7,00	60	0,340	0,230	
38	1 1/2			5	75	209	8,25	60	0,440	0,300	
51	2			5	75	281	11,00	60	0,650	0,440	
NA		LA		NEU		CEU		SA		AP	



264GL

Water S&D - PVC - light duty

Construction: Green transparent PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Water suction and delivery

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			7	100	113	4,50	70	0,290	0,195	
32	1 1/4			6	90	144	5,75	70	0,390	0,260	
38	1 1/2			5	75	171	6,75	70	0,510	0,340	
45	1 3/4			5	75	203	8,00	70	0,670	0,450	
51	2			5	75	230	9,00	70	0,760	0,510	
63	2 1/2			5	75	284	11,25	70	0,970	0,650	
76	3			5	75	342	13,50	70	1,330	0,890	
90	3 1/2			4	60	405	15,75	70	1,800	1,210	
102	4			4	60	459	18,00	70	2,190	1,470	
127	5			3	45	597	23,50	50	2,900	1,950	
152	6			3	45	714	28,25	50	4,000	2,690	
203	8			2	30	954	37,50	40	6,200	4,170	
NA		LA		NEU		CEU		SA		AP	



266GL

Water S&D - PVC - standard duty

Construction: Green transparent PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Water suction and delivery

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
20	13/16			7	100	90	3,50	70	0,230	0,155	
25	1			7	100	113	4,50	70	0,290	0,195	
30	1 3/16			6	90	135	5,25	70	0,360	0,240	
32	1 1/4			6	90	144	5,75	70	0,390	0,260	
35	1 3/8			6	90	158	6,25	70	0,440	0,300	
38	1 1/2			5	75	171	6,75	70	0,510	0,340	
40	1 9/16			5	75	180	7,00	70	0,540	0,360	
45	1 3/4			5	75	203	8,00	70	0,670	0,450	
51	2			5	75	230	9,00	70	0,760	0,510	
60	2 3/8			5	75	270	10,50	70	0,920	0,620	
63	2 1/2			5	75	284	11,25	70	0,970	0,650	
76	3			5	75	342	13,50	70	1,330	0,890	
80	3 1/8			4	60	360	14,00	70	1,450	0,970	
102	4			4	60	459	18,00	70	2,190	1,470	
NA		LA		NEU		CEU		SA		AP	



IANESCO approved

266KL

Water S&D - PVC - standard duty

FDA 90/128/EC A+B+C AS 2070

Construction: Yellow transparent PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Water suction and delivery.

Also suitable for food and alcoholic beverages - max 28% proof

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			7	100	113	4,50	80	0,350	0,235	
32	1 1/4			6	90	144	5,75	80	0,470	0,320	
38	1 1/2			5	75	171	6,75	80	0,650	0,440	
51	2			5	75	230	9,00	80	0,915	0,610	
NA		LA		NEU		CEU		SA		AP	



266BL

Water S&D - PVC - standard duty

Construction: Grey PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Water suction and delivery

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2			5	75	152	6,00	60	0,510	0,340	
40	1 9/16			5	75	160	6,25	60	0,540	0,360	
45	1 3/4			5	75	180	7,00	60	0,670	0,450	
51	2			5	75	204	8,00	60	0,760	0,510	
63	2 1/2			5	75	283	11,25	60	0,970	0,650	
76	3			5	75	342	13,50	60	1,330	0,890	
NA		LA		NEU		CEU		SA		AP	



266OL

Water S&D - PVC - standard duty - super elastic

Construction: Transparent PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Water suction and delivery. Good flexibility at low temperature

Safety factor: 3:1

Temperature: -20 °C +60 °C (-4 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2			5	75	204	8,00	90	0,850	0,570
63	2 1/2			4	60	252	10,00	90	1,250	0,840
76	3			4	60	304	12,00	90	1,500	1,010
102	4			3	45	408	16,00	90	2,200	1,480
127	5			3	45	508	20,00	90	3,200	2,150
152	6			2	30	608	24,00	90	4,100	2,760
NA		LA		NEU		CEU		SA	AP	AU



265TH

Water-slurry S&D - PVC - standard duty super elastic

Construction: Light blue PVC with helical red stripe - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Water suction and delivery.

Special light weight construction for slurry tankers.

Good flexibility at low temperature

Safety factor: 3:1

Temperature: -20 °C +60 °C (-4 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1			7	100	100	4,00	90	0,410	0,275
32	1 1/4			7	100	128	5,00	90	0,600	0,400
38	1 1/2			7	100	152	6,00	90	0,700	0,470
51	2			5	75	204	8,00	90	1,000	0,670
60	2 3/8			5	75	240	9,50	90	1,280	0,860
63	2 1/2			5	75	252	10,00	90	1,340	0,900
76	3			5	75	304	12,00	90	1,750	1,180
80	3 1/8			5	75	320	12,50	90	1,840	1,240
90	3 1/2			4	60	360	14,00	90	2,260	1,520
102	4			4	60	408	16,00	90	2,700	1,810
110	4 5/16			4	60	440	17,25	90	3,100	2,080
120	4 3/4			4	60	480	19,00	90	3,600	2,420
127	5			4	60	508	20,00	90	3,800	2,550
152	6			3	45	608	24,00	90	4,850	3,260
203	8			3	45	812	32,00	90	9,100	6,120
NA		LA		NEU		CEU		SA	AP	AU



267BE

Water-slurry S&D - PVC - medium duty super elastic

Construction: Grey PVC with helical blue stripe - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Water suction and delivery.

Special construction for slurry tankers.

Good flexibility at low temperature flexibility

Safety factor: 3:1

Temperature: -20 °C +60 °C (-4 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1			7	100	150	6,00	90	0,520	0,350
32	1 1/4			6	90	192	7,50	90	0,650	0,440
38	1 1/2			6	90	228	9,00	90	0,760	0,510
51	2			5	75	306	12,00	90	1,100	0,740
63	2 1/2			4	60	378	15,00	90	1,550	1,040
76	3			4	60	456	18,00	90	1,900	1,280
80	3 1/8			4	60	480	19,00	90	2,100	1,410
90	3 1/2			4	60	540	21,00	90	2,500	1,680
102	4			3	45	612	24,00	90	3,200	2,150
127	5			3	45	762	30,00	90	4,200	2,820
152	6			2	30	912	36,00	90	6,000	4,030
203	8			2	30	1218	48,00	60	10,000	6,720
NA		LA		NEU		CEU		SA	AP	AU



268BL

Water-abrasive slurry S&D - PVC - heavy duty

Construction: Grey PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Heavy duty water suction and delivery.

Also suitable for abrasive slurries transfer

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
10	3/8	16	0,63	15	225	40	1,50	90	0,170	0,115	
13	1/2	19	0,75	7	100	52	2,00	85	0,205	0,138	
14	9/16	20	0,79	6	90	56	2,25	85	0,220	0,150	
16	5/8	22	0,87	6	90	64	2,50	85	0,250	0,170	
18	23/32	26	1,02	6	90	72	2,75	85	0,320	0,215	
20	13/16	28	1,10	5	75	80	3,00	85	0,340	0,230	
22	7/8	30	1,18	5	75	88	3,50	85	0,380	0,255	
25	1	33	1,30	5	75	100	4,00	85	0,530	0,360	
30	1 3/16	38	1,50	4	60	120	4,75	85	0,620	0,420	
32	1 1/4	40	1,57	4	60	128	5,00	85	0,655	0,440	
35	1 3/8	45	1,77	4	60	140	5,50	85	0,800	0,540	
38	1 1/2	48	1,89	4	60	152	6,00	85	0,855	0,570	
40	1 9/16	50	1,97	3	45	160	6,25	85	0,895	0,600	
45	1 3/4	55	2,17	3	45	180	7,00	80	1,100	0,740	
51	2	61	2,40	3	45	204	8,00	80	1,230	0,830	
60	2 3/8	72	2,83	2	30	240	9,50	80	1,700	1,140	
63	2 1/2	75	2,95	2	30	252	10,00	80	1,775	1,190	
70	2 3/4	84	3,31	2	30	280	11,00	80	2,030	1,360	
76	3	90	3,54	2	30	304	12,00	70	2,450	1,650	
80	3 1/8	94	3,70	2	30	320	12,50	70	2,565	1,720	
90	3 1/2	104	4,09	2	30	360	14,00	70	3,000	2,020	
102	4	116	4,57	2	30	408	16,00	70	3,480	2,340	
105	4 1/8	121	4,76	3	45	420	16,50	90	4,250	2,860	
152	6	172	6,77	2	30	608	24,00	70	7,300	4,910	

NA	LA	NEU	CEU	SA	AP	AU
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IANESCO approved

47000

General purpose food quality S&D - PVC

FDA 90/128/EC A+B+C AS 2070

Construction: Transparent PVC - abrasion and ozone resistant

Reinforcement: Steel helix wire

Use: General purpose liquid food and alcoholic beverages suction and delivery - max 28% proof.

Sterilize with 5% soda solution

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	35	1,38	12	180	75	3,00	90	0,640	0,430	
32	1 1/4	43	1,69	10	150	96	3,75	90	0,870	0,580	
35	1 3/8	46	1,81	10	150	105	4,25	90	0,935	0,630	
38	1 1/2	49	1,93	10	150	114	4,50	90	1,010	0,680	
51	2	64	2,52	8	120	153	6,00	80	1,600	1,080	

NA	LA	NEU	CEU	SA	AP	AU
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47300

General purpose food quality S&D - PVC

heavy duty

FDA 90/128/EC A+B+C AS 2070

Construction: Transparent PVC - abrasion and ozone resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Use: General purpose heavy duty liquid food and alcoholic beverages suction and delivery - max 28% proof.

Sterilize with 5% soda solution

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
76	3	88	3,46	5	75	304	12,00	90	2,270	1,530
102	4	114	4,49	5	75	408	16,00	90	3,110	2,090
152	6	166	6,54	5	75	760	30,00	80	6,090	4,090
203	8	221	8,70	5	75	1015	40,00	70	10,410	7,000
254	10	272	10,71	5	45	1270	50,00	60	13,930	9,360
NA		LA	NEU	CEU		SA		AP	AU	



204AA

Water S&D 5 bar (75 psi)

Tube: Black SBR
Reinforcement: High tensile textile cords with embedded steel helix wire
Cover: Black SBR - abrasion and ozone resistant
Use: Water suction and delivery
Safety factor: 3:1 254 mm 2:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	35	1,38	10	150	100	4,00	100	0,800	0,540	
30	1 3/16	40	1,57	10	150	120	4,75	100	0,910	0,610	
32	1 1/4	42	1,65	10	150	128	5,00	100	0,960	0,650	
35	1 3/8	45	1,77	10	150	140	5,50	100	1,030	0,690	
38	1 1/2	48	1,89	10	150	152	6,00	100	1,110	0,750	
40	1 9/16	50	1,97	10	150	160	6,25	100	1,160	0,780	
45	1 3/4	55	2,17	10	150	180	7,00	100	1,290	0,870	
51	2	61	2,40	10	150	204	8,00	100	1,440	0,970	
60	2 3/8	72	2,83	10	150	240	9,50	100	1,840	1,240	
63	2 1/2	75	2,95	10	150	252	10,00	90	1,920	1,290	
70	2 3/4	82	3,23	10	150	280	11,00	90	2,120	1,420	
76	3	88	3,46	10	150	304	12,00	90	2,290	1,540	
80	3 1/8	92	3,62	10	150	320	12,50	90	2,470	1,660	
90	3 1/2	102	4,02	10	150	360	14,00	90	2,860	1,920	
102	4	114	4,49	10	150	408	16,00	90	3,200	2,150	
110	4 5/16	122	4,80	10	150	440	17,25	80	3,420	2,300	
115	4 1/2	127	5,00	10	150	460	18,00	80	3,560	2,390	
120	4 3/4	134	5,28	10	150	600	23,75	80	4,770	3,210	
127	5	141	5,55	10	150	635	25,00	80	5,020	3,370	
152	6	166	6,54	10	150	760	30,00	80	6,250	4,200	
203	8	221	8,70	10	150	1015	40,00	70	10,580	7,110	
254	10	272	10,71	10	150	1270	50,00	60	14,390	9,670	
305	12	327	12,87	10	150	1550	61,00	60	20,980	14,100	
NA		LA		NEU		CEU		SA		AP	AU



203AA

Water S&D 10 bar (150 psi)

Tube: Black SBR
Reinforcement: High tensile textile cords with embedded steel helix wire
Cover: Black SBR - abrasion and ozone resistant
Use: Water suction and delivery
Safety factor: ≤ 127 mm 3:1 152-254 mm 2,5:1 305 mm 1,5:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3			5	75	190	7,50	100	2,300	1,550	
80	3 1/8			5	75	200	8,00	100	2,410	1,620	
102	4			5	75	255	10,00	100	3,020	2,030	
120	4 3/4			5	75	300	12,00	100	4,380	2,940	
127	5			5	75	320	12,50	100	4,620	3,100	
152	6			3	45	380	15,00	100	6,100	4,100	
203	8			3	45	510	20,00	100	8,040	5,400	
NA		LA		NEU		CEU		SA		AP	AU



220AA

Water-slurry S&D corrugated - soft ends

Tube: Black SBR
Reinforcement: High tensile textile cords with embedded steel helix wire
Cover: Black SBR - abrasion and ozone resistant
Use: Water suction and delivery.
Special light weight and flexible construction for slurry tankers
Safety factor: 3:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
28	1 1/8	32	1,26	6	90	168	6,75	90	0,250	0,170	
32	1 1/4	40	1,57	6	90	192	7,50	90	0,540	0,360	
42	1 5/8	50	1,97	6	90	252	10,00	90	0,780	0,520	
55	2 1/6	63	2,48	5	75	330	13,00	90	0,840	0,560	
NA		LA		NEU		CEU		SA		AP	AU



268LL

Pools-SPA water circulation

Construction: White PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Water circulation systems for pools and SPA.

Hose outside diameters made to fit rigid PVC pipe fittings

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	36	1,42	100	1500	125	5,00		0,930	0,630	
38	1 1/2	50	1,97	100	1500	190	7,50		1,640	1,100	
NA		LA		NEU		CEU		SA		AP	AU



248AE

High pressure water delivery 100 bar (1500 psi) snow maker - steel braided

Tube: Black SBR

Reinforcement: High tensile steel wire braids

Cover: Blue hypalon - abrasion and ozone resistant

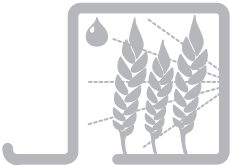
Use: High pressure water delivery.

Specially designed for artificial snow makers.

Designed for use of EN 853 1SN fittings

Safety factor: 2:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
5	3/16	10	0,39	20	300	40	1,50		0,085	0,057
6	1/4	11	0,43	20	300	48	2,00		0,090	0,060
8	5/16	13	0,51	20	300	64	2,50		0,105	0,070
10	3/8	15	0,59	20	300	80	3,00		0,130	0,087
13	1/2	19	0,75	20	300	104	4,00		0,210	0,140
16	5/8	23	0,91	20	300	128	5,00		0,300	0,200
19	3/4	27	1,06	20	300	152	6,00		0,405	0,270
25	1	34	1,34	20	300	200	8,00		0,580	0,390
NA		LA		NEU		CEU		SA		AP
										AU



180AA

Compressed air 20 bar (300 psi)

Tube: Black synthetic elastomer - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black synthetic elastomer - abrasion and ozone resistant

Use: Compressed air and general industrial applications.

Also suitable for crop spraying of fertilizers, pesticides and weed killers

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
8	5/16	14	0,55	50	750	64	2,50		0,135	0,090
10	3/8	16	0,63	50	750	80	3,00		0,160	0,108
13	1/2	20	0,79	40	600	104	4,00		0,225	0,150
16	5/8	24	0,94	40	600	128	5,00		0,320	0,215
19	3/4	27	1,06	40	600	152	6,00		0,370	0,250
25	1	34	1,34	40	600	200	8,00		0,530	0,360
NA		LA		NEU		CEU		SA		AP
AU										



591AE

Crop spraying 40 bar (600 psi) - PVC

Tube: Black PVC

Reinforcement: High tensile textile cords

Cover: Blue PVC - abrasion and ozone resistant.

Use: Crop spraying of fertilizers, pesticides and weed-killers

Safety factor: <=10 mm and 25 mm 2,5:1 >10 mm 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
8	5/16	15	0,59	80	1200	64	2,50		0,160	0,108	
10	3/8	18	0,71	80	1200	80	3,00		0,230	0,155	
13	1/2	22	0,87	80	1200	104	4,00		0,320	0,215	
NA		LA		NEU		CEU		SA		AP	AU



593AK

Crop spraying 80 bar (1200 psi) - PVC

Tube: Black PVC

Reinforcement: High tensile textile cords

Cover: Yellow ribbed PVC with longitudinal black stripe - abrasion and ozone resistant.

Use: Crop spraying of fertilizers, pesticides and weed-killers

Safety factor: 2,5:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			8	120	113	4,50	70	0,290	0,195	
32	1 1/4			7	100	144	5,75	70	0,390	0,260	
38	1 1/2			6	90	171	6,75	70	0,510	0,340	
45	1 3/4			6	90	203	8,00	70	0,670	0,450	
51	2			5	75	230	9,00	70	0,760	0,510	
63	2 1/2			5	75	284	11,25	70	1,180	0,790	
76	3			5	75	342	13,50	70	1,510	1,010	
NA		LA		NEU		CEU		SA		AP	AU



2660A

Air seeder - PVC

Construction: Transparent PVC - abrasion and ozone resistant

Reinforcement: Black shock resistant rigid PVC

Use: Agricultural seed transfer in "Air-Flo" seeding equipments

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
32	1 1/4	42	1,65	10	150	128	5,00	100	0,740	0,500	
38	1 1/2	48	1,89	10	150	152	6,00	100	1,000	0,670	
45	1 3/4	55	2,17	10	150	180	7,00	100	1,160	0,780	
51	2	61	2,40	10	150	204	8,00	100	1,300	0,870	
63	2 1/2	75	2,95	10	150	252	10,00	90	2,020	1,360	
76	3	88	3,46	10	150	304	12,00	90	2,410	1,620	
NA		LA		NEU		CEU		SA		AP	AU



702AA

Air seeder

Tube: Black conductive NR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black NBR/PVC - oil, heat, abrasion and ozone resistant

Use: Agricultural seed transfer in "Air-Flo" seeding equipments

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

FIRE FIGHTING



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	34	1,34	12	180	200	8,00		0,575	0,390
NA		LA		NEU		CEU		SA	AP	AU



283AA

Fire reel 12 bar (180 psi)

EN 694/A2

Tube: Black synthetic elastomer

Reinforcement: High tensile textile cords

Cover: Black synthetic elastomer - abrasion and ozone resistant

Use: Fire reels

Safety factor: 4:1

Temperature: -20 °C +60 °C (-4 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	34	1,34	12	180	200	8,00		0,575	0,390
NA		LA		NEU		CEU		SA	AP	AU



283AH

Fire reel 12 bar (180 psi)

EN 694/A2

Tube: Black synthetic elastomer

Reinforcement: High tensile textile cords

Cover: Red synthetic elastomer - abrasion and ozone resistant

Use: Fire reels

Safety factor: 4:1

Temperature: -20 °C +60 °C (-4 °F +140 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	15	225	152	6,00		0,600	0,400
25	1	37	1,46	15	225	200	8,00		0,750	0,500
NA		LA		NEU		CEU		SA	AP	AU



257AA

Fire reel 15 bar (225 psi)

exceeds BS 3169/A1

Tube: Black SBR

Reinforcement: High tensile textile cords

Cover: Black SBR - abrasion and ozone resistant

Use: Hose reels on fire fighting vehicles

Safety factor: 4:1

Temperature: -20 °C +70 °C (-4 °F +158 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	36	1,42	40	600	125	5,00		0,690	0,460
NA		LA		NEU		CEU		SA	AP	AU



251AA

Fire reel 40 bar (600 psi) - textile braided

NF EN 1947/C/1/II

Tube: Black SBR

Reinforcement: High tensile textile braids

Cover: Black SBR - abrasion and ozone resistant

Use: Hose reels on fire fighting vehicles

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

												
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft		
45	1 3/4	55	2,17	5	75	180	7,00	100	1,140	0,770		
70	2 3/4	82	3,23	5	75	280	11,00	90	2,340	1,570		
110	4 5/16	122	4,80	5	75	440	17,25	80	3,580	2,410		
NA		LA		NEU		CEU		SA		AP		AU



212AA

Fire engine water S&D 5 bar (75 psi)

NF EN ISO 14557/A

Tube: Black SBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black SBR - abrasion and ozone resistant

Use: Water suction and delivery on fire fighting vehicles

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
50	2			5	75	125	5,00	100	1,620	1,090	
75	3			5	75	190	7,50	100	2,270	1,530	
100	4			5	75	250	10,00	100	2,970	2,000	
110	4 5/16			5	75	275	11,00	100	3,240	2,180	
125	5			5	75	315	12,50	100	4,550	3,060	
NA		LA		NEU		CEU		SA		AP	AU



210AA

Fire engine water S&D 5 bar (75 psi)

corrugated - soft ends

EN ISO 14557/A

Tube: Black SBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black SBR - abrasion and ozone resistant

Use: Water suction and delivery on fire fighting vehicles.

Special light weight and flexible construction

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

FURNACE & CABLE COOLING

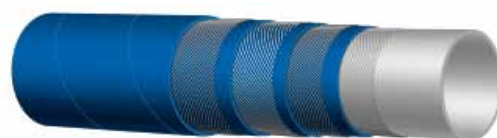


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FURNACE & CABLE COOLING



											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	25	0,98	10	150				0,460	0,310	
19	3/4	31	1,22	10	150				0,620	0,420	
25	1	41	1,61	10	150				1,080	0,730	
32	1 1/4	48	1,89	10	150				1,310	0,880	
38	1 1/2	54	2,13	10	150				1,300	0,870	
51	2	67	2,64	10	150				1,940	1,300	
NA		LA		NEU		CEU		SA		AP	



249LE

**Air-water delivery 10 bar (150 psi)
non conductive**

Tube: White EPDM

Reinforcement: High tensile textile cords

Cover: Blue EPDM - heat, abrasion and ozone resistant

Use: Non conductive air and water delivery in foundry applications

Safety factor: 4:1

Temperature: -40 °C +150 °C (-40 °F +300 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	10	150				0,590	0,400	
25	1	37	1,46	10	150				0,740	0,500	
32	1 1/4	46	1,81	10	150				1,110	0,750	
38	1 1/2	52	2,05	10	150				1,290	0,870	
51	2	65	2,56	10	150				1,690	1,140	
NA		LA		NEU		CEU		SA	AP	AU	



254AL

Furnace cooling 10 bar (150 psi) - soft wall

Tube: Black SBR

Reinforcement: High tensile textile cords

Cover: Black SBR - resin coated dust free fibreglass cover

Use: General purpose water delivery in furnace cooling applications. Specially designed to withstand heat, splashes of molten metal and open flame

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

Cover resistant up to 540 °C (1000 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	63	2,48	10	150	255	10,00	100	1,600	1,080	
60	2 3/8	72	2,83	10	150	300	12,00	100	1,980	1,330	
63	2 1/2	75	2,95	10	150	300	12,00	90	2,070	1,390	
76	3	88	3,46	10	150	330	13,00	90	2,470	1,660	
80	3 1/8	92	3,62	10	150	400	15,75	90	2,660	1,790	
90	3 1/2	102	4,02	10	150	450	17,50	90	3,040	2,040	
102	4	114	4,49	10	150	510	20,00	90	3,430	2,310	
NA		LA		NEU		CEU		SA		AP	



203AL

Furnace cooling 10 bar (150 psi) - hard wall

Tube: Black SBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black SBR - resin coated dust free fibreglass cover

Use: General purpose water suction and delivery in furnace cooling applications. Specially designed to withstand heat, splashes of molten metal and open flame

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

Cover resistant up to 540 °C (1000 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	25	0,98	10	150				0,440	0,300	
16	5/8	28	1,10	10	150				0,500	0,340	
19	3/4	33	1,30	10	150				0,700	0,470	
25	1	39	1,54	10	150				0,860	0,580	
32	1 1/4	48	1,89	10	150				1,250	0,840	
38	1 1/2	54	2,13	10	150				1,460	0,980	
51	2	73	2,87	10	150				2,700	1,810	
63	2 1/2	81	3,19	10	150				2,290	1,540	
76	3	96	3,78	10	150				3,170	2,130	
NA		LA		NEU		CEU		SA		AP	



957LL

**Cable cooling 10 bar (150 psi)
non conductive**

Tube: White EPDM

Reinforcement: High tensile textile cords

Cover: White non conductive EPDM, heat resistant - resin coated dust free fibreglass cover

Use: Non conductive cable cooling in electric furnaces. Specially designed to withstand heat, splashes of molten metal and open flame

Safety factor: 4:1

Temperature: -40 °C +120 °C (-40 °F +248 °F)

Cover resistant up to 540 °C (1000 °F)

HOT WATER & STEAM



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	19	0,75	10	150	130	5,00		0,240	0,160
16	5/8	22	0,87	10	150	160	6,25		0,280	0,190
19	3/4	27	1,06	10	150	190	7,50		0,450	0,300
25	1	33	1,30	10	150	250	10,00		0,570	0,380

NA	LA	NEU	CEU	SA	AP	AU
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375AA

Hot water-car heater 10 bar (150 psi)

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Black EPDM - heat, abrasion and ozone resistant

Use: General purpose-hot water.

Specially designed for automotive heating systems

Safety factor: 3:1

Temperature: -35 °C +100 °C (-31 °F +212 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	21	0,83	5	75				0,280	0,190
16	5/8	24	0,94	5	75				0,330	0,220
18	23/32	26	1,02	5	75				0,360	0,240
20	13/16	28	1,10	5	75				0,390	0,260
22	7/8	30	1,18	5	75				0,420	0,280
25	1	33	1,30	5	75				0,470	0,320
28	1 1/8	36	1,42	5	75				0,510	0,340
30	1 3/16	38	1,50	5	75				0,550	0,370
32	1 1/4	40	1,57	5	75				0,580	0,390
35	1 3/8	43	1,69	5	75				0,620	0,420
38	1 1/2	48	1,89	5	75				0,850	0,570
40	1 9/16	50	1,97	5	75				0,890	0,600
42	1 5/8	52	2,05	5	75				0,930	0,630
45	1 3/4	55	2,17	5	75				0,990	0,670
48	1 7/8	58	2,28	5	75				1,040	0,700
51	2	61	2,40	5	75				1,110	0,750
55	2 1/6	65	2,56	5	75				1,190	0,800
57	2 1/4	67	2,64	5	75				1,230	0,830
60	2 3/8	70	2,76	5	75				1,280	0,860
63	2 1/2	73	2,87	5	75				1,340	0,900
70	2 3/4	80	3,15	5	75				1,440	0,970
76	3	86	3,39	5	75				1,550	1,040
80	3 1/8	90	3,54	5	75				1,630	1,100
90	3 1/2	102	4,02	5	75				2,020	1,360
102	4	114	4,49	5	75				2,260	1,520
110	4 5/16	122	4,80	5	75				2,420	1,630
115	4 1/2	127	5,00	5	75				2,520	1,690
127	5	141	5,55	5	75				3,210	2,160

NA	LA	NEU	CEU	SA	AP	AU
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352AA

Radiator 5 bar (75 psi) exceeds DIN 73411

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Black EPDM - heat, abrasion and ozone resistant

Use: Radiator

Safety factor: 3:1

Temperature: -40 °C +120 °C (-40 °F +248 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
12	15/32	22	0,87	10	150				0,350	0,235
15	19/32	25	0,98	10	150				0,410	0,275
20	13/16	30	1,18	10	150				0,510	0,340
25	1	35	1,38	10	150				0,600	0,400
30	1 3/16	42	1,65	10	150				0,870	0,580
35	1 3/8	47	1,85	10	150				0,990	0,670
40	1 9/16	54	2,13	10	150				1,140	0,770
45	1 3/4	61	2,40	10	150				1,480	0,990
51	2	67	2,64	10	150				1,670	1,120
60	2 3/8	76	2,99	10	150				1,940	1,300

NA	LA	NEU	CEU	SA	AP	AU
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351AA

Hot water 10 bar (150 psi)

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Black EPDM - heat, abrasion and ozone resistant

Use: General purpose-hot water

Safety factor: 4:1

Temperature: -40 °C +120 °C (-40 °F +248 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
12	15/32	22	0,87	50	750	84	3,25		0,325	0,220			
NA		LA		NEU		CEU		SA		AP		AU	



395BT

Hot water wash down 50 bar (750 psi)

Tube: Grey non-toxic PVC

Reinforcement: High tensile textile cords

Cover: Light blue synthetic elastomer - abrasion and ozone resistant

Use: Hot water wash down.

Specially designed for the food and dairy industry.

Designed for 50 bar at 70° C continuous use. Food grade

Safety factor: 3:1

Temperature: -10 °C +70 °C (+14 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	10	150				0,640	0,430	
25	1	37	1,46	10	150				0,780	0,520	
32	1 1/4	46	1,81	10	150				1,150	0,770	
38	1 1/2	52	2,05	10	150				1,350	0,910	
NA		LA		NEU		CEU		SA	AP	AU	



351LL

Hot water wash down 10 bar (150 psi) built in nozzle

Tube: White EPDM

Reinforcement: High tensile textile cords

Cover: White EPDM - heat, abrasion and ozone resistant

Use: Hot and cold water wash down in paper mills and the food industry where a built in rubber nozzle is required to avoid floor and equipment damage

Safety factor: 4:1

Temperature: -40 °C +120 °C (-40 °F +248 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
19	3/4	31	1,22	10	150				0,610	0,410			
25	1	37	1,46	10	150				0,740	0,500			
32	1 1/4	46	1,81	10	150				1,100	0,740			
38	1 1/2	52	2,05	10	150				1,290	0,870			
NA		LA		NEU		CEU		SA		AP		AU	



351LG

Hot water wash down 10 bar (150 psi) built in nozzle

Tube: White EPDM

Reinforcement: High tensile textile cords

Cover: Green EPDM - heat, abrasion and ozone resistant

Use: Hot and cold water wash down in paper mills and the food industry where a built in rubber nozzle is required to avoid floor and equipment damage

Safety factor: 4:1

Temperature: -40 °C +120 °C (-40 °F +248 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	7	100				0,370	0,250
16	5/8	26	1,02	7	100				0,430	0,290
19	3/4	31	1,22	7	100				0,610	0,410
25	1	37	1,46	7	100				0,750	0,500
30	1 3/16	44	1,73	7	100				0,900	0,600
32	1 1/4	46	1,81	7	100				0,950	0,640
38	1 1/2	52	2,05	7	100				1,100	0,740
40	1 9/16	54	2,13	7	100				1,150	0,770
51	2	67	2,64	7	100				1,700	1,140
NA		LA		NEU		CEU		SA	AP	AU



350AA

Steam 7 bar (100 psi)-hot water 15 bar (225 psi) exceeds BS 5122/A2

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Black EPDM - heat, abrasion and ozone resistant

Use: Saturated steam and hot water delivery in general industrial applications

Safety factor: According to BS 5122/A2

Temperature: -40 °C +165 °C (-40 °F +330 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	7	100				0,390	0,260
19	3/4	31	1,22	7	100				0,650	0,440
25	1	37	1,46	7	100				0,800	0,540
NA		LA		NEU		CEU		SA	AP	AU



350LL

Steam 7 bar (100 psi)-hot water 15 bar (225 psi) exceeds BS 5122/A2 FDA

Tube: White food grade EPDM

Reinforcement: High tensile textile cords

Cover: White EPDM - heat, abrasion and ozone resistant

Use: Saturated steam and hot water delivery in general industrial applications.

Specially designed for wash down use in the food and dairy industry

Safety factor: According to BS 5122/A2

Temperature: -40 °C +165 °C (-40 °F +330 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	7	100				0,370	0,250
16	5/8	26	1,02	7	100				0,430	0,290
19	3/4	31	1,22	7	100				0,600	0,400
25	1	37	1,46	7	100				0,740	0,500
NA		LA		NEU		CEU		SA	AP	AU



350LE

Steam 7 bar (100 psi)-hot water 15 bar (225 psi) exceeds BS 5122/A2 FDA

Tube: White food grade EPDM

Reinforcement: High tensile textile cords

Cover: Blue EPDM - heat, abrasion and ozone resistant

Use: Saturated steam and hot water delivery in general industrial applications.

Specially designed for wash down use in the food and dairy industry

Safety factor: According to BS 5122/A2

Temperature: -40 °C +165 °C (-40 °F +330 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
13	1/2	25	0,98	17	250	130	5,00			0,570	0,380
16	5/8	28	1,10	17	250	160	6,25			0,640	0,430
19	3/4	32	1,26	17	250	190	7,50			0,750	0,500
25	1	38	1,50	17	250	250	10,00			0,920	0,620
32	1 1/4	46	1,81	17	250	320	12,50			1,190	0,800
38	1 1/2	52	2,05	17	250	380	15,00			1,390	0,930
51	2	67	2,64	17	250	510	20,00			2,190	1,470

NA	LA	NEU	CEU	SA	AP	AU
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330AA

Saturated steam 17 bar (250 psi)

steel reinforced

BS 5342/2A NFT 47263/I3

Tube: Black EPDM

Reinforcement: High tensile steel cords

Cover: Black EPDM - heat, abrasion and ozone resistant - pin pricked

Use: Saturated steam

Safety factor: 10:1

Temperature: -40 °C +210 °C (-40 °F +410 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
10	3/8	22	0,87	17	250	100	4,00			0,490	0,330
13	1/2	25	0,98	17	250	130	5,00			0,560	0,380
16	5/8	28	1,10	17	250	160	6,25			0,620	0,420
19	3/4	32	1,26	17	250	190	7,50			0,730	0,490
19	3/4	33	1,30	17	250	190	7,50			0,850	0,570
25	1	38	1,50	17	250	250	10,00			0,900	0,600
25	1	40	1,57	17	250	250	10,00			1,040	0,700
32	1 1/4	46	1,81	17	250	320	12,50			1,320	0,890
32	1 1/4	48	1,89	17	250	320	12,50			1,500	1,010
38	1 1/2	52	2,05	17	250	380	15,00			1,540	1,030
38	1 1/2	54	2,13	17	250	380	15,00			1,740	1,170
51	2	67	2,64	17	250	510	20,00			2,150	1,440
51	2	69	2,72	17	250	510	20,00			2,400	1,610
63	2 1/2	83	3,27	17	250	630	25,00			3,720	2,500
76	3	96	3,78	17	250	760	30,00			4,410	2,960

NA	LA	NEU	CEU	SA	AP	AU
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330AH

Saturated steam 17 bar (250 psi)

steel reinforced

BS 5342/2A NFT 47263/I3

Tube: Black EPDM

Reinforcement: High tensile steel cords

Cover: Red EPDM - heat, abrasion and ozone resistant - pin pricked

Use: Saturated steam

Safety factor: 10:1

Temperature: -40 °C +210 °C (-40 °F +410 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
13	1/2	25	0,98	17	250	130	5,00			0,620	0,420
19	3/4	33	1,30	17	250	190	7,50			0,800	0,540
25	1	39	1,54	17	250	250	10,00			0,990	0,670

NA	LA	NEU	CEU	SA	AP	AU
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333AA

Saturated steam 17 bar (250 psi)

oil resistant - steel reinforced

BS 5342/2B NFT 47263/II3

Tube: Black EPDM

Reinforcement: High tensile steel cords

Cover: Black CSM - abrasion, ozone and hydrocarbon resistant - pin pricked

Use: Saturated steam where an oil resistant cover is required

Safety factor: 10:1

Temperature: -40 °C +210 °C (-40 °F +410 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft		
13	1/2	25	0,98	17	250	130	5,00			0,590	0,400		
19	3/4	32	1,26	17	250	190	7,50			0,770	0,520		
25	1	38	1,50	17	250	250	10,00			0,990	0,670		
32	1 1/4	46	1,81	17	250	320	12,50			1,230	0,830		
38	1 1/2	52	2,05	17	250	380	15,00			1,440	0,970		
51	2	67	2,64	17	250	510	20,00			2,280	1,530		
NA		LA		NEU		CEU		SA		AP		AU	



331AA

**Saturated-superheated steam 17 bar (250 psi)
steel reinforced**

BS 5342/2A - NFT 47263/I3

Tube: Black chlorobutyl

Reinforcement: High tensile steel cords

Cover: Black EPDM - heat, abrasion and ozone resistant - pin pricked

Use: Saturated and superheated steam

Safety factor: 10:1

Temperature: -40 °C +220 °C (-40 °F +430 °F)
intermittent to 232 °C (450 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	25	0,98	17	250	130	5,00		0,580	0,390	
19	3/4	32	1,26	17	250	190	7,50		0,750	0,500	
25	1	38	1,50	17	250	250	10,00		0,940	0,630	
32	1 1/4	46	1,81	17	250	320	12,50		1,380	0,930	
38	1 1/2	52	2,05	17	250	380	15,00		1,610	1,080	
51	2	67	2,64	17	250	510	20,00		2,240	1,510	
NA		LA		NEU		CEU		SA		AP	AU



331AH

**Saturated-superheated steam 17 bar (250 psi)
steel reinforced**

BS 5342/2A - NFT 47263/I3

Tube: Black chlorobutyl

Reinforcement: High tensile steel cords

Cover: Red EPDM - heat, abrasion and ozone resistant - pin pricked

Use: Saturated and superheated steam

Safety factor: 10:1

Temperature: -40 °C +220 °C (-40 °F +430 °F)
intermittent to 232 °C (450 °F)

(Reprinted from RMA IP-11-1 Steam Hose)

Handling steam is a very hazardous situation. Using care and some safety precaution can minimise or eliminate personal or property damage.

SELECTING AND USING STEAM HOSE

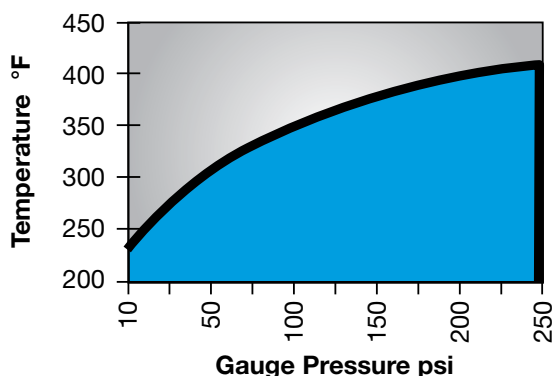
1. Make sure steam hose is identified as a steam hose. It should be branded as such, stating working pressure and temperature rating
2. Make sure working pressure and temperature is not exceeded.
3. Do not allow hose to remain under pressure when not in use.
4. Avoid excess bending or flexing of hose near the coupling. Straight line operation is preferred. If bends are necessary as part of operation, spring guards may help.
5. Be sure and use recommended steam hose couplings and clamps on hose.

MAINTENANCE OF STEAM HOSE

1. Periodic inspection of hose should include looking for cover blisters and lumps.
2. Check for kinked areas that could damage hose.
3. Drain hose after each use to avoid tube damage before hose is put back in operation, to avoid "popcorning" of the tube.
4. Check tightness of clamps bolts after each use.
5. Check to see if clamps halves are touching. If they are, recouple hose with smaller clamps to insure proper tightness or grip around hose.
6. Do not store hose over hooks.
7. Steam hose lying on metal racks or installed around steel piping will dry out the hose, causing tube and cover cracking.
8. For service in sub-zero application, use only T-331 chlorobutyl hose.

The chart represents the three forms of water when subjected to heat and pressure. Use only hoses specifically designed for the application.

Gauge Pressure (psi)	Temperature of Saturated Steam (°F)
10	239
25	267
50	298
75	320
100	338
125	353
150	366
175	377
200	388
225	397
250	406



Hot water

Superheated steam

Saturated steam

TEMPERATURE OF SATURATED STEAM

Gauge Pressure		Temperature	
psi	bar	°C	°F
25	1.73	130	267
30	2.07	134	274
35	2.42	138	281
40	2.76	141	287
45	3.11	144	292
50	3.45	148	298
60	4.14	153	307
70	4.83	158	316
80	5.52	162	324
90	6.21	166	330
100	6.90	170	338
120	8.28	177	350
140	9.66	182	361
160	11.04	188	371
180	12.42	193	379
200	13.80	198	388
225	15.53	203	397
250	17.25	208	406
275	18.98	212	414
300	20.70	216	422
325	22.43	221	429
350	24.15	225	437

CORROSIVE STEAM

When the water used to generate steam contains dissolved air, oxygen or carbon dioxide, then these gases end up as contaminants in the steam. At high temperatures of steam both oxygen and carbon dioxide are extremely corrosive.

Carbon dioxide is acidic and therefore attacks metals whereas the oxygen corrodes metals and oxidises rubbers. Corrosion of metals in the presence of both oxygen and acids is forty times faster than with either alone. Boiler water is therefore normally treated not only to remove the "hardness" which would cause "furring" of the boiler but also to remove dissolved oxygen and carbon dioxide and to ensure that the steam is not only not acidic but even slightly alkaline. Boiler water treatment is a specialised subject beyond the scope of this technical sheet but correct steam generation is important.

DETERIORATION OF STEAM HOSE

Like all rubber products steam hoses have a finite life and are subject to gradual deterioration with use. However, it sometimes happens that hoses which have been giving a good life suddenly start failing without apparent reason. In such cases it is often a change in the steam conditions causing a rapid acceleration of a normal failure mode. It is therefore useful to consider how steam hoses normally last and thus how the condition of the steam affects hose life.

LIQUID FOOD



	49000	General purpose tubing - PVC - FDA 90/128/EC A+B+C AS 2070.....	52
	49100	General purpose food quality - PVC - FDA 90/128/EC A+B+C AS 2070	52
	4660L	Liquid food S&D - PVC - standard duty - FDA 90/128/EC A+B+C AS 2070	53
	4680H	Liquid food S&D - PVC - heavy duty - FDA 90/128/EC A+B+C AS 2070.....	53
	47000	General purpose food quality S&D - PVC - FDA 90/128/EC A+B+C AS 2070.....	54
	47300	General purpose food quality S&D - PVC - heavy duty - FDA 90/128/EC A+B+C AS 2070	54
	452LH	Liquid food delivery 10 bar (150 psi) - FDA	55
	402LH	Liquid food S&D 10 bar (150 psi) - FDA.....	55
	408LL	Alcoholic beverages S&D 16 bar (240 psi) - crush resistant - FDA	55
	412LE	Milk tanker 10 bar (150 psi) - hard wall - FDA	55
	455LE	Fat food delivery 10 bar (150 psi) - FDA.....	56
	455LL	Fat food delivery 10 bar (150 psi) - FDA.....	56
	405LE	Fat food S&D 10 bar (150 psi) - FDA.....	57
	405LL	Fat food S&D 10 bar (150 psi) - FDA.....	57
	405LH	Fat food S&D 10 bar (150 psi) - FDA.....	57
	407LE	Fat food S&D 16 bar (240 psi) - crush resistant - FDA.....	57

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
3	1/8	5	0,20						0,020	0,013	
4	5/32	6	0,24						0,020	0,013	
5	3/16	8	0,31						0,040	0,027	
6	1/4	9	0,35						0,045	0,030	
7	9/32	11	0,43						0,070	0,047	
8	5/16	12	0,47						0,080	0,054	
10	3/8	14	0,55						0,095	0,064	
12	15/32	16	0,63						0,110	0,075	
14	9/16	19	0,75						0,160	0,108	
16	5/8	22	0,87						0,220	0,150	
18	23/32	24	0,94						0,245	0,165	
20	13/16	26	1,02						0,265	0,180	
22	7/8	28	1,10						0,290	0,195	
25	1	32	1,26						0,415	0,280	

NA	LA	NEU	CEU	SA	AP	AU
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49000

General purpose tubing - PVC
FDA 90/128/EC A+B+C AS 2070

Tube: Transparent non-toxic PVC
Use: General purpose food quality tubing.
 Sterilize with 5% soda solution
Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
5	3/16	10	0,39	20	300					0,075	0,050
6	1/4	11	0,43	20	300					0,080	0,054
6	1/4	12	0,47	15	225					0,100	0,067
8	5/16	13	0,51	15	225					0,095	0,064
8	5/16	14	0,55	15	225					0,115	0,077
10	3/8	15	0,59	15	225					0,115	0,077
10	3/8	16	0,63	15	225					0,135	0,090
13	1/2	19	0,75	10	150					0,165	0,110
13	1/2	20	0,79	10	150					0,215	0,145
16	5/8	22	0,87	10	150					0,215	0,145
16	5/8	23	0,91	10	150					0,260	0,175
19	3/4	26	1,02	10	150					0,300	0,200
19	3/4	27	1,06	10	150					0,350	0,235
22	7/8	29	1,14	10	150					0,335	0,225
25	1	33	1,30	10	150					0,415	0,280
25	1	35	1,38	10	150					0,555	0,370
30	1 3/16	38	1,50	7	100					0,520	0,350
32	1 1/4	42	1,65	7	100					0,690	0,460
38	1 1/2	48	1,89	7	100					0,820	0,550
51	2	63	2,48	6	90					1,320	0,890

NA	LA	NEU	CEU	SA	AP	AU
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49100

IANESCO approved

General purpose food quality - PVC
FDA 90/128/EC A+B+C AS 2070

Tube: Transparent non-toxic PVC
Reinforcement: High tensile textile cords
Cover: Transparent PVC with longitudinal red stripes - abrasion and ozone resistant
Use: General purpose food quality. Also suitable for compressed air.
 Oil mist resistant.
 Sterilize with 5% soda solution
Safety factor: 3:1
Temperature: -5 °C +60 °C (+23 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
20	13/16			8	120	90	3,50	70	0,230	0,155
25	1			8	120	113	4,50	70	0,290	0,195
30	1 3/16			7	100	135	5,25	70	0,360	0,240
32	1 1/4			7	100	144	5,75	70	0,390	0,260
35	1 3/8			7	100	158	6,25	70	0,440	0,300
38	1 1/2			6	90	171	6,75	70	0,510	0,340
40	1 9/16			6	90	180	7,00	70	0,540	0,360
45	1 3/4			6	90	203	8,00	70	0,670	0,450
51	2			5	75	230	9,00	70	0,760	0,510
55	2 1/6			5	75	247	9,75	70	0,810	0,540
60	2 3/8			5	75	270	10,50	70	0,920	0,620
63	2 1/2			5	75	284	11,25	70	0,970	0,650
70	2 3/4			5	75	315	12,50	70	1,160	0,780
76	3			5	75	342	13,50	70	1,330	0,890
80	3 1/8			4	60	360	14,00	70	1,450	0,970
90	3 1/2			4	60	405	15,75	70	1,800	1,210
102	4			4	60	459	18,00	70	2,190	1,470
120	4 3/4			3	45	540	21,00	50	2,700	1,810
NA		LA		NEU		CEU		SA	AP	AU



4660L

IANESCO approved

Liquid food S&D - PVC - standard duty
FDA 90/128/EC A+B+C AS 2070

Construction: Transparent PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Liquid food and alcoholic beverages suction and delivery - max 28% proof.

Sterilize with 5% soda solution

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1			7	100	125	5,00	90	0,400	0,270
30	1 3/16			7	100	150	6,00	90	0,500	0,340
32	1 1/4			7	100	160	6,25	90	0,520	0,350
38	1 1/2			7	100	190	7,50	90	0,730	0,490
40	1 9/16			7	100	200	8,00	90	0,750	0,500
51	2			7	100	255	10,00	90	1,000	0,670
60	2 3/8			7	100	300	12,00	90	1,450	0,970
63	2 1/2			6	90	315	12,50	90	1,500	1,010
70	2 3/4			5	75	350	14,00	90	1,560	1,050
76	3			5	75	380	15,00	90	1,900	1,280
80	3 1/8			5	75	400	15,75	90	2,100	1,410
102	4			4	60	510	20,00	90	3,300	2,220
120	4 3/4			3	45	600	23,75	80	3,600	2,420
NA		LA		NEU		CEU		SA	AP	AU



4680H

IANESCO approved

Liquid food S&D - PVC - heavy duty
FDA 90/128/EC A+B+C AS 2070

Construction: Transparent PVC - abrasion and ozone resistant

Reinforcement: Red shock resistant rigid PVC

Use: Liquid food and alcoholic beverages suction and delivery - max 28% proof.

Sterilize with 5% soda solution

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
10	3/8	16	0,63	15	225	40	1,50	90	0,170	0,115	
13	1/2	19	0,75	7	100	52	2,00	85	0,205	0,138	
14	9/16	20	0,79	6	90	56	2,25	85	0,220	0,150	
16	5/8	22	0,87	6	90	64	2,50	85	0,250	0,170	
18	23/32	26	1,02	6	90	72	2,75	85	0,320	0,215	
20	13/16	28	1,10	5	75	80	3,00	85	0,340	0,230	
22	7/8	30	1,18	5	75	88	3,50	85	0,380	0,255	
25	1	33	1,30	5	75	100	4,00	85	0,530	0,360	
30	1 3/16	38	1,50	4	60	120	4,75	85	0,620	0,420	
32	1 1/4	40	1,57	4	60	128	5,00	85	0,655	0,440	
35	1 3/8	45	1,77	4	60	140	5,50	85	0,800	0,540	
38	1 1/2	48	1,89	4	60	152	6,00	85	0,855	0,570	
40	1 9/16	50	1,97	3	45	160	6,25	85	0,895	0,600	
45	1 3/4	55	2,17	3	45	180	7,00	80	1,100	0,740	
51	2	61	2,40	3	45	204	8,00	80	1,230	0,830	
60	2 3/8	72	2,83	2	30	240	9,50	80	1,700	1,140	
63	2 1/2	75	2,95	2	30	252	10,00	80	1,775	1,190	
70	2 3/4	84	3,31	2	30	280	11,00	80	2,030	1,360	
76	3	90	3,54	2	30	304	12,00	70	2,450	1,650	
80	3 1/8	94	3,70	2	30	320	12,50	70	2,565	1,720	
90	3 1/2	104	4,09	2	30	360	14,00	70	3,000	2,020	
102	4	116	4,57	2	30	408	16,00	70	3,480	2,340	
105	4 1/8	121	4,76	3	45	420	16,50	90	4,250	2,860	
152	6	172	6,77	2	30	608	24,00	70	7,300	4,910	

NA	LA	NEU	CEU	SA	AP	AU
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47000

IANESCO approved

General purpose food quality S&D - PVC
FDA 90/128/EC A+B+C AS 2070

Construction: Transparent PVC - abrasion and ozone resistant

Reinforcement: Steel helix wire

Use: General purpose liquid food and alcoholic beverages suction and delivery - max 28% proof.

Sterilize with 5% soda solution

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	35	1,38	12	180	75	3,00	90	0,640	0,430
32	1 1/4	43	1,69	10	150	96	3,75	90	0,935	0,580
35	1 3/8	46	1,81	10	150	105	4,25	90	0,940	0,630
38	1 1/2	49	1,93	10	150	114	4,50	90	1,010	0,680
51	2	64	2,52	8	120	153	6,00	80	1,600	1,080

NA	LA	NEU	CEU	SA	AP	AU
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47300

General purpose food quality S&D - PVC
heavy duty
FDA 90/128/EC A+B+C AS 2070

Construction: Transparent PVC - abrasion and ozone resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Use: General purpose heavy duty liquid food and alcoholic beverages suction and delivery - max 28% proof.

Sterilize with 5% soda solution

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	10	150				0,380	0,255	
19	3/4	31	1,22	10	150				0,610	0,410	
25	1	37	1,46	10	150				0,760	0,510	
32	1 1/4	44	1,73	10	150				0,920	0,620	
38	1 1/2	50	1,97	10	150				1,070	0,720	
40	1 9/16	52	2,05	10	150				1,120	0,750	
51	2	65	2,56	10	150				1,680	1,130	
51	2	71	2,80	10	150				2,500	1,680	
63	2 1/2	77	3,03	10	150				2,020	1,360	
76	3	92	3,62	10	150				2,800	2,910	
76	3	100	3,94	10	150				4,330	1,880	
102	4	118	4,65	10	150				3,740	2,510	
NA		LA		NEU		CEU		SA		AP	
										AU	



452LH

IANESCO approved

Liquid food delivery 10 bar (150 psi)
FDA

Tube: White NR

Reinforcement: High tensile textile cords

Cover: Red SBR/EPDM - abrasion and ozone resistant

Use: Liquid food and alcoholic beverages delivery - max 50% proof.

Sterilize with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	10	150	75	3,00	100	0,900	0,600	
38	1 1/2	50	1,97	10	150	114	4,50	100	1,220	0,820	
40	1 9/16	52	2,05	10	150	120	4,75	100	1,270	0,850	
51	2	63	2,48	10	150	153	6,00	100	1,580	1,060	
70	2 3/4	82	3,23	10	150	210	8,25	90	2,300	1,550	
76	3	88	3,46	10	150	228	9,00	90	2,480	1,670	
80	3 1/8	92	3,62	10	150	240	9,50	90	2,590	1,740	
102	4	116	4,57	10	150	306	12,00	90	3,400	2,280	
NA		LA		NEU		CEU		SA		AP	
										AU	



402LH

IANESCO approved

Liquid food S&D 10 bar (150 psi)
FDA

Tube: White NR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Red SBR/EPDM - abrasion and ozone resistant

Use: Liquid food and alcoholic beverages suction and delivery - max 50% proof. Special construction for maximum flexibility.

Sterilize with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	16	240	125	5,00	100	0,870	0,580	
38	1 1/2	52	2,05	16	240	190	7,50	100	1,470	0,990	
51	2	67	2,64	16	240	255	10,00	100	2,210	1,490	
63	2 1/2	79	3,11	16	240	315	12,50	100	2,740	1,840	
76	3	94	3,70	16	240	380	15,00	100	3,350	2,250	
102	4	122	4,80	16	240	510	20,00	80	5,060	3,400	
NA		LA		NEU		CEU		SA		AP	
										AU	



408LL

IANESCO approved

Alcoholic beverages S&D 16 bar (240 psi)
crush resistant
FDA

Tube: White chlorobutyl

Reinforcement: High tensile textile cords with embedded nylon helix

Cover: White EPDM - abrasion and ozone resistant

Use: Liquid food and alcoholic beverages suction and delivery - max 95% proof. Special crush resistant construction.

Sterilize with 130 °C (226 °F) steam for 30 minutes or with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	35	1,38	10	150	50	2,00	100	0,630	0,420	
32	1 1/4	42	1,65	10	150	64	2,50	100	0,780	0,520	
38	1 1/2	48	1,89	10	150	76	3,00	100	0,970	0,650	
40	1 9/16	50	1,97	10	150	80	3,00	100	1,020	0,690	
45	1 3/4	55	2,17	10	150	90	3,50	100	1,130	0,760	
51	2	61	2,40	10	150	100	4,00	100	1,330	0,890	
63	2 1/2	75	2,95	10	150	126	5,00	100	1,890	1,270	
76	3	88	3,46	10	150	228	9,00	90	2,730	1,830	
102	4	116	4,57	10	150	306	12,00	90	3,610	2,430	
NA		LA		NEU		CEU		SA		AP	
										AU	



412LE

IANESCO approved

Milk tanker 10 bar (150 psi) - hard wall
FDA

Tube: White NR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Blue SBR/EPDM - abrasion, ozone and oil resistant

Use: Liquid food suction and delivery.

Special construction for maximum flexibility in milk tanker applications.

Sterilize with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	10	150				0,380	0,255
19	3/4	31	1,22	10	150				0,610	0,410
25	1	37	1,46	10	150				0,760	0,510
32	1 1/4	44	1,73	10	150				0,930	0,630
38	1 1/2	50	1,97	10	150				1,080	0,730
40	1 9/16	52	2,05	10	150				1,130	0,760
51	2	65	2,56	10	150				1,680	1,130

NA	LA	NEU	CEU	SA	AP	AU
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455LE

Fat food delivery 10 bar (150 psi)

FDA

Tube: White NBR

Reinforcement: High tensile textile cords

Cover: Blue NBR/PVC - abrasion, ozone and oil resistant

Use: Liquid and fat food-alcoholic beverages delivery - max 75% proof. Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	48	1,89	10	150				0,870	0,580	
51	2	63	2,48	10	150				1,390	0,930	
76	3	88	3,46	10	150				2,030	1,360	

NA	LA	NEU	CEU	SA	AP	AU
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455LL

Fat food delivery 10 bar (150 psi)

FDA

Tube: White NBR

Reinforcement: High tensile textile cords

Cover: White NBR/PVC - abrasion, ozone and oil resistant

Use: Liquid and fat food-alcoholic beverages delivery - max 75% proof. Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	10	150	57	2,25	100	0,730	0,490	
25	1	37	1,46	10	150	75	3,00	100	0,900	0,600	
38	1 1/2	50	1,97	10	150	114	4,50	100	1,230	0,830	
51	2	63	2,48	10	150	153	6,00	100	1,590	1,070	
63	2 1/2	75	2,95	10	150	189	7,50	90	2,100	1,410	
76	3	88	3,46	10	150	228	9,00	90	2,500	1,680	
102	4	116	4,57	10	150	306	12,00	90	3,450	2,320	

NA	LA	NEU	CEU	SA	AP	AU
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405LE

Fat food S&D 10 bar (150 psi)
FDA

Tube: White NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Blue NBR/PVC - abrasion, ozone and oil resistant

Use: Liquid and fat food-alcoholic beverages suction and delivery - max 75% proof.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	10	150	75	3,00	100	0,880	0,590	
38	1 1/2	50	1,97	10	150	114	4,50	100	1,210	0,810	
51	2	63	2,48	10	150	153	6,00	100	1,560	1,050	
63	2 1/2	75	2,95	10	150	189	7,50	90	2,070	1,390	
76	3	88	3,46	10	150	228	9,00	90	2,460	1,650	
102	4	116	4,57	10	150	306	12,00	90	3,390	2,280	

NA	LA	NEU	CEU	SA	AP	AU
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405LL

Fat food S&D 10 bar (150 psi)
FDA

Tube: White NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: White NBR/PVC - abrasion, ozone and oil resistant

Use: Liquid and fat food-alcoholic beverages suction and delivery - max 75% proof.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	50	1,97	10	150	114	4,50	100	1,240	0,830	
51	2	63	2,48	10	150	153	6,00	100	1,600	1,080	
63	2 1/2	75	2,95	10	150	189	7,50	90	2,120	1,420	
76	3	88	3,46	10	150	228	9,00	90	2,520	1,690	

NA	LA	NEU	CEU	SA	AP	AU
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405LH

Fat food S&D 10 bar (150 psi)
FDA

Tube: White NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Red NBR/PVC - abrasion, ozone and oil resistant

Use: Liquid and fat food-alcoholic beverages suction and delivery - max 75% proof.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	52	2,05	16	240	190	7,50	100	1,440	0,970	
51	2	67	2,64	16	240	255	10,00	100	2,180	1,470	
63	2 1/2	79	3,11	16	240	315	12,50	100	2,710	1,820	
76	3	94	3,70	16	240	380	15,00	100	3,690	2,480	

NA	LA	NEU	CEU	SA	AP	AU
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407LE

Fat food S&D 16 bar (240 psi)
crush resistant
FDA

Tube: White NBR

Reinforcement: High tensile textile cords with embedded nylon helix

Cover: Blue NBR/PVC - abrasion, ozone and oil resistant

Use: Liquid and fat food-alcoholic beverages suction and delivery - max 75% proof. Special crush resistant construction.

Sterilize with 130 °C (266 °F) steam for 30 minutes or with 5% soda solution

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

BULK FOOD



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
75	3	93	3,66	5	75				2,400	1,610
80	3 1/8	92	3,62	5	75				1,880	1,260
90	3 1/2	102	4,02	5	75				2,150	1,440
100	4	120	4,72	5	75				3,580	2,410
102	4	118	4,65	5	75				2,780	1,870
102	4	120	4,72	5	75				3,210	2,160
110	4 5/16	122	4,80	5	75				2,570	1,730
NA		LA		NEU		CEU		SA	AP	AU



760LA

Bulk food delivery 5 bar (75 psi)

FDA

Tube: White NR - abrasion resistant

Reinforcement: High tensile textile cords - antistatic wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk food and material delivery.

Specially designed for grain, flour and plastic pellets transfer

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
102	4	118	4,65	5	75				3,160	2,120
NA		LA		NEU		CEU		SA	AP	AU



760LB

Bulk food delivery 5 bar (75 psi)

FDA

Tube: White NR - abrasion resistant

Reinforcement: High tensile textile cords - antistatic wire

Cover: Grey SBR/EPDM - abrasion and ozone resistant

Use: Bulk food and material delivery.

Specially designed for grain, flour and plastic pellets transfer

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
102	4	118	4,65	10	150				2,960	1,990
NA		LA		NEU		CEU		SA	AP	AU



766LA

Bulk food delivery 10 bar (150 psi)

FDA

Tube: White NR - abrasion resistant

Reinforcement: High tensile textile cords - antistatic wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk food and material delivery.

Specially designed for grain, flour and plastic pellets transfer

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	92	3,62	10	150	228	9,00	90	2,640	1,770	
90	3 1/2	106	4,17	10	150	270	10,50	90	3,240	2,180	
102	4	118	4,65	10	150	306	12,00	90	3,610	2,430	
NA		LA		NEU		CEU		SA		AP	
										AU	



720LA

Bulk food S&D 10 bar (150 psi)

FDA

Tube: White NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire - antistatic wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

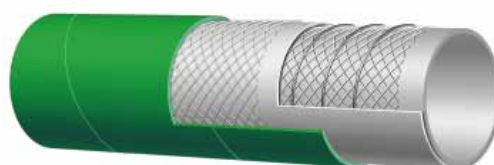
Use: Bulk food and material suction and delivery.

Specially designed for grain, flour and plastic pellets transfer

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	67	2,64	10	150	153	6,00	100	1,810	1,220	
76	3	92	3,62	10	150	228	9,00	90	2,800	1,880	
102	4	118	4,65	10	150	306	12,00	90	3,810	2,560	
127	5	145	5,71	5	75	508	20,00	80	5,640	3,790	
152	6	170	6,69	5	75	608	24,00	80	6,940	4,660	
203	8	223	8,78	5	75	812	32,00	70	10,430	7,010	
NA		LA		NEU		CEU		SA		AP	
										AU	



720LG

Bulk food S&D 10 bar (150 psi)

FDA

Tube: White NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire - antistatic wire

Cover: Green SBR/EPDM - abrasion and ozone resistant

Use: Bulk food and material suction and delivery.

Specially designed for grain, flour and plastic pellets transfer

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
152	6			2	30	380	15,00	95	5,600	3,760	
203	8			2	30	609	24,00	95	9,200	6,180	
254	10			2	30	1016	40,00	95	14,500	9,740	
305	12			1	15	1525	60,00	95	19,000	12,770	
NA		LA		NEU		CEU		SA		AP	AU



967OL

Fish handling - PVC - super elastic 90/128/EC A+B+C

Construction: Transparent PVC - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Fish transfer on fish farms

Safety factor: 3:1

Temperature: -20 °C +60 °C (-4 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
254	10	262	10,31	3	45				4,130	2,780	
305	12	313	12,32	3	45				4,940	3,320	
355	14	367	14,45	3	45				8,150	5,480	
406	16	418	16,46	3	45				9,770	6,570	
457	18	469	18,46	3	45				10,970	7,370	
NA		LA		NEU		CEU		SA		AP	AU



949AA

Fish pump 3 bar (45 psi)

Tube: Black NBR - oil, abrasion and sea water resistant

Reinforcement: High tensile textile cords

Cover: Black conductive NBR/PVC - oil, abrasion, ozone and sea water resistant

Use: Fish transfer from fishing net to ship deck

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

BULK MATERIALS



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mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
75	3	93	3,66	5	75					2,380	1,600
80	3 1/8	92	3,62	5	75					1,870	1,260
90	3 1/2	102	4,02	5	75					2,130	1,430
90	3 1/2	110	4,33	5	75					3,240	2,180
100	4	120	4,72	5	75					3,560	2,390
102	4	114	4,49	5	75					2,380	1,600
102	4	118	4,65	5	75					2,770	1,860
102	4	120	4,72	5	75					3,190	2,140
110	4 5/16	122	4,80	5	75					2,550	1,710
127	5	145	5,71	5	75					3,920	2,630
NA		LA		NEU		CEU		SA		AP	
										AU	



760AA

Bulk material delivery 5 bar (75 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk material delivery.

Specially designed for dry cement, grain and animal feed transfer

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
76	3	92	3,62	10	150					2,180	1,470
102	4	118	4,65	10	150					2,940	1,980
127	5	143	5,63	10	150					3,630	2,440
NA		LA		NEU		CEU		SA		AP	
										AU	



766AA

Bulk material delivery 10 bar (150 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk material delivery in heavy duty applications.

Specially designed for dry cement, grain and animal feed transfer

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
51	2	65	2,56	10	150	153	6,00	100		1,420	0,950
60	2 3/8	74	2,91	10	150	180	7,00	90		1,820	1,220
63	2 1/2	77	3,03	10	150	189	7,50	90		1,900	1,280
76	3	90	3,54	10	150	228	9,00	90		2,260	1,520
76	3	92	3,62	10	150	228	9,00	90		2,580	1,730
80	3 1/8	96	3,78	10	150	240	9,50	90		2,770	1,860
90	3 1/2	106	4,17	10	150	270	10,50	90		3,160	2,120
102	4	116	4,57	10	150	306	12,00	90		3,120	2,100
102	4	118	4,65	10	150	306	12,00	90		3,530	2,370
127	5	143	5,63	5	75	508	20,00	80		4,750	3,190
127	5	145	5,71	5	75	508	20,00	80		5,270	3,540
152	6	168	6,61	5	75	608	24,00	80		5,900	3,970
203	8	221	8,70	5	75	812	32,00	70		9,030	6,070
NA		LA		NEU		CEU		SA		AP	
										AU	



720AA

Bulk material S&D 10 bar (150 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk material delivery in heavy duty applications.

Specially designed for dry cement, grain and animal feed transfer

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft
102	4			5	75	306	12,00	90		4,220	2,840
NA		LA		NEU		CEU		SA		AP	
										AU	



713AA

Bulk material S&D 5 bar (75 psi) corrugated - soft ends

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk material delivery in heavy duty applications.

Specially designed for dry cement, grain and animal feed transfer.

Corrugated construction for maximum flexibility

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
51	2	61	2,40			204	8,00	90	1,400	0,940			
63	2 1/2	73	2,87			252	10,00	90	1,700	1,140			
76	3	86	3,39			304	12,00	90	2,190	1,470			
102	4	112	4,41			408	16,00	90	3,190	2,140			
127	5	137	5,39			508	20,00	90	3,920	2,630			
152	6	162	6,38			608	24,00	90	4,660	3,130			
203	8	215	8,46			812	32,00	90	7,330	4,930			
NA		LA		NEU		CEU		SA		AP		AU	



700AA

Bulk material suction corrugated

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk material suction, transfer and gravity feed.

Also suitable for heavy duty dust extraction

Temperature: -30 °C +80 °C (-22 °F +176 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
51	2			5	75	255	10,00	100	1,050	0,710			
63	2 1/2			5	75	315	12,50	100	1,470	0,990			
76	3			5	75	380	15,00	100	1,830	1,230			
102	4			4	60	510	20,00	100	2,982	2,000			
127	5			3	45	635	25,00	100	4,215	2,830			
152	6			3	45	760	30,00	100	5,235	3,520			
NA		LA		NEU		CEU		SA		AP		AU	



767AA

Bulk material S&D - PVC - polyurethane lined

Construction: Black antistatic polyurethane coextruded with black PVC - abrasion and ozone resistant

Reinforcement: Black shock resistant rigid PVC

Use: Bulk material suction and low pressure delivery-gravity feed.

Specially designed for gravel, cement and iron ore transfer

Safety factor: 3:1

Temperature: -20 °C +60 °C (-4 °F +140 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
38	1 1/2	47	1,85	2	30	80	3,00	100	0,570	0,380			
51	2	61	2,40	2	30	120	4,75	100	0,860	0,580			
63	2 1/2	75	2,95	2	30	200	8,00	100	1,090	0,730			
76	3	90	3,54	1	15	240	9,50	100	1,390	0,930			
102	4	119	4,69	1	15	320	12,50	100	2,560	1,720			
127	5	146	5,75	1	15	480	19,00	100	3,320	2,230			
152	6	175	6,89	1	15	720	28,50	100	4,890	3,290			
NA		LA		NEU		CEU		SA		AP		AU	



780AA

Bulk material S&D - PVC - INDUS AR

Construction: Black antistatic synthetic elastomer

Reinforcement: Black shock resistant thermoplastic elastomer

Use: Bulk material suction and low pressure delivery-gravity feed.

Specially designed for gravel, cement and iron ore transfer

Safety factor: 4:1

Temperature: -15 °C +60 °C (+5 °F +140 °F)

SANDBLAST & GUNITE



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	750AH Sandblast 10 bar (150 psi).....	68
	750AG Sandblast 10 bar (150 psi).....	68
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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	33	1,30	10	150				0,670	0,450
19	3/4	35	1,38	10	150				0,790	0,530
19	3/4	38	1,50	10	150				0,930	0,630
25	1	40	1,57	10	150				0,820	0,550
25	1	48	1,89	10	150				1,440	0,970
32	1 1/4	48	1,89	10	150				1,180	0,790
32	1 1/4	55	2,17	10	150				1,730	1,160
38	1 1/2	55	2,17	10	150				1,540	1,030
38	1 1/2	60	2,36	10	150				1,960	1,320
40	1 9/16	60	2,36	10	150				1,810	1,220
51	2	71	2,80	10	150				2,210	1,490
51	2	73	2,87	10	150				2,490	1,670
NA		LA		NEU		CEU		SA	AP	AU



750AA

Sandblast 10 bar (150 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant - pin pricked

Use: Sandblast

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	33	1,30	10	150				0,720	0,480
25	1	40	1,57	10	150				0,890	0,600
32	1 1/4	48	1,89	10	150				1,260	0,850
38	1 1/2	55	2,17	10	150				1,680	1,130
NA		LA		NEU		CEU		SA	AP	AU



750AH

Sandblast 10 bar (150 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Red SBR/EPDM - abrasion and ozone resistant - pin pricked

Use: Sandblast

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	38	1,50	10	150				1,020	0,690
25	1	48	1,89	10	150				1,560	1,050
32	1 1/4	55	2,17	10	150				1,860	1,250
38	1 1/2	60	2,36	10	150				2,110	1,420
NA		LA		NEU		CEU		SA	AP	AU



750AG

Sandblast 10 bar (150 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Green SBR/EPDM - abrasion and ozone resistant - pin pricked

Use: Sandblast

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	27	1,06	10	150				0,510	0,340
13	1/2	29	1,14	10	150				0,600	0,400
13	1/2	33	1,30	10	150				0,810	0,540
19	3/4	33	1,30	10	150				0,650	0,440
19	3/4	38	1,50	10	150				0,910	0,610
19	3/4	40	1,57	10	150				1,040	0,700
25	1	40	1,57	10	150				0,800	0,540
25	1	48	1,89	10	150				1,410	0,950
32	1 1/4	48	1,89	10	150				1,150	0,770
32	1 1/4	55	2,17	10	150				1,690	1,140
35	1 3/8	54	2,13	10	150				1,400	0,940
38	1 1/2	55	2,17	10	150				1,510	1,010
38	1 1/2	60	2,36	10	150				1,920	1,290
38	1 1/2	64	2,52	10	150				2,330	1,570
51	2	71	2,80	10	150				2,170	1,460
51	2	73	2,87	10	150				2,430	1,630
51	2	76	2,99	10	150				2,680	1,800
NA		LA		NEU		CEU		SA	AP	AU



753AA

Sandblast - premium quality - 10 bar (150 psi)

Tube: Premium black conductive NR - abrasion resistance 50 mm³ (ISO 4649/A)

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant - pin pricked

Use: Sandblast. Designed for long service life in heavy duty applications

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
32	1 1/4	53	2,09	10	150				1,710	1,150	
38	1 1/2	62	2,44	10	150				2,380	1,600	
51	2	75	2,95	10	150				2,990	2,010	
NA		LA		NEU		CEU		SA		AP	



759AK

Gunit 10 bar (150 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

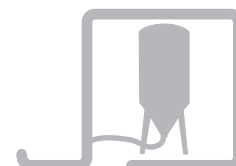
Cover: Yellow SBR/EPDM - abrasion and ozone resistant - pin pricked

Use: Gunit

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

PLASTER



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
45	1 3/4					203	8,00	60	0,680	0,460	
NA		LA		NEU		CEU		SA		AP	
										AU	



764OL

Plaster conveyance - polyurethane

Construction: Transparent polyurethane - abrasion and ozone resistant

Reinforcement: White shock resistant rigid PVC

Use: Pneumatic conveyance of pre-mixed synthetic plaster from silo to plaster pumping machine.

Assembly complete with fittings also available

Safety factor: 3:1

Temperature: -20 °C + 60 °C (-4 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	71	2,80	10	150				2,040	1,370
60	2 3/8	80	3,15	10	150				2,380	1,600
65	2 9/16	85	3,35	10	150				2,590	1,740
76	3	96	3,78	10	150				2,950	1,980
80	3 1/8	103	4,06	10	150				3,800	2,550
90	3 1/2	113	4,45	10	150				4,230	2,840
102	4	127	5,00	10	150				4,810	3,230
NA		LA		NEU		CEU		SA	AP	AU



752AA

Plaster 10 bar (150 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant - pin pricked

Use: Plaster and sand/cement mix pumping.

Also suitable for heavy duty sandblast

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	38	1,50	40	600				0,720	0,480
32	1 1/4	46	1,81	40	600				0,900	0,600
35	1 3/8	49	1,93	40	600				0,990	0,670
38	1 1/2	54	2,13	40	600				1,220	0,820
51	2	67	2,64	40	600				1,650	1,110
NA		LA		NEU		CEU		SA	AP	AU



757AA

Plaster 40 bar (600 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Plaster pumping

Safety factor: 2,5:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
35	1 3/8	45	1,77	40	600	175	7,00		0,920	0,620
51	2	63	2,48	40	600	255	10,00		1,740	1,170
NA		LA		NEU		CEU		SA	AP	AU



739AA

Plaster 40 bar (600 psi) - steel reinforced

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile steel cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Plaster pumping

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	40	1,57	55	800				0,850	0,570
32	1 1/4	49	1,93	55	800				1,260	0,850
38	1 1/2	58	2,28	55	800				1,660	1,120
51	2	71	2,80	55	800				2,240	1,510
NA		LA		NEU		CEU		SA	AP	AU



758AA

Plaster 55 bar (800 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Plaster pumping

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	40	1,57	55	800				0,970	0,650
32	1 1/4	49	1,93	55	800				1,440	0,970
38	1 1/2	58	2,28	55	800				1,920	1,290
51	2	71	2,80	55	800				2,570	1,730
NA		LA		NEU		CEU		SA	AP	AU



758AE

Plaster 55 bar (800 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Blue SBR/EPDM - abrasion and ozone resistant

Use: Plaster pumping

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

CONCRETE



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	10	150				0,680	0,460
25	1	39	1,54	10	150				1,010	0,680
30	1 3/16	45	1,77	10	150				1,380	0,930
NA		LA		NEU		CEU		SA	AP	AU



754AA

Concrete vibrator 10 bar (150 psi)

Tube: Black SBR
Reinforcement: High tensile textile cords
Cover: Black SBR - abrasion and ozone resistant
Use: Pneumatic concrete vibrators
Safety factor: 4:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	69	2,72	40	600				1,850	1,240
76	3	104	4,09	40	600				4,410	2,960
90	3 1/2	118	4,65	40	600				5,170	3,470
102	4	130	5,12	40	600				5,850	3,930
NA		LA		NEU		CEU		SA	AP	AU



737AA

Concrete pumping 40 bar (600 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Concrete pumping

Safety factor: 2,5:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
76	3	104	4,09	55	800				4,550	3,060
102	4	130	5,12	55	800				5,840	3,920
NA		LA		NEU		CEU		SA	AP	AU



738AA

Concrete pumping 55 bar (800 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Concrete pumping

Safety factor: 76 mm 3:1 102 mm 2:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	69	2,72	85	1275	255	10,00		2,160	1,450
63	2 1/2	85	3,35	85	1275	265	10,50		3,380	2,270
76	3	100	3,94	85	1275	380	15,00		4,590	3,080
90	3 1/2	116	4,57	85	1275	450	17,50		5,930	3,990
102	4	128	5,04	85	1275	510	20,00		7,510	5,050
127	5	155	6,10	85	1275	635	25,00		10,940	7,350
152	6	186	7,32	85	1275	760	30,00		14,250	9,580
NA		LA		NEU		CEU		SA	AP	AU



740AA

Concrete pumping 85 bar (1275 psi) heavy duty - steel reinforced

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile steel cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: High pressure concrete pumping

Safety factor: 2:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	69	2,72	85	1275	255	10,00		2,620	1,760
63	2 1/2	85	3,35	85	1275	325	13,00		3,810	2,560
76	3	102	4,02	85	1275	380	15,00		5,020	3,370
90	3 1/2	116	4,57	85	1275	450	17,50		7,270	4,890
102	4	130	5,12	85	1275	510	20,00		8,150	5,480
127	5	157	6,18	85	1275	635	25,00		10,850	7,290
152	6	188	7,40	85	1275	760	30,00		14,100	9,480
NA		LA		NEU		CEU		SA	AP	AU



741AA

Concrete pumping 85 bar (1275 psi) extra service - steel reinforced

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile steel cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: High pressure concrete pumping.

Designed for long service life in heavy duty applications

Safety factor: <= 127 mm 2,5:1 152 mm 2:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

ACID, CHEMICAL & MULTIPURPOSE



	984AH	Multipurpose 20 bar (300 psi)	80
	974AH	Multipurpose 17 bar (250 psi) - non conductive	80
	975AH	Multipurpose 20 bar (300 psi) - non conductive	80
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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	48	2,00		0,140	0,095	
8	5/16	15	0,59	20	300	64	2,50		0,170	0,115	
10	3/8	17	0,67	20	300	80	3,00		0,205	0,138	
13	1/2	21	0,83	20	300	104	4,00		0,295	0,200	
16	5/8	25	0,98	20	300	128	5,00		0,385	0,260	
19	3/4	29	1,14	20	300	152	6,00		0,505	0,340	
25	1	36	1,42	20	300	200	8,00		0,705	0,470	

NA	LA	NEU	CEU	SA	AP	AU
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984AH

Multipurpose 20 bar (300 psi)

Tube: Black synthetic elastomer

Reinforcement: High tensile textile cords

Cover: Red synthetic elastomer with longitudinal blue stripes - abrasion, ozone and hydrocarbon resistant

Use: Compressed air, water, fuel and oil delivery in general industrial applications

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	17	250	48	2,00		0,120	0,080	
10	3/8	17	0,67	17	250	64	2,50		0,250	0,170	
13	1/2	21	0,83	17	250	104	4,00		0,360	0,240	
16	5/8	25	0,98	17	250	128	5,00		0,420	0,280	
19	3/4	29	1,14	17	250	152	6,00		0,540	0,360	
25	1	35	1,38	17	250	200	8,00		0,730	0,490	

NA	LA	NEU	CEU	SA	AP	AU
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974AH

Multipurpose 17 bar (250 psi) - non conductive

Tube: Black non conductive NBR (RMA Class A)

Reinforcement: High tensile textile cords

Cover: Red NBR/PVC (RMA Class B) - abrasion, ozone and hydrocarbon resistant

Use: Premium quality compressed air, water, fuel and oil delivery in general industrial applications

Safety factor: 4:1

Temperature: -25 °C +80 °C (-13 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	16	0,63	20	300	48	2,00		0,240	0,160
10	3/8	18	0,71	20	300	80	3,00		0,270	0,180
13	1/2	21	0,83	20	300	104	4,00		0,370	0,250
19	3/4	29	1,14	20	300	152	6,00		0,620	0,420
25	1	36	1,42	20	300	200	8,00		0,940	0,630

NA	LA	NEU	CEU	SA	AP	AU
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975AH

Multipurpose 20 bar (300 psi) - non conductive

Tube: Black non conductive NBR (RMA Class A)

Reinforcement: High tensile textile cords

Cover: Red NBR/PVC (RMA Class A) - abrasion, ozone and hydrocarbon resistant

Use: Premium quality compressed air, water, fuel and oil delivery in general industrial applications

Safety factor: 4:1

Temperature: -25 °C +80 °C (-13 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
32	1 1/4	44	1,73	20	300				0,980	0,660
38	1 1/2	50	1,97	20	300				1,140	0,770
51	2	65	2,56	20	300				1,500	1,010

NA	LA	NEU	CEU	SA	AP	AU
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954AH

Multipurpose 20 bar (300 psi) - non conductive

Tube: Black non conductive NBR

Reinforcement: High tensile textile cords

Cover: Red NBR/PVC - abrasion, ozone and hydrocarbon resistant

Use: Premium quality compressed air, water, fuel and oil delivery in general industrial applications

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
6	1/4	13	0,51	20	300	48	2,00		0,130	0,087	
8	5/16	15	0,59	20	300	64	2,50		0,160	0,108	
10	3/8	17	0,67	20	300	80	3,00		0,190	0,128	
13	1/2	21	0,83	20	300	104	4,00		0,270	0,180	
16	5/8	25	0,98	20	300	128	5,00		0,360	0,240	
19	3/4	29	1,14	20	300	152	6,00		0,460	0,310	
25	1	35	1,38	20	300	200	8,00		0,580	0,390	
NA		LA		NEU		CEU		SA		AP	



976AB

General purpose 20 bar (300 psi) - EPDM

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Grey EPDM - abrasion and ozone resistant

Use: Air, water and mild chemicals delivery in general industrial applications

Safety factor: 3:1

Temperature: -40 °C +100 °C (-40 °F +212 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
32	1 1/4	44	1,73	20	300				0,930	0,630	
38	1 1/2	52	2,05	20	300				1,080	0,730	
51	2	66	2,60	20	300				1,660	1,120	
NA		LA		NEU		CEU		SA		AP	



956AB

General purpose 20 bar (300 psi) - EPDM

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Grey EPDM - abrasion and ozone resistant

Use: Air, water and mild chemicals delivery in general industrial applications

Safety factor: 3:1

Temperature: -40 °C +100 °C (-40 °F +212 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	20	300				0,350	0,235	
19	3/4	31	1,22	20	300				0,580	0,390	
25	1	37	1,46	20	300				0,730	0,490	
38	1 1/2	52	2,05	20	300				1,070	0,720	
51	2	67	2,64	20	300				1,880	1,260	
63	2 1/2	81	3,19	20	300				2,300	1,550	
76	3	94	3,70	20	300				2,790	1,880	
90	3 1/2	108	4,25	20	300				3,440	2,310	
NA		LA		NEU		CEU		SA		AP	



953AE

General purpose 20 bar (300 psi) - EPDM

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Blue EPDM - abrasion and ozone resistant

Use: Air, water and mild chemicals delivery

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	10	150	76	3,00	100	0,550	0,370	
25	1	35	1,38	10	150	100	4,00	100	0,680	0,460	
32	1 1/4	42	1,65	10	150	128	5,00	100	0,810	0,540	
38	1 1/2	48	1,89	10	150	152	6,00	100	0,930	0,630	
51	2	61	2,40	10	150	204	8,00	100	1,220	0,820	
60	2 3/8	72	2,83	10	150	240	9,50	100	1,750	1,180	
63	2 1/2	75	2,95	10	150	252	10,00	90	1,760	1,180	
76	3	88	3,46	10	150	304	12,00	90	2,100	1,410	
90	3 1/2	102	4,02	10	150	360	14,00	90	2,640	1,770	
102	4	114	4,49	10	150	408	16,00	90	2,950	1,980	
127	5	141	5,55	10	150	635	25,00	80	4,670	3,140	
152	6	166	6,54	10	150	760	30,00	80	5,840	3,920	
203	8	221	8,70	10	150	1015	40,00	70	9,810	6,590	
NA		LA		NEU		CEU		SA		AP	



202AA

General purpose S&D 10 bar (150 psi) - EPDM

Tube: Black EPDM

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black EPDM - abrasion and ozone resistant

Use: Mild chemicals and fertilizers suction and delivery in general industrial and agricultural applications

Safety factor: ≤ 127 mm 3:1 ≥ 152 mm 2,5:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	16	240	125	5,00	90	0,700	0,470
25	1	37	1,46	16	240	150	6,00	90	0,860	0,580
32	1 1/4	44	1,73	16	240	175	7,00	90	1,030	0,690
38	1 1/2	51	2,01	16	240	225	9,00	90	1,180	0,790
50	2	66	2,60	16	240	275	11,00	90	1,790	1,200
51	2	67	2,64	16	240	275	11,00	90	1,820	1,220
63	2 1/2	79	3,11	16	240	300	12,00	90	2,390	1,610
75	3	91	3,58	16	240	350	14,00	80	2,830	1,900
76	3	92	3,62	16	240	350	14,00	80	2,860	1,920
100	4	116	4,57	16	240	450	17,50	80	3,830	2,570
102	4	118	4,65	16	240	450	17,50	80	3,900	2,620
NA		LA		NEU		CEU		SA	AP	AU



503AA

Acid-chemical S&D 16 bar (240 psi) - EPDM exceeds EN 12115

Tube: Black EPDM

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black EPDM - abrasion, ozone and fire resistant

Use: Acid and chemical suction and delivery

Safety factor: 3:1

Temperature: -20 °C +65 °C (-4 °F +150 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	16	240	188	7,50	90	0,690	0,460
25	1	37	1,46	16	240	225	9,00	90	0,850	0,570
32	1 1/4	44	1,73	16	240	263	10,25	90	1,010	0,680
38	1 1/2	51	2,01	16	240	338	13,25	90	1,160	0,780
51	2	65	2,56	16	240	413	16,25	90	1,530	1,030
63	2 1/2	79	3,11	16	240	450	17,50	90	2,320	1,560
76	3	92	3,62	16	240	525	20,75	80	2,780	1,870
102	4	118	4,65	16	240	675	26,50	80	3,780	2,540
NA		LA		NEU		CEU		SA	AP	AU



5050G

Acid-chemical S&D 16 bar (240 psi) - XLPE

Tube: Transparent XLPE (Cross Linked Polyethylene)

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Green EPDM - abrasion and ozone resistant

Use: Acid and chemical suction and delivery.

Suitable for 90% of existing chemicals

Safety factor: 3:1

Temperature: -20 °C +65 °C (-4 °F +150 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	10	150	188	7,50	90	0,620	0,420
25	1	37	1,46	10	150	225	9,00	90	0,770	0,520
32	1 1/4	44	1,73	10	150	263	10,25	90	0,920	0,620
38	1 1/2	51	2,01	10	150	338	13,25	90	1,050	0,710
50	2	66	2,60	10	150	413	16,25	90	1,870	1,260
51	2	67	2,64	10	150	413	16,25	90	1,900	1,280
63	2 1/2	79	3,11	10	150	450	17,50	90	2,490	1,670
75	3	91	3,58	10	150	525	20,75	80	2,950	1,980
76	3	92	3,62	10	150	525	20,75	80	2,980	2,000
100	4	116	4,57	10	150	675	26,50	80	3,980	2,670
102	4	118	4,65	10	150	675	26,50	80	4,050	2,720
NA		LA		NEU		CEU		SA	AP	AU



509AA

Acid-chemical S&D 10 bar (150 psi) - UHMWPE EN 12115

Tube: Black conductive UHMWPE (Ultra High Molecular Weight Polyethylene)

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black EPDM - abrasion, ozone and fire resistant

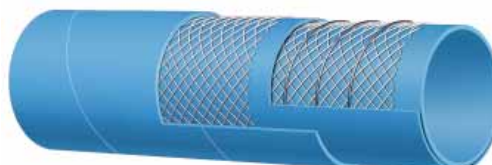
Use: Acid and chemical suction and delivery.

Suitable for 98% of existing chemicals

Safety factor: 4:1

Temperature: -20 °C +65 °C (-4 °F +150 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	16	240	188	7,50	90	0,590	0,400
25	1	37	1,46	16	240	225	9,00	90	0,730	0,490
32	1 1/4	44	1,73	16	240	263	10,25	90	0,870	0,580
38	1 1/2	50	1,97	16	240	338	13,25	90	1,010	0,680
40	1 9/16	52	2,05	16	240	338	13,25	90	1,050	0,710
51	2	63	2,48	16	240	413	16,25	90	1,330	0,890
60	2 3/8	74	2,91	16	240	450	17,50	90	1,990	1,340
63	2 1/2	77	3,03	16	240	450	17,50	90	2,080	1,400
76	3	92	3,62	16	240	525	20,75	80	2,820	1,900
102	4	118	4,65	16	240	675	26,50	80	3,850	2,590
NA		LA		NEU		CEU		SA	AP	AU



5090E

Acid-chemical S&D 16 bar (240 psi) - UHMWPE FDA

Tube: Transparent UHMWPE (Ultra High Molecular Weight Polyethylene)

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Blue EPDM - abrasion and ozone resistant

Use: Acid and chemical suction and delivery.

Suitable for 98% of existing chemicals

Safety factor: 3:1

Temperature: -20 °C +65 °C (-4 °F +150 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1			10	150	100	4,00	90	0,940	0,630	
40	1 1/2			10	150	140	5,50	90	1,100	0,740	
50	2			10	150	150	6,00	90	1,450	0,970	
63	2 1/2			10	150	175	7,00	90	2,050	1,380	
65	2 5/8			10	150	175	7,00	90	2,250	1,510	
75	3			10	150	250	10,00	90	2,400	1,610	
80	3 1/8			10	150	250	10,00	90	3,100	2,080	
100	4			10	150	350	14,00	90	4,400	2,960	
NA		LA		NEU		CEU		SA		AP	
										AU	



5J551

**Acid-chemical S&D 10 bar (150 psi) - standard duty
BS 5842 arrêté ADR annexe 1**

Inner wire: Polypropylene coated steel wire

Tube: Polypropylene film

Cover: Grey PVC coated fabric

Outer wire: Galvanised steel wire

Use: Acid and chemical suction and delivery.
Specially designed for tank truck applications

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
40	1 1/2			10	150	140	5,50	90	1,100	0,740	
50	2			10	150	150	6,00	90	1,450	0,970	
65	2 1/2			10	150	175	7,00	90	2,250	1,510	
80	3 1/8			10	150	250	10,00	90	3,100	2,080	
100	4			10	150	350	14,00	90	5,300	3,560	
NA		LA		NEU		CEU		SA		AP	
										AU	



5J553

**Acid-chemical S&D 10 bar (150 psi) - standard duty
BS 5842 arrêté ADR annexe 1**

Inner wire: Polypropylene coated steel wire

Tube: Polypropylene film

Cover: Green PVC coated fabric

Outer wire: Stainless steel wire

Use: Acid and chemical suction and delivery.
Specially designed for tank truck applications

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1			14	200	100	4,00	90	0,940	0,630
40	1 1/2			14	200	140	5,50	90	1,150	0,770
50	2			14	200	150	6,00	90	1,500	1,010
63	2 1/2			14	200	175	7,00	90	2,100	1,410
65	2 5/8			14	200	175	7,00	90	2,300	1,550
75	3			14	200	250	10,00	90	2,500	1,680
80	3 1/8			14	200	250	10,00	90	3,150	2,120
100	4			14	200	350	14,00	90	5,400	3,630
NA		LA		NEU		CEU		SA	AP	AU



5N551

Acid-chemical S&D 14 bar (200 psi) - heavy duty
BS 5842 arrêté ADR annexe 1

Inner wire: Polypropylene coated steel wire
Tube: Polypropylene film
Cover: Green PVC coated fabric
Outer wire: Galvanised steel wire
Use: Acid and chemical suction and delivery.
Specially designed for tank truck applications
Safety factor: 4:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
40	1 1/2			14	200	140	5,50	90	1,300	0,870
50	2			14	200	150	6,00	90	1,700	1,140
63	2 1/2			14	200	175	7,00	90	2,300	1,550
65	2 5/8			14	200	175	7,00	90	2,500	1,680
75	3			14	200	250	10,00	90	2,700	1,810
80	3 1/8			14	200	250	10,00	90	3,500	2,350
100	4			14	200	350	14,00	90	6,200	4,170
NA		LA		NEU		CEU		SA	AP	AU



5N331

Acid-chemical S&D 14 bar (200 psi) - heavy duty
PTFE
BS 5842 arrêté ADR annexe 1

Inner wire: Stainless steel wire
Tube: PTFE film
Cover: Red PVC coated fabric
Outer wire: Galvanised steel wire
Use: Acid, chemical, fuel and solvents suction and delivery.
Specially designed for long service life in heavy duty applications
requiring resistance to high temperature
Safety factor: 4:1
Temperature: -30 °C +120 °C (-22 °F +248 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1			14	200	100	4,00	90	1,000	0,670
40	1 1/2			14	200	140	5,50	90	1,300	0,870
50	2			14	200	150	6,00	90	1,700	1,140
63	2 1/2			14	200	175	7,00	90	2,300	1,550
65	2 5/8			14	200	175	7,00	90	2,800	1,880
75	3			14	200	250	10,00	90	2,700	1,810
80	3 1/8			14	200	250	10,00	90	3,500	2,350
100	4			14	200	350	14,00	90	6,200	4,170
NA		LA		NEU		CEU		SA	AP	AU



5N333

Acid-chemical S&D 14 bar (200 psi) - heavy duty
PTFE
BS 5842 arrêté ADR annexe 1

Inner wire: Stainless steel wire
Tube: PTFE film
Cover: Red PVC coated fabric
Outer wire: Stainless steel wire
Use: Acid, chemical, fuel and solvents suction and delivery.
Specially designed for long service life in heavy duty applications
requiring resistance to high temperature
Safety factor: 4:1
Temperature: -30 °C +120 °C (-22 °F +248 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
50	2			10	150	150	6,00	90	1,680	1,130
80	3 1/8			10	150	250	10,00	90	3,400	2,280
NA		LA		NEU		CEU		SA	AP	AU



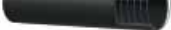
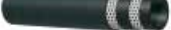
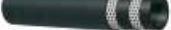
5J533

Tank cleaning 10 bar (150 psi)
BS 5842 arrêté ADR annexe 1

Inner wire: Stainless steel wire
Tube: Polypropylene film
Cover: Green PVC coated fabric
Outer wire: Stainless steel wire
Use: Tank cleaning
Safety factor: 4:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

HYDROCARBONS



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
3,5	9/64	9,5	0,37	7	100	35	1,50		0,090	0,060
4,5	11/64	10,5	0,41	7	100	45	1,75		0,100	0,067
5,0	13/64	11,0	0,43	7	100	50	2,00		0,110	0,075
5,5	7/32	11,5	0,45	7	100	55	2,25		0,120	0,080
6,0	1/4	12,0	0,47	7	100	60	2,50		0,120	0,080
7,5	19/64	13,5	0,53	7	100	75	3,00		0,140	0,095
9,5	3/8	15,5	0,61	7	100	95	3,75		0,170	0,115

NA	LA	NEU	CEU	SA	AP	AU
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687AA

Automotive fuel 7 bar (100 psi)

DIN 73379/2A

Tube: Black NBR

Reinforcement: High tensile textile cords

Cover: Black CR - abrasion, ozone and hydrocarbon resistant

Use: Petrol and diesel transfer in automotive applications. Also suitable for ecodiesel

Safety factor: 4:1

Temperature: -40 °C +85 °C (-40 °F +185 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
3,2	1/8	7,0	0,28	10	150				0,040	0,027	
3,5	9/64	7,5	0,30	10	150				0,045	0,030	
4,0	5/32	8,0	0,31	10	150				0,050	0,034	
4,5	11/64	9,5	0,37	10	150				0,060	0,040	
5,0	3/16	10,0	0,39	10	150				0,065	0,044	
5,5	7/32	10,5	0,41	10	150				0,070	0,047	
6,0	1/4	11,0	0,43	10	150				0,075	0,050	
7,5	19/64	12,5	0,50	10	150				0,080	0,054	
8,0	5/16	13,0	0,51	10	150				0,090	0,060	
9,0	23/64	14,0	0,55	10	150				0,105	0,070	
10,0	3/8	15,0	0,59	10	150				0,110	0,075	
12,0	15/32	17,0	0,67	10	150				0,135	0,090	

NA	LA	NEU	CEU	SA	AP	AU
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689AA

Automotive fuel 10 bar (150 psi)

external textile braid

Tube: Black NBR

Reinforcement: High tensile textile braid

Use: Petrol and diesel transfer in automotive applications.

Also suitable for unleaded fuel and ecodiesel

Safety factor: 3:1

Temperature: -20 °C +100 °C (-4 °F +212 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
5	3/16	10	0,39	15	225				0,090	0,060	
6	1/4	11	0,43	15	225				0,100	0,067	
8	5/16	13	0,51	15	225				0,155	0,105	
10	3/8	15	0,59	15	225				0,190	0,128	
12	15/32	17	0,67	15	225				0,230	0,155	

NA	LA	NEU	CEU	SA	AP	AU
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688AA

Diesel oil delivery 15 bar (225 psi)

external steel braid

Tube: Black NBR

Reinforcement: Plated steel braid

Use: Diesel oil delivery. Specially designed for burner feed line

Safety factor: 4:1

Temperature: -20 °C +100 °C (-4 °F +212 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	13	0,51	10	150	48	2,00		0,140	0,095
8	5/16	15	0,59	10	150	64	2,50		0,170	0,115
10	3/8	17	0,67	10	150	80	3,00		0,205	0,138
13	1/2	20	0,79	10	150	104	4,00		0,250	0,170
16	5/8	24	0,94	10	150	128	5,00		0,345	0,230
19	3/4	27	1,06	10	150	152	6,00		0,400	0,270
25	1	35	1,38	10	150	200	8,00		0,630	0,420

NA	LA	NEU	CEU	SA	AP	AU
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680AA

Fuel-oil delivery 10 bar (150 psi)

Tube: Black synthetic elastomer

Reinforcement: High tensile textile cords - antistatic wire ID >= 13 mm

Cover: Black synthetic elastomer - abrasion, ozone and hydrocarbon resistant

Use: General purpose fuel and oil delivery

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
5	3/16	12	0,47	16	240	50	2,00		0,130	0,087
6	1/4	13	0,51	16	240	60	2,50		0,150	0,100
7	9/32	13	0,51	16	240	70	2,75		0,150	0,100
8	5/16	15	0,59	16	240	80	3,00		0,170	0,115
10	3/8	17	0,67	16	240	100	4,00		0,210	0,140
13	1/2	20	0,79	16	240	120	4,75		0,250	0,170
16	5/8	24	0,94	16	240	160	6,25		0,350	0,235
19	3/4	27	1,06	16	240	190	7,50		0,400	0,270
25	1	35	1,38	16	240	250	10,00		0,730	0,490

NA	LA	NEU	CEU	SA	AP	AU
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671AA

Fuel-oil delivery 16 bar (240 psi)

Tube: Black NBR

Reinforcement: High tensile textile cords

Cover: Black synthetic rubber - abrasion, ozone and hydrocarbon resistant

Use: General purpose fuel and oil delivery

Safety factor: 3:1

Temperature: -25 °C +80 °C (-13 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	10	150				0,350	0,235
16	5/8	26	1,02	10	150				0,410	0,275
19	3/4	29	1,14	10	150				0,470	0,320
25	1	35	1,38	10	150				0,580	0,390
32	1 1/4	42	1,65	10	150				0,710	0,480
32	1 1/4	44	1,73	10	150				0,880	0,590
35	1 3/8	47	1,85	10	150				0,960	0,650
38	1 1/2	48	1,89	10	150				0,830	0,560
38	1 1/2	50	1,97	10	150				1,030	0,690
40	1 9/16	52	2,05	10	150				1,070	0,720
45	1 3/4	57	2,24	10	150				1,190	0,800
51	2	61	2,48	10	150				1,110	0,750
51	2	63	2,50	10	150				1,350	0,910
63	2 1/2	75	2,95	10	150				1,630	1,100
76	3	88	3,46	10	150				1,960	1,320
102	4	114	4,49	10	150				2,660	1,790
127	5	141	5,55	10	150				3,280	2,200
152	6	166	6,54	10	150				4,010	2,690
NA		LA		NEU		CEU		SA	AP	AU



650AA

Fuel-oil delivery 10 bar (150 psi)
TRbF 131/2

Tube: Black conductive NBR

Reinforcement: High tensile textile cords

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: General purpose fuel and oil delivery

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	29	1,14	10	150				0,520	0,350
22	7/8	32	1,26	10	150				0,580	0,390
25	1	35	1,38	10	150				0,650	0,440
32	1 1/4	42	1,65	10	150				0,790	0,530
32	1 1/4	44	1,73	10	150				0,960	0,650
38	1 1/2	48	1,89	10	150				0,920	0,620
51	2	61	2,40	10	150				1,210	0,810
51	2	63	2,48	10	150				1,460	0,980
63	2 1/2	77	3,03	10	150				2,070	1,390
76	3	88	3,46	10	150				2,120	1,420
76	3	92	3,62	10	150				2,550	1,710
102	4	114	4,49	10	150				2,850	1,920
NA		LA		NEU		CEU	SA	AP	AU	



650AH

Fuel-oil delivery 10 bar (150 psi)

Tube: Black conductive NBR

Reinforcement: High tensile textile cords - antistatic wire

Cover: Red CR - abrasion, ozone and hydrocarbon resistant

Use: General purpose fuel and oil delivery

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1	35	1,38	10	150				0,650	0,440
32	1 1/4	42	1,65	10	150				0,790	0,530
32	1 1/4	44	1,73	10	150				0,960	0,650
38	1 1/2	48	1,89	10	150				0,920	0,620
38	1 1/2	50	1,97	10	150				1,120	0,750
NA		LA		NEU		CEU	SA	AP	AU	



650AB

Fuel-oil delivery 10 bar (150 psi)

Tube: Black conductive NBR

Reinforcement: High tensile textile cords - antistatic wire

Cover: Grey CR - abrasion, ozone and hydrocarbon resistant

Use: General purpose fuel and oil delivery

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
25	1			7	100	150	6,00	90	0,540	0,360			
32	1 1/4			6	90	192	7,50	90	0,680	0,460			
38	1 1/2			6	90	228	9,00	90	0,760	0,510			
40	1 9/16			6	90	240	9,50	90	0,800	0,540			
51	2			5	75	306	12,00	90	1,150	0,770			
60	2 3/8			4	60	360	14,00	90	1,550	1,040			
63	2 1/2			4	60	378	15,00	90	1,600	1,080			
76	3			4	60	456	18,00	90	2,000	1,340			
80	3 1/8			4	60	480	19,00	90	2,100	1,410			
90	3 1/2			4	60	540	21,00	90	2,600	1,750			
102	4			3	45	612	24,00	90	3,100	2,080			
NA		LA		NEU		CEU		SA		AP		AU	



668EL

Fuel-oil S&D - PVC - heavy duty

Construction: Blue PVC - abrasion, ozone and hydrocarbon resistant

Reinforcement: White shock resistant rigid PVC

Use: General purpose fuel and oil suction and delivery

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	10	150	60	2,50	90	0,460	0,310	
25	1	35	1,38	10	150	80	3,00	90	0,690	0,460	
32	1 1/4	43	1,69	10	150	100	4,00	90	0,930	0,630	
38	1 1/2	49	1,93	10	150	120	4,75	90	1,080	0,730	
51	2	64	2,52	10	150	150	6,00	90	1,630	1,100	
NA		LA		NEU		CEU		SA		AP	AU



673AA

Fuel-oil S&D 10 bar (150 psi) - PVC - heavy duty

Construction: Black PVC - abrasion, ozone and hydrocarbon resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Use: General purpose fuel and oil suction and delivery

Safety factor: 3:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	61	2,40	10	150	255	10,00	100	1,350	0,910	
76	3	88	3,46	10	150	380	15,00	90	2,510	1,690	
102	4	116	4,57	10	150	510	20,00	90	3,450	2,320	
152	6	168	6,61	10	150	760	30,00	80	6,610	4,440	
NA		LA		NEU		CEU		SA		AP	AU



601AA

Oil rigger S&D 10 bar (150 psi)

Tube: Black NBR/PVC

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black SBR - abrasion and ozone resistant

Use: Oilfield vacuum tank service for crude oil mud handling

Safety factor: <= 102 mm 3:1 152 mm 2,5:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	10	150	76	3,00	100	0,600	0,400	
25	1	35	1,38	10	150	100	4,00	100	0,740	0,500	
28	1 1/8	38	1,50	10	150	112	4,50	100	0,810	0,540	
30	1 3/16	40	1,57	10	150	120	4,75	100	0,840	0,560	
32	1 1/4	42	1,65	10	150	128	5,00	100	0,900	0,600	
35	1 3/8	45	1,77	10	150	140	5,50	100	0,960	0,650	
38	1 1/2	48	1,89	10	150	152	6,00	100	1,030	0,690	
40	1 9/16	50	1,97	10	150	160	6,25	100	1,070	0,720	
42	1 5/8	52	2,05	10	150	168	6,75	100	1,120	0,750	
45	1 3/4	55	2,17	10	150	180	7,00	100	1,190	0,800	
48	1 7/8	58	2,28	10	150	192	7,50	100	1,260	0,850	
51	2	61	2,40	10	150	204	8,00	100	1,330	0,890	
57	2 1/4	67	2,64	10	150	228	9,00	100	1,460	0,980	
60	2 3/8	72	2,83	10	150	240	9,50	100	1,990	1,340	
63	2 1/2	75	2,95	10	150	252	10,00	90	2,080	1,400	
70	2 3/4	82	3,23	10	150	280	11,00	90	2,300	1,550	
76	3	88	3,46	10	150	304	12,00	90	2,480	1,670	
80	3 1/8	94	3,70	10	150	320	12,50	90	2,660	1,790	
90	3 1/2	104	4,09	10	150	360	14,00	90	3,040	2,040	
102	4	116	4,57	10	150	408	16,00	90	3,400	2,280	
110	4 5/16	124	4,88	10	150	440	17,25	90	4,160	2,800	
115	4 1/2	129	5,08	10	150	460	18,00	90	4,330	2,910	
120	4 3/4	138	5,43	10	150	480	19,00	80	5,490	3,690	
127	5	145	5,71	10	150	508	20,00	80	5,780	3,880	
133	5 1/4	151	5,94	10	150	532	21,00	80	6,030	4,050	
152	6	170	6,69	10	150	608	24,00	80	7,150	4,810	
160	6 5/16	178	7,01	10	150	640	25,25	80	7,490	5,030	
203	8	225	8,86	10	150	812	32,00	70	11,630	7,820	
254	10	276	10,87	10	150	1016	40,00	70	15,670	10,530	
305	12	327	12,87	10	150	1220	48,00	70	19,940	13,400	
NA		LA		NEU		CEU		SA		AP	AU



605AA

Fuel-oil S&D 10 bar (150 psi)

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR - abrasion, ozone and hydrocarbon resistant

Use: Fuel and oil suction and delivery. Specially designed for tank truck and general industrial applications

Safety factor: ≤ 127 mm 3:1 133-254 mm 2,5:1 305 mm 1,5:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	48	1,89	10	150	152	6,00	100	1,050	0,710	
51	2	61	2,40	10	150	204	8,00	100	1,370	0,920	
76	3	88	3,46	10	150	304	12,00	90	2,540	1,710	
102	4	116	4,57	10	150	408	16,00	90	3,480	2,340	
NA		LA		NEU		CEU		SA		AP	AU



605AH

Fuel-oil S&D 10 bar (150 psi)

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Red CR - abrasion, ozone and hydrocarbon resistant

Use: Fuel and oil suction and delivery. Specially designed for tank truck and general industrial applications

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3			5	75	190	7,50	90	2,330	1,570	
80	3 1/8			5	75	200	8,00	90	2,450	1,650	
102	4			5	75	250	10,00	90	3,070	2,060	
NA		LA		NEU		CEU		SA		AP	AU



610AA

Tank truck 5 bar (75 psi) corrugated - soft ends

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Fuel and oil suction and delivery. Specially designed for tank truck applications. Flexible and light weight construction

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
63	2 1/2			10	150	175	7,00	90	1,700	1,140	
75	3			10	150	250	10,00	90	2,000	1,340	
80	3 1/8			10	150	250	10,00	90	2,500	1,680	
100	4			10	150	350	14,00	90	3,200	2,150	
NA		LA		NEU		CEU		SA		AP	AU



6J541

Fuel-oil S&D 10 bar (150 psi) - light duty
BS 3492/BX BS 5842 arrêté ADR annexe 1

Inner wire: Aluminium wire
Tube: Polypropylene film
Cover: Orange PVC coated fabric
Outer wire: Galvanised steel wire
Use: Fuel and oil suction and delivery.
 Specially designed for tank truck applications.
 Light weight construction
Safety factor: 4:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
50	2			10	150	150	6,00	90	1,680	1,130	
63	2 1/2			10	150	175	7,00	90	2,200	1,480	
65	2 5/8			10	150	175	7,00	90	2,450	1,650	
75	3			10	150	250	10,00	90	2,600	1,750	
80	3 1/8			10	150	250	10,00	90	2,600	1,750	
100	4			10	150	350	14,00	90	4,200	2,820	
NA		LA		NEU		CEU		SA		AP	AU



6J511

Fuel-oil S&D 10 bar (150 psi) - standard duty
BS 3492/BX BS 5842 arrêté ADR annexe 1

Inner wire: Galvanised steel wire
Tube: Polypropylene film
Cover: Green PVC coated fabric
Outer wire: Galvanised steel wire
Use: Fuel and oil suction and delivery.
 Specially designed for tank truck applications
Safety factor: 4:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4	31	1,22	16	240	125	5,00		0,590	0,400
25	1	37	1,46	16	240	150	6,00		0,720	0,480
32	1 1/4	44	1,73	16	240	175	7,00		0,900	0,600
38	1 1/2	51	2,01	16	240	225	9,00		1,060	0,710
50	2	66	2,60	16	240	275	11,00		1,610	1,080
51	2	67	2,64	16	240	275	11,00		1,640	1,100
63	2 1/2	79	3,11	16	240	300	12,00		1,980	1,330
75	3	91	3,58	16	240	350	14,00		2,410	1,620
76	3	92	3,62	16	240	350	14,00		2,430	1,630
100	4	118	4,65	16	240	450	17,50		3,570	2,400
102	4	120	4,72	16	240	450	17,50		3,630	2,440
152	6	170	6,69	16	240	750	29,50		5,460	3,670
203	8	225	8,86	16	240	750	29,50		7,430	4,990
NA		LA		NEU		CEU		SA	AP	AU



655AA

**Fuel-oil delivery 16 bar (240 psi)
exceeds EN 1761 TRbf 131/2**

Tube: Black conductive NBR

Reinforcement: High tensile textile cords

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Fuel and oil delivery.

Designed for long service life in heavy duty applications

Safety factor: 3:1

Temperature: -30 °C +70 °C (-22 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	16	240	150	6,00	100	0,860	0,580	
32	1 1/4	44	1,73	16	240	175	7,00	100	1,030	0,690	
38	1 1/2	51	2,01	16	240	225	9,00	100	1,180	0,790	
50	2	66	2,60	16	240	275	11,00	100	1,790	1,200	
51	2	67	2,64	16	240	275	11,00	100	1,820	1,220	
63	2 1/2	79	3,11	16	240	300	12,00	90	2,380	1,600	
75	3	91	3,58	16	240	350	14,00	90	2,830	1,900	
76	3	92	3,62	16	240	350	14,00	90	2,860	1,920	
100	4	116	4,57	16	240	450	17,50	90	3,830	2,570	
102	4	118	4,65	16	240	450	17,50	90	3,900	2,620	
152	6	172	6,77	16	240	760	30,00	80	8,700	5,850	
NA		LA		NEU		CEU		SA		AP	AU



609AA

**Fuel-oil S&D 16 bar (240 psi)
exceeds EN 1761 TRbf 131/2**

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Fuel and oil suction and delivery.

Designed for long service life in heavy duty applications

Safety factor: 3:1

Temperature: -30 °C +70 °C (-22 °F +158 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
25	1			14	200	100	4,00	90	0,900	0,600
40	1 1/2			14	200	140	5,50	90	1,250	0,840
50	2			14	200	150	6,00	90	1,700	1,140
63	2 1/2			14	200	175	7,00	90	2,250	1,510
65	2 5/8			14	200	175	7,00	90	2,500	1,680
75	3			14	200	250	10,00	90	2,700	1,810
80	3 1/8			14	200	250	10,00	90	3,400	2,280
100	4			14	200	350	14,00	90	4,600	3,090
NA		LA		NEU		CEU		SA	AP	AU



6N111

**Fuel-oil S&D 14 bar (200 psi) - heavy duty
high temperature +100 °C (+212 °F)
BS 3492/BX BS 5842 arrêté ADR annexe 1**

Inner wire: Galvanised steel wire

Tube: Polyester film

Cover: Green PVC coated fabric

Outer wire: Galvanised steel wire

Use: Fuel and oil suction and delivery.

Specially designed for long service life in heavy duty applications requiring resistance to high temperature

Safety factor: 4:1

Temperature: -30 °C +100 °C (-22 °F +212 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
32	1 1/4	44	1,73	16	240	160	6,25		0,970	0,650	
35	1 3/8	47	1,85	16	240	175	7,00		1,040	0,700	
38	1 1/2	51	2,01	16	240	190	7,50		1,130	0,760	
40	1 9/16	53	2,09	16	240	200	8,00		1,180	0,790	
51	2	67	2,64	16	240	255	10,00		1,650	1,110	
NA		LA		NEU		CEU		SA		AP	AU



658AA

**Domestic fuel reeling 16 bar (240 psi)
textile braided**

EN 1360 TRbf 131/2

Tube: Black conductive NBR

Reinforcement: High tensile textile braids

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Fuel and oil delivery in heavy duty reeling applications.

Also suitable for tank cleaning.

Antistatic wire available on request

Safety factor: 3:1

Temperature: -30 °C +70 °C (-22 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	31	1,22	25	375	160	6,25		0,650	0,440	
25	1	38	1,50	25	375	200	8,00		0,830	0,560	
32	1 1/4	45	1,77	25	375	250	10,00		0,980	0,660	
38	1 1/2	52	2,05	25	375	320	12,50		1,380	0,930	
51	2	67	2,64	25	375	400	15,75		2,070	1,390	
NA		LA		NEU		CEU		SA		AP	AU



659AA

**LPG delivery 25 bar (375 psi) - textile braided
EN 1762/DM**

Tube: Black NBR

Reinforcement: High tensile textile braids - antistatic wire

Cover: Black CR - abrasion, ozone, hydrocarbon and fire resistant - pin pricked

Use: LPG delivery in heavy duty reeling applications

Safety factor: 4:1

Temperature: -30 °C +70 °C (-22 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	37	1,46	20	300	150	6,00		0,780	0,520	
32	1 1/4	44	1,73	20	300	190	7,50		0,930	0,630	
38	1 1/2	51	2,01	20	300	225	9,00		1,300	0,870	
50	2	66	2,60	20	300	275	11,00		1,880	1,260	
63	2 1/2	79	3,11	20	300	300	12,00		1,920	1,290	
75	3	91	3,58	20	300	300	12,00		2,560	1,720	
100	4	116	4,57	20	300	450	18,00		3,580	2,410	
NA		LA		NEU		CEU		SA		AP	AU



656AA

DNV approved

Aircraft ground fuelling 20 bar (300 psi)

EN 1361 API 1529

Tube: Black conductive NBR

Reinforcement: High tensile textile braids.

ID >= 75 mm high tensile textile cords

Cover: Black conductive CR - abrasion, ozone and hydrocarbon resistant

Use: Aircraft ground fuelling

Safety factor: 4:1

Temperature: -30 °C +55 °C (-22 °F +131 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
25	1	41	1,61	20	300	150	6,00	65	0,860	0,580	
32	1 1/4	48	1,89	20	300	190	7,50	65	1,070	0,720	
38	1 1/2	54	2,13	20	300	225	9,00	65	1,240	0,830	
50	2	67	2,64	20	300	275	11,00	65	1,880	1,260	
63	2 1/2	81	3,19	20	300	300	12,00	65	2,420	1,630	
75	3	93	3,66	20	300	300	12,00	65	2,870	1,930	
NA		LA		NEU		CEU		SA		AP	AU



611AA

DNV approved

Aircraft ground fuelling-defuelling 20 bar (300 psi)

EN 1361 API 1529

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded nylon helix

Cover: Black conductive CR - abrasion, ozone and hydrocarbon resistant

Use: Aircraft ground fuelling and defuelling

Safety factor: 4:1

Temperature: -30 °C +55 °C (-22 °F +131 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	69	2,72	10	150	255	10,00	100	2,240	1,510	
60	2 3/8	78	3,07	10	150	300	12,00	100	2,720	1,830	
76	3	96	3,78	10	150	380	15,00	90	3,720	2,500	
102	4	122	4,80	10	150	510	20,00	90	4,970	3,340	
NA		LA		NEU		CEU		SA		AP	AU



614AA

Hot tar 10 bar (150 psi)

Tube: Black NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CSM - abrasion and ozone resistant

Use: Hot tar, asphalt and bitumen suction and delivery

Safety factor: 4:1

Temperature: -20 °C +180 °C (-4 °F +356 °F)

												
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft	
19	3/4	29	1,14	21	300	57	2,25	100		0,600	0,400	
25	1	35	1,38	17	250	75	3,00	100		0,740	0,500	
32	1 1/4	42	1,65	14	200	96	3,75	100		0,890	0,600	
38	1 1/2	48	1,89	10	150	114	4,50	100		1,030	0,690	
51	2	61	2,40	7	100	153	6,00	100		1,320	0,890	
63	2 1/2	75	2,95	4	60	189	7,50	100		2,070	1,390	
76	3	88	3,46	4	60	228	9,00	100		2,470	1,660	
90	3 1/2	104	4,09	3	45	270	10,50	100		3,040	2,040	
102	4	116	4,57	2	30	306	12,00	100		3,390	2,280	
NA		LA		NEU		CEU		SA		AP		AU



604AA

**Oil suction & return
exceeds SAE 100R4**

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR - abrasion, ozone and hydrocarbon resistant

Use: Hydraulic oil suction and return lines

Safety factor: 4:1

Temperature: -40 °C +100 °C (-40 °F +212 °F)

												
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft	
19	3/4	29	1,14	25	375	38	1,50	100		0,510	0,340	
25	1	35	1,38	20	300	50	2,00	100		0,630	0,420	
32	1 1/4	42	1,65	17	250	64	2,50	100		0,780	0,520	
38	1 1/2	48	1,89	10	150	76	3,00	100		0,920	0,620	
51	2	61	2,40	7	100	102	4,00	100		1,200	0,810	
63	2 1/2	75	2,95	5	75	126	5,00	100		2,080	1,400	
76	3	88	3,46	5	75	152	6,00	100		2,460	1,650	
102	4	116	4,57	5	75	204	8,00	100		3,380	2,270	
NA		LA		NEU		CEU		SA		AP		AU



634 AA

**Oil suction & return - extra flexible
exceeds SAE 100R4**

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR - abrasion, ozone, hydrocarbon and flame resistant

Use: Hydraulic oil suction and return lines requiring tight bend radius

Safety factor: 4:1

Temperature: -40 °C +100 °C (-40 °F +212 °F)

												
mm	inch	mm	inch	bar	psi	mm	inch	%		kg/m	lb/ft	
19	3/4	29	1,14	25	375	38	1,50	100		0,550	0,370	
25	1	35	1,38	20	300	50	2,00	100		0,680	0,460	
32	1 1/4	42	1,65	17	250	64	2,50	100		0,840	0,560	
38	1 1/2	48	1,89	10	150	76	3,00	100		0,990	0,670	
51	2	61	2,40	7	100	102	4,00	100		1,290	0,870	
63	2 1/2	75	2,95	5	75	126	5,00	100		2,190	1,470	
76	3	88	3,46	5	75	152	6,00	100		2,590	1,740	
102	4	116	4,57	5	75	204	8,00	100		3,550	2,390	
NA		LA		NEU		CEU		SA		AP		AU



644AA

MSHA approved

**Oil suction & return - extra flexible
high temperature
exceeds SAE 100R4**

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR - abrasion, ozone, hydrocarbon and flame resistant

Use: Hydraulic oil suction and return lines requiring tight bend radius

and resistance to high temperature

Safety factor: 4:1

Temperature: -40 °C +135 °C (-40 °F +275 °F)



	266LL	Marine sanitary hose - PVC	96
	470LL	Marine sanitary hose - steel helix wire	96
	202AL	Marine sanitary hose 10 bar (150 psi)	96
	653AA	Marine exhaust - soft wall - SAE J2006/R1 ISO 13363/1/A+B	97
	621AA	Marine exhaust - hard wall - SAE J2006/R2 ISO 13363/2/A+B	97
	674AA	Marine fuel - soft wall - ISO 7840/A1 94/25/CE 2003/44/EC	98
	616AA	Marine fuel-exhaust - hard wall - ISO 7840/A2 94/25/CE 2003/44/EC	98

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
19	3/4			8	120	75	3,00	70	0,300	0,200
25	1			8	120	120	4,75	70	0,380	0,255
38	1 1/2			6	90	170	6,75	70	0,580	0,390
NA		LA	NEU	CEU	SA	AP	AU			



266LL

Marine sanitary hose - PVC

Construction: White thermoplastic elastomer

Reinforcement: White shock resistant rigid PVC

Use: Sanitary hose for marine installations

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
20	13/16	28	1,10	5	75	80	3,00	85	0,340	0,230			
25	1	33	1,30	5	75	100	4,00	85	0,530	0,360			
38	1 1/2	48	1,89	4	60	152	6,00	85	0,855	0,570			
NA		LA		NEU		CEU		SA		AP		AU	



470LL

Marine sanitary hose - steel helix wire

Construction: White PVC - abrasion and ozone resistant

Reinforcement: Steel helix wire

Use: Sanitary hose for marine installations

Safety factor: 3:1

Temperature: -5 °C +60 °C (+23 °F +140 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
25	1	35	1,38	10	150	100	4,00	100	0,710	0,480			
38	1 1/2	48	1,89	10	150	152	6,00	100	0,970	0,650			
NA		LA		NEU		CEU		SA		AP		AU	



202AL

Marine sanitary hose 10 bar (150 psi)

Tube: Black chlorobutyl

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: White EPDM - abrasion and ozone resistant

Use: Sanitary hose for marine installations. Designed for excellent kink resistance at tight bend radius and maximum flexibility.

Top permeability resistance

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch			%		kg/m	lb/ft
25	1	35	1,38	3	45							0,600	0,400
28	1 1/8	38	1,50	3	45							0,660	0,440
32	1 1/4	42	1,65	3	45							0,730	0,490
35	1 3/8	45	1,77	3	45							0,790	0,530
38	1 1/2	48	1,89	3	45							0,850	0,570
42	1 5/8	52	2,05	3	45							0,930	0,630
45	1 3/4	55	2,17	3	45							0,990	0,670
48	1 7/8	58	2,28	3	45							1,050	0,710
51	2	63	2,48	3	45							1,360	0,910
55	2 1/6	67	2,64	3	45							1,450	0,970
57	2 1/4	69	2,72	3	45							1,500	1,010
60	2 3/8	74	2,91	3	45							1,840	1,240
63	2 1/2	77	3,03	3	45							1,930	1,300
76	3	90	3,54	3	45							2,310	1,550
90	3 1/2	104	4,09	3	45							2,750	1,850
102	4	116	4,57	3	45							3,070	2,060
115	4 1/2	129	5,08	3	45							3,430	2,310
127	5	141	5,55	3	45							3,780	2,540
152	6	168	6,61	3	45							4,610	3,100
168	6 5/8	184	7,24	3	45							5,040	3,390
203	8	221	8,70	3	45							7,010	4,710
NA		LA		NEU		CEU		SA		AP		AU	



**RINA & LLOYD' S
approved**

653AA

Marine exhaust - soft wall

SAE J2006/R1 ISO 13363/1/A+B

Tube: Black NBR

Reinforcement: High tensile textile cords

Cover: Black NBR/PVC - abrasion, ozone and hydrocarbon resistant

Use: Marine wet exhaust. Also suitable for bilge pump connection

Safety factor: 5:1

Temperature: -30 °C +100 °C (-22 °F +212 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch			%		kg/m	lb/ft
25	1	35	1,38	3	45	75	3,00	100				0,730	0,490
28	1 1/8	38	1,50	3	45	84	3,25	100				0,800	0,540
30	1 3/16	40	1,57	3	45	90	3,50	100				0,830	0,560
32	1 1/4	42	1,65	3	45	96	3,75	100				0,880	0,590
35	1 3/8	45	1,77	3	45	105	4,25	100				0,940	0,630
38	1 1/2	48	1,89	3	45	114	4,50	100				1,010	0,680
40	1 9/16	50	1,97	3	45	120	4,75	100				1,060	0,710
42	1 5/8	52	2,05	3	45	126	5,00	100				1,100	0,740
45	1 3/4	55	2,17	3	45	135	5,25	100				1,170	0,790
48	1 7/8	58	2,28	3	45	144	5,75	100				1,240	0,830
51	2	61	2,40	3	45	153	6,00	100				1,310	0,880
57	2 1/4	67	2,64	3	45	171	6,75	100				1,440	0,970
60	2 3/8	70	2,76	3	45	180	7,00	100				1,670	1,120
63	2 1/2	73	2,87	3	45	189	7,50	90				1,750	1,180
70	2 3/4	80	3,15	3	45	210	8,25	90				1,940	1,300
76	3	86	3,39	3	45	228	9,00	90				2,090	1,400
80	3 1/8	90	3,54	3	45	240	9,50	90				2,190	1,470
90	3 1/2	100	3,94	3	45	270	10,50	90				2,550	1,710
102	4	114	4,49	3	45	306	12,00	90				3,310	2,220
115	4 1/2	127	5,00	3	45	345	13,50	90				3,700	2,490
127	5	141	5,55	3	45	381	15,00	80				5,110	3,430
152	6	166	6,54	3	45	456	18,00	80				6,320	4,250
203	8	221	8,70	3	45	609	24,00	70				9,700	6,520
NA		LA		NEU		CEU		SA		AP		AU	



**RINA & LLOYD' S
approved**

621AA

Marine exhaust - hard wall

SAE J2006/R2 ISO 13363/2/A+B

Tube: Black NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black NBR/PVC - abrasion, ozone and hydrocarbon resistant

Use: Marine wet exhaust. Also suitable for bilge pump connection.

Designed for excellent kink resistance at tight bend radius and maximum flexibility

Safety factor: 5:1

Temperature: -30 °C +100 °C (-22 °F +212 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
6	1/4	15	0,59	3	45	48	2,00		0,210	0,140
8	5/16	17	0,67	3	45	64	2,50		0,250	0,170
10	3/8	19	0,75	3	45	80	3,00		0,290	0,195
13	1/2	22	0,87	2	30	104	4,00		0,350	0,235
15	19/32	24	0,94	2	30	128	5,00		0,350	0,235
19	3/4	29	1,14	2	30	152	6,00		0,520	0,350
25	1	35	1,38	2	30	200	8,00		0,650	0,440

NA	LA	NEU	CEU	SA	AP	AU
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674AA

Marine fuel - soft wall

ISO 7840/A1 94/25/CE 2003/44/EC

Tube: Black NBR - fuel and fire resistant

Reinforcement: High tensile textile cords

Cover: Black NBR/PVC - abrasion, ozone, hydrocarbon and fire resistant

Use: Marine fuel delivery

Safety factor: 5:1

Temperature: -20 °C +100 °C (-4 °F +212 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
16	5/8	26	1,02	2	30	48	2,00	100	0,540	0,360
19	3/4	29	1,14	2	30	57	2,25	100	0,650	0,440
20	13/16	30	1,18	2	30	60	2,50	100	0,670	0,450
22	7/8	32	1,26	2	30	66	2,75	100	0,720	0,480
25	1	35	1,38	2	30	75	3,00	100	0,800	0,540
28	1 1/8	38	1,50	2	30	84	3,25	100	0,870	0,580
30	1 3/16	40	1,57	2	30	90	3,50	100	0,900	0,600
32	1 1/4	42	1,65	2	30	96	3,75	100	0,970	0,650
35	1 3/8	45	1,77	2	30	105	4,25	100	1,030	0,690
38	1 1/2	48	1,89	2	30	114	4,50	100	1,110	0,750
40	1 9/16	50	1,97	2	30	120	4,75	100	1,160	0,780
42	1 5/8	52	2,05	2	30	126	5,00	100	1,200	0,810
45	1 3/4	55	2,17	2	30	135	5,25	100	1,280	0,860
48	1 7/8	58	2,28	2	30	144	5,75	100	1,350	0,910
51	2	61	2,40	2	30	153	6,00	100	1,450	0,970
57	2 1/4	67	2,64	2	30	171	6,75	100	1,600	1,080
60	2 3/8	70	2,76	2	30	180	7,00	90	1,850	1,240
63	2 1/2	73	2,87	2	30	189	7,50	90	1,930	1,300
70	2 3/4	80	3,15	2	30	210	8,25	90	2,100	1,410
76	3	86	3,39	2	30	228	9,00	90	2,260	1,520
80	3 1/8	90	3,54	2	30	240	9,50	90	2,370	1,590
90	3 1/2	100	3,94	2	30	270	10,50	90	2,820	1,900
102	4	112	4,41	2	30	306	12,00	90	3,150	2,120
115	4 1/2	129	5,08	2	30	345	13,50	90	4,020	2,700
127	5	141	5,55	2	30	381	15,00	80	4,490	3,020
152	6	166	6,54	2	30	456	18,00	80	6,110	4,110
203	8	223	8,78	2	30	609	24,00	70	11,490	7,720

NA	LA	NEU	CEU	SA	AP	AU
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616AA

Marine fuel-exhaust - hard wall

ISO 7840/A2 94/25/CE 2003/44/EC

Tube: Black NBR - fuel and fire resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black NBR/PVC - abrasion, ozone, hydrocarbon and fire resistant

Use: Marine fuel transfer. Designed for excellent kink resistance at

tight bend radius and maximum flexibility.

Also suitable for marine wet exhaust applications

Safety factor: 5:1

Temperature: -20 °C +100 °C (-4 °F +212 °F)



	60LAA	Fuel-oil S&D 7 bar (100 psi) - EN 1765/S7	100
	60AAA	Fuel-oil S&D 7 bar (100 psi) - EN 1765/S7	100
	60MAA	Fuel-oil S&D 10 bar (150 psi) - EN 1765/S10	101
	60DAA	Fuel-oil S&D 10 bar (150 psi) - EN 1765/S10	101
	64AAA	Fuel-oil delivery 10 bar (150 psi) - EN 1765/L10.....	101
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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
75	3	98	3,86	7	100	450	18,00	85	4,700	3,160	
100	4	124	4,88	7	100	600	24,00	85	6,100	4,100	
150	6	180	7,09	7	100	850	34,00	85	12,200	8,200	
200	8	233	9,17	7	100	1100	44,00	85	16,300	10,950	
NA		LA		NEU		CEU		SA		AP AU	



60LAA

Fuel-oil S&D 7 bar (100 psi)

EN 1765/S7

Tube: Black NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR- abrasion, ozone, sea water and hydrocarbon resistant

Use: Crude oil and liquid petroleum products suction and delivery to/ from tankers and bunkering vessels.

Max 55% aromatic content resistance.

Electrically continuous (discontinuous on request)

AVAILABLE WITH SWAGED FITTINGS

Safety factor: 4:1

Temperature: -20 °C +82 °C (-4 °F +180 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
100	4			7	100	500	20,00	100	10,200	6,850	
150	6			7	100	750	30,00	100	15,900	10,690	
200	8			7	100	1000	40,00	100	24,300	16,330	
250	10			7	100	1250	50,00	100	33,900	22,780	
300	12			7	100	1500	60,00	100	45,800	30,780	
NA		LA		NEU		CEU		SA		AP AU	



60AAA

Fuel-oil S&D 7 bar (100 psi)

EN 1765/S7

Tube: Black NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR- abrasion, ozone, sea water and hydrocarbon resistant

Use: Crude oil and liquid petroleum products suction and delivery to/ from tankers and bunkering vessels.

Max 55% aromatic content resistance.

Electrically continuous (discontinuous on request)

BUILT-IN FITTINGS

ALSO AVAILABLE:

• 60BAA 100% aromatic content

• 60CAA biofuel

Safety factor: 4:1

Temperature: -20 °C +82 °C (-4 °F +180 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
75	3	100	3,94	10	150	450	18,00	85	4,660	3,130
100	4	126	4,96	10	150	600	24,00	85	6,100	4,100
150	6	182	7,17	10	150	850	34,00	85	12,200	8,200
200	8	235	9,25	10	150	1100	44,00	85	17,300	11,630
NA		LA		NEU		CEU		SA		AP AU



60MAA

Fuel-oil S&D 10 bar (150 psi)

EN 1765/S10

Tube: Black NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR- abrasion, ozone, sea water and hydrocarbon resistant

Use: Crude oil and liquid petroleum products suction and delivery to/from tankers and bunkering vessels.

Max 55% aromatic content resistance.

Electrically continuous (discontinuous on request)

AVAILABLE WITH SWAGED FITTINGS

Safety factor: 4:1

Temperature: -20 °C +82 °C (-4 °F +180 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
100	4			10	150	500	20,00	100	10,200	6,850	
150	6			10	150	750	30,00	100	15,900	10,690	
200	8			10	150	1000	40,00	100	24,300	16,330	
250	10			10	150	1250	50,00	100	33,900	22,780	
300	12			10	150	1500	60,00	100	45,800	30,780	
NA		LA		NEU		CEU		SA		AP AU	



60DAA

Fuel-oil S&D 10 bar (150 psi)

EN 1765/S10

Tube: Black NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR- abrasion, ozone, sea water and hydrocarbon resistant

Use: Crude oil and liquid petroleum products suction and delivery to/from tankers and bunkering vessels.

Max 55% aromatic content resistance.

Electrically continuous (discontinuous on request)

BUILT-IN FITTINGS

ALSO AVAILABLE:

• 60BAA 100% aromatic content

• 60CAA biofuel

Safety factor: 4:1

Temperature: -20 °C +82 °C (-4 °F +180 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
100	4			10	150	600	24,00		6,700	4,500	
150	6			10	150	900	36,00		11,000	7,390	
200	8			10	150	1200	48,00		16,100	10,820	
250	10			10	150	1500	60,00		20,100	13,510	
300	12			10	150	1800	72,00		25,000	16,800	
NA		LA		NEU		CEU		SA		AP	AU



64AAA

Fuel-oil delivery 10 bar (150 psi)

EN 1765/L10

Tube: Black NBR

Reinforcement: High tensile textile cords

Cover: Black CR- abrasion, ozone, sea water and hydrocarbon resistant

Use: Crude oil and liquid petroleum products delivery to/from tankers and bunkering vessels.

Max 55% aromatic content resistance.

Electrically continuous (discontinuous on request)

BUILT-IN FITTINGS

ALSO AVAILABLE:

• 64BAA 100% aromatic content

• 64CAA biofuel

Safety factor: 4:1

Temperature: -20 °C +82 °C (-4 °F +180 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
75	3	100	3,94	15	225	375	15,00	85	4,710	3,170	
100	4	126	4,96	15	225	500	20,00	85	6,250	4,200	
150	6	184	7,24	15	225	750	30,00	85	12,400	8,330	
NA		LA		NEU		CEU		SA		AP	AU



60NAA

Fuel-oil S&D 15 bar (225 psi)

EN 1765/S15

Tube: Black NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR- abrasion, ozone, sea water and hydrocarbon resistant

Use: Crude oil and liquid petroleum products suction and delivery to/from tankers and bunkering vessels.

Max 55% aromatic content resistance.

Electrically continuous (discontinuous on request)

AVAILABLE WITH SWAGED FITTINGS

Safety factor: 4:1

Temperature: -20 °C +82 °C (-4 °F +180 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
100	4			15	225	500	20,00	100	11,000	7,390	
150	6			15	225	750	30,00	100	17,100	11,490	
200	8			15	225	1000	40,00	100	26,500	17,810	
250	10			15	225	1250	50,00	100	36,600	24,600	
300	12			15	225	1500	60,00	100	51,400	34,540	
NA		LA		NEU		CEU		SA		AP	AU



60GAA

Fuel-oil S&D 15 bar (225 psi)

EN 1765/S15

Tube: Black NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black CR- abrasion, ozone, sea water and hydrocarbon resistant

Use: Crude oil and liquid petroleum products suction and delivery to/from tankers and bunkering vessels.

Max 55% aromatic content resistance.

Electrically continuous (discontinuous on request)

BUILT-IN FITTINGS

ALSO AVAILABLE:

• 60BAA 100% aromatic content

• 60CAA biofuel

Safety factor: 4:1

Temperature: -20 °C +82 °C (-4 °F +180 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
100	4			15	225	600	24,00		7,500	5,040	
150	6			15	225	900	36,00		13,400	9,010	
200	8			15	225	1200	48,00		18,100	12,160	
250	10			15	225	1500	60,00		24,700	16,600	
300	12			15	225	1800	72,00		31,400	21,100	
NA		LA		NEU		CEU		SA		AP	AU



64DAA

Fuel-oil delivery 15 bar (225 psi)

EN 1765/L15

Tube: Black NBR

Reinforcement: High tensile textile cords

Cover: Black CR- abrasion, ozone, sea water and hydrocarbon resistant

Use: Crude oil and liquid petroleum products delivery to/from tankers and bunkering vessels.

Max 55% aromatic content resistance.

Electrically continuous (discontinuous on request)

BUILT-IN FITTINGS

ALSO AVAILABLE:

• 64EAA 100% aromatic content

• 64FAA biofuel

Safety factor: 4:1

Temperature: -20 °C +82 °C (-4 °F +180 °F)

FLOATING ROOF TANK DRAIN



906AA	Roof drain 10 bar (150 psi)	104
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FLOATING ROOF TANK DRAIN



mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	102	4,02	10	150	380	15,00	90	4,780	3,210	
102	4	128	5,04	10	150	510	20,00	90	6,340	4,260	
152	6	180	7,09	10	150	760	30,00	80	10,550	7,090	
NA		LA		NEU		CEU		SA		AP	



906AA

Roof drain 10 bar (150 psi)

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive NBR- abrasion, ozone and hydrocarbon resistant

Use: Rain water drainage in floating petrochemical storage tank roofs. 80% max aromatic content resistance

ALSO AVAILABLE:

- 905AA 100% aromatic

AVAILABLE WITH SWAGED FITTINGS

Safety factor: 3:1

Temperature: -20 °C +82 °C (-4 °F +180 °F)



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	646AA	Rig supply soft wall - fuel-liquid mud 16 bar (240 psi) - end load resistance 6.000 kg	106
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	615AA	Rig supply hard wall - fuel-liquid mud	107
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	442LI	Rig supply soft wall - potable water 10 bar (150 psi) - FDA.....	109
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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
76	3	94	3,70	10	150				2,780	1,870
102	4	120	4,72	10	150				3,670	2,470
127	5	145	5,71	10	150				4,540	3,050
152	6	170	6,69	10	150				5,440	3,660
NA		LA		NEU		CEU		SA	AP	AU



642AA

DNV approved

**Rig supply soft wall
fuel-liquid mud 10 bar (150 psi)**

Tube: Black conductive NBR

Reinforcement: High tensile textile cords

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Fuel, oil and liquid mud transfer from supply vessels to offshore platforms. Also suitable for sea water pumping and barite transfer

Safety factor: 4:1

Temperature: -30 °C +70 °C (-22 °F +158 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
76	3	94	3,70	16	240				2,560	1,720
102	4	120	4,72	16	240				3,220	2,160
NA		LA		NEU		CEU		SA	AP	AU



646AA

DNV approved

**Rig supply soft wall
fuel-liquid mud 16 bar (240 psi)
end load resistance 6.000 kg**

Tube: Black conductive NBR

Reinforcement: High tensile textile cords

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Fuel, oil and liquid mud transfer from supply vessels to offshore platforms. Also suitable for sea water pumping and barite transfer. Specially designed for reeling applications and weak link couplings use. Max utilized load 4.000 kg

Safety factor: 4:1

Temperature: -30 °C +70 °C (-22 °F +158 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
76	3	94	3,70	20	300				2,560	1,720
102	4	120	4,72	20	300				3,350	2,250
NA		LA		NEU		CEU		SA	AP	AU



648AA

DNV approved

**Rig supply soft wall
fuel-liquid mud 20 bar (300 psi)
end load resistance 8.000 kg**

Tube: Black conductive NBR

Reinforcement: High tensile textile cords

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Fuel, oil and liquid mud transfer from supply vessels to offshore platforms. Also suitable for sea water pumping and barite transfer. Specially designed for reeling applications and weak link couplings use. Max utilized load 5.333 kg

Safety factor: 4:1

Temperature: -30 °C +70 °C (-22 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	100	3,94	40	600				3,960	2,660	
102	4	126	4,96	35	525				4,770	3,210	

NA	LA	NEU	CEU	SA	AP	AU
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NA	LA	NEU	CEU	SA	AP	AU
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652AA

**Rig supply soft wall
fuel-liquid mud**

DNV approved

end load resistance 10.000 kg

Tube: Black conductive NBR

Reinforcement: High tensile textile cords

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Fuel, oil and liquid mud transfer from supply vessels to offshore platforms. Also suitable for sea water pumping and barite transfer.

Specially designed for reeling applications and weak link couplings use

Max utilized load 6.667 kg

Safety factor: 4:1

Temperature: -30 °C +70 °C (-22 °F +158 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	92	3,62	16	240	380	15,00	90	3,260	2,190	
102	4	120	4,72	16	240	510	20,00	90	4,870	3,270	
127	5	147	5,79	10	150	635	25,00	80	6,950	4,670	
152	6	172	6,77	10	150	760	30,00	80	8,680	5,830	

NA	LA	NEU	CEU	SA	AP	AU
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615AA

**Rig supply hard wall
fuel-liquid mud**

DNV approved

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Fuel, oil and liquid mud transfer from supply vessels to offshore platforms. Also suitable for sea water pumping and barite transfer

Safety factor: 4:1

Temperature: -30 °C +70 °C (-22 °F +158 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
102	4	122	4,80	10	150				3,910	2,630	
127	5	147	5,79	10	150				4,820	3,240	
NA		LA		NEU		CEU		SA		AP	



742AA

DNV approved

Rig supply soft wall
bulk material 10 bar (150 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk material, barite and dry cement transfer from supply vessels to offshore platforms

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
102	4	122	4,80	20	300				4,180	2,810	
127	5	151	5,94	20	300				5,060	3,400	
NA		LA		NEU		CEU		SA		AP	



748AA

DNV approved

Rig supply soft wall
bulk material 20 bar (300 psi)
end load resistance 8.000 kg

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk material, barite and dry cement transfer from supply vessels to offshore platforms.

Specially designed for reeling applications and weak link couplings use

Max utilized load 5.333 kg

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
102	4	122	4,80	10	150	408	16,00	90	4,810	3,230	
127	5	149	5,87	10	150	635	25,00	80	6,990	4,700	
NA		LA		NEU		CEU		SA		AP	



715AA

DNV approved

Rig supply hard wall
bulk material 10 bar (150 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk material, barite and dry cement transfer from supply vessels to offshore platforms

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
152	6	188	7,40	10	150			80	15,520	10,430	
NA		LA		NEU		CEU		SA		AP	



727AA

DNV approved

Drilling waste - hard wall 10 bar (150 psi)
end load resistance 26.000 kg

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire - boot straps

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Dumplines for drill cuttings containing sand, sea water and abrasive material. Also suitable for barite transfer.

Heavy duty, high end load construction.

Not to be used with oil based mud

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	94	3,70	10	150				2,860	1,920	
102	4	120	4,72	10	150				3,770	2,530	
NA		LA		NEU		CEU		SA		AP AU	



442LI

DNV approved

Rig supply soft wall
potable water 10 bar (150 psi)

FDA

Tube: White NR

Reinforcement: High tensile textile cords

Cover: Orange NBR/PVC - abrasion, ozone and hydrocarbon resistant

Use: Potable water transfer from supply vessels to offshore platforms.

Sterilize with 5% soda solution

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
102	4	120	4,72	20	300				4,140	2,780	
NA		LA		NEU		CEU		SA		AP AU	



448LI

DNV approved

Rig supply soft wall
potable water 20 bar (300 psi)
end load resistance 8.000 kg

FDA

Tube: White NR

Reinforcement: High tensile textile cords

Cover: Orange NBR/PVC - abrasion, ozone and hydrocarbon resistant

Use: Potable water transfer from supply vessels to offshore platforms.

Specially designed for reeling applications and weak link couplings use.

Sterilize with 5% soda solution

Max utilized load 5.333 kg

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	92	3,62	10	150	304	12,00	90	3,610	2,430	
102	4	120	4,72	10	150	408	16,00	90	4,810	3,230	
NA		LA		NEU		CEU		SA		AP AU	



415LI

DNV approved

Rig supply hard wall
potable water 10 bar (150 psi)

FDA

Tube: White NR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Orange NBR/PVC - abrasion, ozone and hydrocarbon resistant

Use: Potable water transfer from supply vessel to offshore platforms.

Sterilize with 5% soda solution

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
76	3	106	4,17	20	300	456	18		5,700	3,830	
102	4	132	5,20	20	300	612	24		7,450	5,010	
127	5	157	6,18	20	300	762	30		9,700	6,520	
152	6	192	7,56	20	300	912	36		18,900	12,700	
203	8	243	9,57	20	300	1218	48		25,600	17,200	
NA		LA		NEU		CEU		SA		AP AU	



230AH

Firewater 20 bar (300 psi)

Tube: Black conductive NBR

Reinforcement: High tensile steel cords.

ID >= 152 mm with embedded steel helix wire

Cover: Fiberglass fabric coated with red fire resistant CSM

Use: Firewater mains systems on board off shore installations and sea going vessels.

ID >= 152 mm corrugated construction for maximum flexibility

Safety factor: 5:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	20	300				0,350	0,235	
19	3/4	31	1,22	20	300				0,580	0,390	
25	1	37	1,46	20	300				0,730	0,490	
38	1 1/2	52	2,05	20	300				1,070	0,720	
51	2	67	2,64	20	300				1,880	1,260	
63	2 1/2	81	3,19	20	300				2,300	1,550	
76	3	94	3,70	20	300				2,790	1,880	
90	3 1/2	108	4,25	20	300				3,440	2,310	
NA		LA		NEU		CEU		SA		AP AU	



953AE

General purpose 20 bar (300 psi) - EPDM

Tube: Black EPDM

Reinforcement: High tensile textile cords

Cover: Blue EPDM - abrasion and ozone resistant

Use: Air, water and mild chemicals delivery

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)



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mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	20	300				0,420	0,280	
19	3/4	31	1,22	20	300				0,680	0,460	
25	1	37	1,46	20	300				0,840	0,560	
38	1 1/2	52	2,05	20	300				1,240	0,830	
51	2	67	2,64	20	300				2,160	1,450	
76	3	93	3,66	20	300				3,190	2,140	
NA		LA		NEU		CEU		SA		AP	
										AU	



151AA

**Compressed air 20 bar (300 psi)
heavy duty mining**

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black SBR - abrasion and ozone resistant

Use: Compressed air designed for heavy duty mining applications

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	20	300				0,430	0,290	
19	3/4	31	1,22	20	300				0,700	0,470	
25	1	37	1,46	20	300				0,860	0,580	
38	1 1/2	52	2,05	20	300				1,260	0,850	
51	2	67	2,64	20	300				2,210	1,490	
NA		LA		NEU		CEU		SA		AP	
										AU	



151AK

**Compressed air 20 bar (300 psi)
heavy duty mining**

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Yellow SBR - abrasion and ozone resistant

Use: Compressed air designed for heavy duty mining applications

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	33	1,30	27	400	190	7,50		0,680	0,460	
25	1	39	1,54	27	400	250	10,00		0,840	0,560	
32	1 1/4	48	1,89	27	400	320	12,50		1,240	0,830	
38	1 1/2	54	2,13	27	400	380	15,00		1,410	0,950	
51	2	69	2,72	27	400	510	20,00		2,060	1,380	
NA		LA		NEU		CEU		SA		AP	
										AU	



157AA

**Compressed air 27 bar (400 psi)
heavy duty mining**

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Black NBR/PVC - oil, abrasion and ozone resistant

Use: Compressed air designed for heavy duty mining applications

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	29	1,14	27	400	190	7,50		0,560	0,380	
25	1	35	1,38	27	400	250	10,00		0,710	0,480	
32	1 1/4	44	1,73	27	400	320	12,50		0,920	0,620	
38	1 1/2	50	1,97	27	400	380	15,00		1,050	0,710	
51	2	65	2,56	27	400	510	20,00		1,690	1,140	
NA		LA		NEU		CEU		SA		AP	
										AU	



157AK

**Compressed air 27 bar (400 psi)
heavy duty mining**

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile textile cords

Cover: Yellow SBR - abrasion and ozone resistant

Use: Compressed air designed for heavy duty mining applications

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	21	0,83	20	300	104	4,00		0,270	0,180	
19	3/4	29	1,14	20	300	152	6,00		0,485	0,330	
25	1	35	1,38	35	525	200	8,00		0,565	0,380	
NA		LA		NEU		CEU		SA		AP	
										AU	



189AK

**Air-water delivery - PVC - FRAS
AS 2660/A AS/NZS 2554/A**

Tube: Black antistatic PVC

Reinforcement: High tensile textile cords

Cover: Yellow ribbed PVC with longitudinal antistatic stripes - abrasion and ozone resistant

Use: Compressed air in underground mining applications.

Specialty designed for roof bolting applications

Safety factor: <= 19 mm 3,5:1 25 mm 2:1

Temperature: -5 °C +60 °C (-23 °F +140 °F)

													
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft			
19	3/4	29	1,14	70	1000	95	3,75		0,690	0,460			
25	1	35	1,38	70	1000	125	5,00		0,910	0,610			
32	1 1/4	42	1,65	70	1000	160	6,25		1,180	0,790			
38	1 1/2	50	1,97	70	1000	190	7,50		1,530	1,030			
51	2	65	2,56	70	1000	255	10,00		2,280	1,530			
63	2 1/2	83	3,27	70	1000	315	12,50		3,700	2,490			
NA		LA		NEU		CEU		SA		AP		AU	


MSHA approved

136AK

**Compressed air-water 70 bar (1000 psi)
steel reinforced**

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile steel cords

Cover: Yellow SBR/NBR - abrasion, ozone, hydrocarbon and flame resistant - pin pricked

Use: High pressure compressed air and water in heavy duty mining where long service life and maximum safety is required. Ideal for water spraying in mining dust control operation

Safety factor: <= 51 mm 4:1 >= 63 mm 3:1

Temperature: -30 °C +90 °C (-22 °F +200 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
38	1 1/2	52	2,05	70	1000	190	7,50		1,460	0,980	
51	2	65	2,56	70	1000	255	10,00		2,180	1,470	
63	2 1/2	83	3,27	70	1000	315	12,50		3,820	2,570	
76	3	96	3,78	40	600	380	15,00		3,500	2,350	
102	4	122	4,80	40	600	510	20,00		5,200	3,490	
NA		LA		NEU		CEU		SA		AP	AU



131AA

**Compressed air 70 bar (1000 psi)
steel reinforced - FRAS
exceeds AS 2660/B**

Tube: Black SBR/NBR - oil mist resistant

Reinforcement: High tensile steel cords

Cover: Black conductive SBR - abrasion, ozone and fire resistant

Use: High pressure compressed air and water in heavy duty "long wall" mining where long service life and maximum safety is required

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
63	2 1/2	86	3,39	100	1500	760	30,00		5,230	3,510	
63	2 1/2	93	3,66	100	1500	760	30,00		6,650	4,470	
76	3	100	3,94	100	1500	910	36,00		6,700	4,500	
76	3	105	4,13	100	1500	910	36,00		7,780	5,230	
NA		LA		NEU		CEU		SA		AP	AU



170AA

**Compressed air 100 bar (1500 psi)
steel braided**

Tube: Black NBR

Reinforcement: High tensile steel braids

Cover: Black CR/SBR - abrasion, ozone and hydrocarbon resistant

Use: Heavy duty high pressure compressed air. Specially designed for mobile drilling rigs

Safety factor: 4:1

Temperature: -40 °C +90 °C (-40 °F +200 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
105	4	113	4,45	14	200				1,740	1,170
157	6	167	6,57	10	150				3,300	2,220
208	8	220	8,66	10	150				5,140	3,450
NA		LA		NEU		CEU		SA		AP
										AU



289GG

Mine dewatering - PVC - lay flat

Tube: Green PVC

Reinforcement: High tensile textile cords

Cover: Green PVC - abrasion, ozone and cut resistant

Use: Lay flat water discharge for heavy duty applications.

Specially designed for mine and construction sites dewatering.

High end load resistance

Safety factor: 4:1

Temperature: -10 °C +60 °C (+14 °F +140 °F)

											
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	20	300				0,320	0,215	
19	3/4	31	1,22	20	300				0,530	0,360	
25	1	37	1,46	20	300				0,670	0,450	
32	1 1/4	46	1,81	20	300				1,020	0,690	
38	1 1/2	52	2,05	20	300				1,160	0,780	
51	2	67	2,64	20	300				1,740	1,170	
63	2 1/2	80	3,15	20	300				2,150	1,440	
76	3	93	3,66	20	300				2,550	1,710	
102	4	119	4,69	20	300				3,420	2,300	
NA		LA		NEU		CEU		SA		AP	AU



240AA

Air-water delivery 20 bar (300 psi) - FRAS exceeds AS 2660/B

Tube: Black conductive SBR/NR

Reinforcement: High tensile textile cords

Cover: Black conductive SBR - abrasion, ozone and fire resistant

Use: Air, water and stone dust delivery in underground mines

Safety factor: <= 63 mm 4:1 76 mm-102 mm 3,5:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
13	1/2	23	0,91	35	525				0,330	0,220
19	3/4	32	1,26	35	525				0,550	0,370
25	1	38	1,50	35	525				0,730	0,490
38	1 1/2	54	2,13	35	525				1,240	0,830
76	3	95	3,74	35	525				2,930	1,970
NA		LA		NEU		CEU		SA		AP
AU										



241AA

Air-water delivery 35 bar (525 psi) - FRAS exceeds AS 2660/B

Tube: Black conductive SBR/NR

Reinforcement: High tensile textile cords

Cover: Black conductive SBR - abrasion, ozone and fire resistant

Use: Air, water and stone dust delivery in underground mines

Safety factor: <= 38 mm 4:1 76 mm 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	61	2,40	10	150	204	8,00	100	1,200	0,810	
63	2 1/2	75	2,95	10	150	252	10,00	90	1,920	1,290	
76	3	88	3,46	10	150	304	12,00	90	2,280	1,530	
102	4	116	4,57	10	150	408	16,00	90	3,520	2,370	
152	6	170	6,69	10	150	760	30,00	80	6,650	4,470	

NA	LA	NEU	CEU	SA	AP	AU
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225AA

General purpose S&D 10 bar (150 psi) - FRAS exceeds AS 2660/C

Tube: Black conductive SBR/NR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive SBR - abrasion, ozone and fire resistant

Use: Water and stone dust suction and delivery.

Also suitable for methane drainage/extraction in underground coal mines

Safety factor: 4:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	73	2,87	27	400			60	2,370	1,590	

NA	LA	NEU	CEU	SA	AP	AU
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245AA

General purpose delivery & light suction 27 bar (400 psi) - crush resistant - FRAS exceeds AS 2660/B

Tube: Black conductive SBR/NR

Reinforcement: High tensile textile braids

Cover: Black conductive SBR - abrasion, ozone and fire resistant

Use: Air and water delivery-light suction.

Special heavy wall braided construction for vacuum, crush and kink resistance.

Ideal for methane drainage/extraction in underground coal mines.

Vacuum resistance 60%

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	61	2,40	10	150	204	8,00	100	1,180	0,790	
57	2 1/4	67	2,64	10	150	204	8,00	100	1,300	0,870	
63	2 1/2	75	2,95	10	150	252	10,00	90	1,900	1,280	
76	3	88	3,46	10	150	304	12,00	90	2,260	1,520	
102	4	116	4,57	10	150	408	16,00	90	3,400	2,280	

NA	LA	NEU	CEU	SA	AP	AU
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226AA

Multipurpose S&D 20 bar (300 psi) exceeds BCS 352

Tube: Black conductive NBR

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive NBR/PVC - abrasion, ozone, hydrocarbon and fire resistant

Use: Air, water and oil delivery in underground mines

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	23	0,91	20	300				0,350	0,235	
19	3/4	31	1,22	20	300				0,540	0,360	
25	1	37	1,46	20	300				0,670	0,450	
32	1 1/4	46	1,81	20	300				0,960	0,650	
38	1 1/2	52	2,05	20	300				1,110	0,750	
51	2	67	2,64	20	300				1,610	1,080	
76	3	94	3,70	20	300				2,850	1,920	

NA	LA	NEU	CEU	SA	AP	AU
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242AA

Multipurpose delivery 20 bar (300 psi) exceeds BCS 182

Tube: Black conductive NBR

Reinforcement: High tensile textile cords

Cover: Black conductive NBR/PVC - abrasion, ozone, hydrocarbon and fire resistant

Use: Air, water and oil delivery in underground mines

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
38	1 1/2	62	2,44	14	200				2,230	1,500
51	2	75	2,95	14	200				2,850	1,920
NA		LA		NEU		CEU		SA	AP	AU



756AA

Gunite 14 bar (200 psi) - FRAS exceeds AS 2660/C

Tube: Black conductive NR - abrasion resistant
Reinforcement: High tensile textile cords
Cover: Black conductive SBR - abrasion, ozone and fire resistant
Use: Gunite
Safety factor: 4:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
32	1 1/4	46	1,81	7	100				0,940	0,630
38	1 1/2	52	2,05	7	100				1,090	0,730
51	2	65	2,56	7	100				1,430	0,960
NA		LA		NEU		CEU		SA	AP	AU



765AA

Stone dust 7 bar (100 psi) - FRAS AS 2660/C

Tube: Black conductive SBR/NR - abrasion resistant
Reinforcement: High tensile textile cords
Cover: Black conductive SBR - abrasion, ozone and fire resistant
Use: "Stone dusting" in underground mines. Also suitable for air and water delivery
Safety factor: 4:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	69	2,72	10	150	204	8,00	90	2,190	1,470
76	3	98	3,86	10	150	304	12,00	90	4,040	2,720
102	4	124	4,88	10	150	408	16,00	90	5,400	3,630
127	5	153	6,02	10	150	635	25,00	80	7,350	4,940
152	6	178	7,01	10	150	760	30,00	80	9,360	6,290
203	8	237	9,33	10	150	1015	40,00	70	17,320	11,640
254	10	292	11,50	10	150	1270	50,00	70	23,720	15,940
NA		LA		NEU		CEU		SA	AP	AU



707AA

Abrasive slurry S&D 10 bar (150 psi) muff couplings

Tube: Black conductive NR
Abrasion resistance 50 mm³ (ISO 4649/A)
Reinforcement: High tensile textile cords with embedded steel helix wire
Cover: Black conductive SBR/NR - abrasion and ozone resistant
Use: Bulk material and abrasive slurries suction and delivery in heavy duty mining. Designed for muff coupling use
Safety factor: ≤ 127 mm 3:1 >152 mm 2,5:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
76	3	102	4,02	10	150	304	12,00	90	4,770	3,210
102	4	128	5,04	10	150	408	16,00	90	6,310	4,240
127	5	159	6,26	10	150	635	25,00	80	9,440	6,340
152	6	184	7,24	10	150	760	30,00	80	11,420	7,670
203	8	235	9,25	10	150	1015	40,00	70	15,480	10,400
254	10	286	11,26	10	150	1270	50,00	60	21,600	14,520
300	12	344	13,54	10	150	1500	60,00	60	34,490	23,180
NA		LA		NEU		CEU		SA	AP	AU



706AA

Abrasive slurry S&D 10 bar (150 psi) muff couplings

Tube: Black conductive NR
Abrasion resistance 50 mm³ (ISO 4649/A)
Reinforcement: High tensile textile cords with embedded steel helix wire
Cover: Black conductive SBR/NR - abrasion and ozone resistant
Use: Bulk material and abrasive slurries suction and delivery in heavy duty mining. Designed for muff coupling use
Safety factor: ≤ 127 mm 3:1 >152 mm 2,5:1
Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	77	3,03	35	525	204	8,00	100	3,070	2,060
76	3	106	4,17	35	525	304	12,00	90	5,000	3,360
102	4	134	5,28	35	525	408	16,00	90	7,290	4,900
NA		LA		NEU		CEU		SA	AP	AU



776AA

Mineral sampling 35 bar (525 psi)

Tube: Black conductive NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Mineral recovery in sampling operations

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
76	3	106	4,17	35	525	304	12,00	90	4,940	3,320
NA		LA		NEU		CEU		SA	AP	AU



776JA

Mineral sampling 35 bar (525 psi)

Tube: Beige NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Mineral recovery in sampling operations

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

										
mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft
51	2	63	2,48	5	75	204	8,00	90	1,320	0,890
63	2 1/2	77	3,03	5	75	252	10,00	90	2,020	1,360
76	3	92	3,62	5	75	304	12,00	90	2,760	1,850
102	4	116	4,57	5	75	408	16,00	90	3,350	2,250
127	5	143	5,63	5	75	635	25,00	80	4,980	3,350
152	6	170	6,69	5	75	760	30,00	80	6,810	4,580
NA		LA		NEU		CEU		SA	AP	AU



714JA

Drill cutting suction 5 bar (75 psi) - corrugated

Tube: Beige NR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire - antistatic wire

Cover: Black conductive SBR/NR - abrasion and ozone resistant

Use: Bulk material suction and delivery.

Specially designed for drill cutting suction in mobile drilling rigs.

Corrugated construction for maximum flexibility

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
19	3/4	25	0,98						0,200	0,135	
NA		LA		NEU		CEU		SA		AP	
										AU	



660AA

Nitro blast loading

AS 2187-2

Tube: Black conductive NBR - abrasion resistant

Reinforcement: High tensile textile fabric

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Explosive loading in blasting holes

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
51	2	71	2,80	20	300	255	10,00	70	2,840	1,910	
63	2 1/2	83	3,27	20	300	315	12,50	70	3,320	2,230	
NA		LA		NEU		CEU		SA		AP	
										AU	



612AA

Nitro blast handling 20 bar (300 psi)

Tube: Black conductive NBR - abrasion resistant

Reinforcement: High tensile textile cords with embedded steel helix wire

Cover: Black conductive CR - abrasion, ozone, hydrocarbon and fire resistant

Use: Explosive handling in mobile delivery units.

Specially designed for heavy duty reeling applications

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

mm	inch	mm	inch	bar	psi	mm	inch	%	kg/m	lb/ft	
13	1/2	21	0,83	5	75				0,250	0,170	
16	5/8	24	0,94	5	75				0,290	0,195	
19	3/4	29	1,14	5	75				0,420	0,280	
25	1	35	1,38	5	75				0,520	0,350	
32	1 1/4	42	1,65	5	75				0,650	0,440	
38	1 1/2	48	1,89	5	75				0,750	0,500	
45	1 3/4	55	2,17	5	75				0,870	0,580	
51	2	61	2,40	5	75				0,980	0,660	
NA		LA		NEU		CEU		SA		AP	
										AU	



NSW dept. of mineral resources
approved

964AA

Cable protection - FRAS

AS 1802 AS 2660

Tube: Black conductive SBR/NR

Reinforcement: High tensile textile cords

Cover: Black conductive SBR - abrasion, ozone and fire resistant

Use: Cable protection in underground mines.

Also suitable for light duty air and water delivery max 5 bar (75 psi)

Safety factor: 3:1

Temperature: -30 °C +80 °C (-22 °F +176 °F)

(Reprinted from Assogomma "Recommendation regarding choice, storing, use and maintenance of rubber hoses" June 2004.)

1. CHOICE CRITERIA

In order to choose a hose suitable for a specific use it is necessary to determine at least the following basic points:

1.1 Pressure - suction

It is necessary to determine the maximum working pressure or suction values. It should be taken into consideration that the normal life of the hose will be prejudiced in the case of a sudden pressure variation or pressure peaks exceeding the maximum allowed.

1.2 Compatibility of conveyed substances

The nature, designation, concentration, temperature and state (liquid, solid, gaseous) must be determined. In the case of solid substances conveyed, it is necessary to indicate granulometry, density, quantity of the solid substance conveyed as well as the nature, speed and flow of the fluid carrying it.

1.3 Environment

It is necessary to know the place of usage, ambient temperature, hygrometric conditions and exposure to atmospheric agents. Specific environment conditions such as ultraviolet rays, ozone, sea water, chemical agents and other aggressive elements could cause early degeneration of the hose.

1.4 Mechanical stress

The minimum bend radius* must be established as well as any stress related to traction, torsion, bending, vibration, compression, deflection and longitudinal or transversal loads.

1.5 Cover abrasion

Even though the hoses are manufactured to guarantee good resistance to abrasion, it is advisable to use further protection when damage to the hose may be caused by shock, corrosion and/or dragging.

1.6 Working position

Indicate if the hose is either placed on the ground, suspended or immersed.

1.7 Used or foreseen couplings

This must be selected according to:

- couplings and flanges: type, dimension, type of thread, standard references and kind of application;
- hose shank: internal and external diameter and length;
- ferrules/clumps: type and dimension.

In order to guarantee good performance the compatibility between the hose and type of coupling must be ensured. The assembly must guarantee the working pressure suggested by the manufacturer.

1.8 Technical standards

National, European and International technical standards and rules must always be adhered to. In the case of hoses for peculiar purposes it is advisable to establish proper specification with the manufacturer.

1.9 Marking

Manufacturers must mark hoses at regular intervals with the information necessary for the proper use of the product. When interpretation is not clear or information is insufficient, user should apply to the manufacturer.

2. RECOMMENDATION FOR CORRECT STORAGE

Rubber is subject, by nature, to changes in physical properties. These changes, which normally occur over the course of time, according to the kind of rubber used, can be accelerated by one particular factor or by a combination of these.

Reinforcement materials are also adversely affected by unsuitable conditions of storage. The following recommendations give some precautions to be taken to ensure the minimum deterioration to stored articles.

2.1 Storage life

Storage time should be reduced to the minimum through programme rotation.

When it is not possible to avoid long term storage, it is necessary that the user, as indicated in ISO 8331, carries out a complete check of the hose before its use according to the following criteria:

- maximum two years storage for assembly;
- maximum four years storage for hoses.

2.2 Temperature and humidity

The best temperature for the storage of rubber hoses varies from 10 to 25 degrees centigrade. Hoses should not be stored at temperature above 40 °C or below 0 °C. When the temperature is below -15 °C it is necessary to take precautions when handling.

Hoses should not be stored near sources of heat nor in conditions of high or low humidity. A humidity level of a maximum of 65% is recommended.

2.3 Light

Hoses must be stored in dark places, avoiding direct sun light or strong artificial light. Should store rooms have windows or glass openings, these must be screened.

2.4 Oxygen and ozone

Hoses should be protected from circulating air by suitable packing or by storage in air-tight containers. As ozone has a particularly aggressive action on all rubber products, the store house must not contain material producing ozone like devices under high electrical tension, electric engines or other materials provoking sparks or electric arcs.

2.5 Contact with other materials

Hoses should not come into contact with solvents, fuels, oils, greases, volatile chemical mixtures, acids, disinfectants and other organic liquids in general.

Furthermore direct contact with some metals (for example manganese, iron, copper and its alloys) and relative mixture exercise harmful effects on some types of rubber.

Contact with PVC and creosote impregnated timber or fabrics should be avoided.

2.6 Heat sources

The temperature limits given in point 2.2 must be respected. When this is impossible, it is necessary to use a thermic shield at a distance not less than one meter.

2.7 Electric or magnetic field

Variation in electric or magnetic fields must be eliminated in store houses as these could provoke currents in metal coupling, heating them. Similar fields could be caused by high-tension cables or high frequency generators.

* The **minimum bend radius** is the radius to which the hose can be bent in service without damage or appreciably shortening its life. The radius is measured to the inside of the curvature. **Formula to determine minimum hose length given bend radius and degree of bend required:**

$$L = \frac{A}{360^\circ} \times 2 \pi B$$

Where:

- L = Minimum length of hose to make bend (Bend must be made equally along this portion of hose length).
- A = Angle of bend
- B = Given bend radius of hose
- π = 3.14

Example: To make a 60° bend at the hose's rated minimum bend radius of 15 cm

$$L = \frac{60}{360^\circ} \times 2 \times 3.14 \times 15 = 15.7 \text{ cm} \cong 16 \text{ cm}$$

Thus, the bend must be made over approximately 16 cm of hose length. The bend radius used must be equal to or greater than the rated minimum bend radius. Bending the hose to a smaller bend radius than minimum may kink the hose and result in damage and early failure.

2.8 Storage conditions

Hoses must be stored in a relaxed condition free from tension, compression or other deformation and contact with objects that could pierce or cut must be avoided. It is preferable to store hoses on special shelves or on dry surfaces.

Coiled hoses must be stored horizontally avoiding piling. When this is not possible the height of the piles must be such to avoid permanent deformation of hoses stored underneath.

The inside diameter of the coil, during the storage, must be such as to not compromise the performances of the products. In particular, this diameter must not have value less than those indicated by the manufacturers.

It is advisable to avoid storing coiled hoses on poles or hooks. Furthermore it is advisable to store hoses to be delivered straight, horizontally, without bending.

2.9 Rodents and insects

Hoses must be protected from rodents and insects. When such a risk is probable adequate precautions must be taken.

2.10 Marking or packaged items

It is advisable that hoses are always easy to identify even if packaged.

2.11 Exit from storage

Prior to delivery hoses must be checked for integrity and must correspond to the required use. After long storage if couplings are not clipped, swaged or built-in, it is necessary to check that locking collars are tight.

2.12 Return to storage

Hoses that have been used must be free from all substances prior to storage. Particular attention must be paid when chemical, explosive, inflammable, abrasive and corrosive substances have been conveyed. After cleaning, check whether the hose is suitable to use again.

3. NORMS AND METHOD OF USE

After having chosen the type of hose, the users must keep in mind the following hose installation criteria:

3.1 Preassembly checks

Prior to installation it is necessary to check the characteristics of the hose carefully to verify that type, diameter and length conform with the required specifications. Moreover a visual check must be effected to make sure that there are no obstructions, cuts, damaged cover or any other evident imperfections.

3.2 Handling

Hoses must be moved with care avoiding knocks, dragging over abrasive surfaces and compression. Hoses must not be pulled violently when twisted or knotted. Heavy hoses, normally delivered in a straight line, must be laid on special supports for transport (see attachment). Should wood supports be used these must not be treated with creosote or painted with substances which could damage the rubber.

3.3 Pressure and seal test

The working pressure generally indicated by manufacturer must be respected. Following installation, when air bubbles have been eliminated, increase the pressure to test the assembly and check possible leaks. This test must be carried out in a place free from danger.

3.4 Temperature

Hoses must always be used within the temperature limits generally indicated. In case of doubt apply to manufacturers.

3.5 Conveyed products

Hoses must be used exclusively to convey substances for which they were manufactured. In case of doubt it is always advisable to contact manufacturer. As far as possible, hoses must be empty after usage. Where any risks are involved special precautions must be taken to avoid bursts.

3.6 Environment

Hoses must be used exclusively in the environment conditions for which they were manufactured.

3.7 Bending radius

Installation underneath the minimum bending radius reduces the life of the hose considerably. Moreover it is necessary to avoid bending at fitting ends. *(See attached 1).

3.8 Torsion

Hoses are not manufactured to work in torsion, except for specific purposes.

3.9 Traction

Traction must be within limits specified by manufacturer. In case of doubts it's advisable to get in touch with manufacturers.

3.10 Vibration

Vibrations subject hoses to stress from heat and fatigue above all near couplings and premature bursting may occur. It is therefore advisable to check that hoses have been manufactured to resist such stress.

3.11 Kinking

Some users tend to obstruct the flow of liquids by kinking the hose. This system is not advised by manufacturers because the reinforcement is subjected to excessive stress and could lead to bursting.

3.12 Choice and application of couplings

Provided that the manufacturers instructions are met it is always necessary to check the compatibility between the working pressure of couplings and hoses. Couplings with too large diameters cause abnormal stress which can split the hose reinforcement, whilst too small dimensions can create clumping difficulties and leakage. Furthermore couplings must be free from sharp and cutting edges which could damage the hose.

Water or soap and water can be used to fit couplings. Do not use products containing oils or solvents except for the kind of hoses destined to be used with the latter.

Softening hoses with mallet or similar tools is forbidden.

Take care to avoid external collars or other tightening tools. The use of makeshift collars (for example wire) with sharp edges or too tight clumping leads to damage of cover and reinforcement.

3.13 Electrical properties

Electrical properties of hoses and assemblies, are measured between couplings and/or the end of the hose and are expressed in Ohm.

The hoses are divided into three grade:

- a) continuous (M grade)
they contain little ropes or wire helics.
Resistance < of 10^2 ohm
- b) Conductive or antistatic (Ω grade)
They contain rubber or plastic conductive sheets
Resistance > 10^3 ohm < 10^6 ohm
- c) Insulating or discontinuous
They contain rubber or plastic insulating sheets
Resistance > 10^6 ohm

3.14 Installation between two points

The hoses must be supported in a suitable way, so as the normal movement when the hose is under pressure (variations in length, diameter, twisting, etc.) are allowed.

3.15 Mobile pieces

When hoses link mobile pieces, it is necessary to check that the length of the hose is suitable and that the movement does not subject the hose to shock or chafing and that abnormal stress, bending, traction or torsion do not occur.

3.16 Identification

If further marking is necessary, self-adhesive tape may be used. When the use of paint is unavoidable check compatibility of cover with manufacturer.

4. MAINTENANCE

Even though choice, storage and installation have been carried out correctly regular maintenance is necessary.

Frequency of the latter is determined according to use involved. During regular check special attention must be paid to couplings and to the appearance of the following irregularities which show deterioration of hose:

- Cracks, cuts, abrasions, unsticking, tears in cover revealing reinforcement;
- Deformity, bubbles, local swelling under pressure;
- Sticky or soft areas;
- Leaks.

Such irregularities justify hose substitutions. When cover bears date of expiry this must be kept to even if the hose shows no apparent signs of wear.

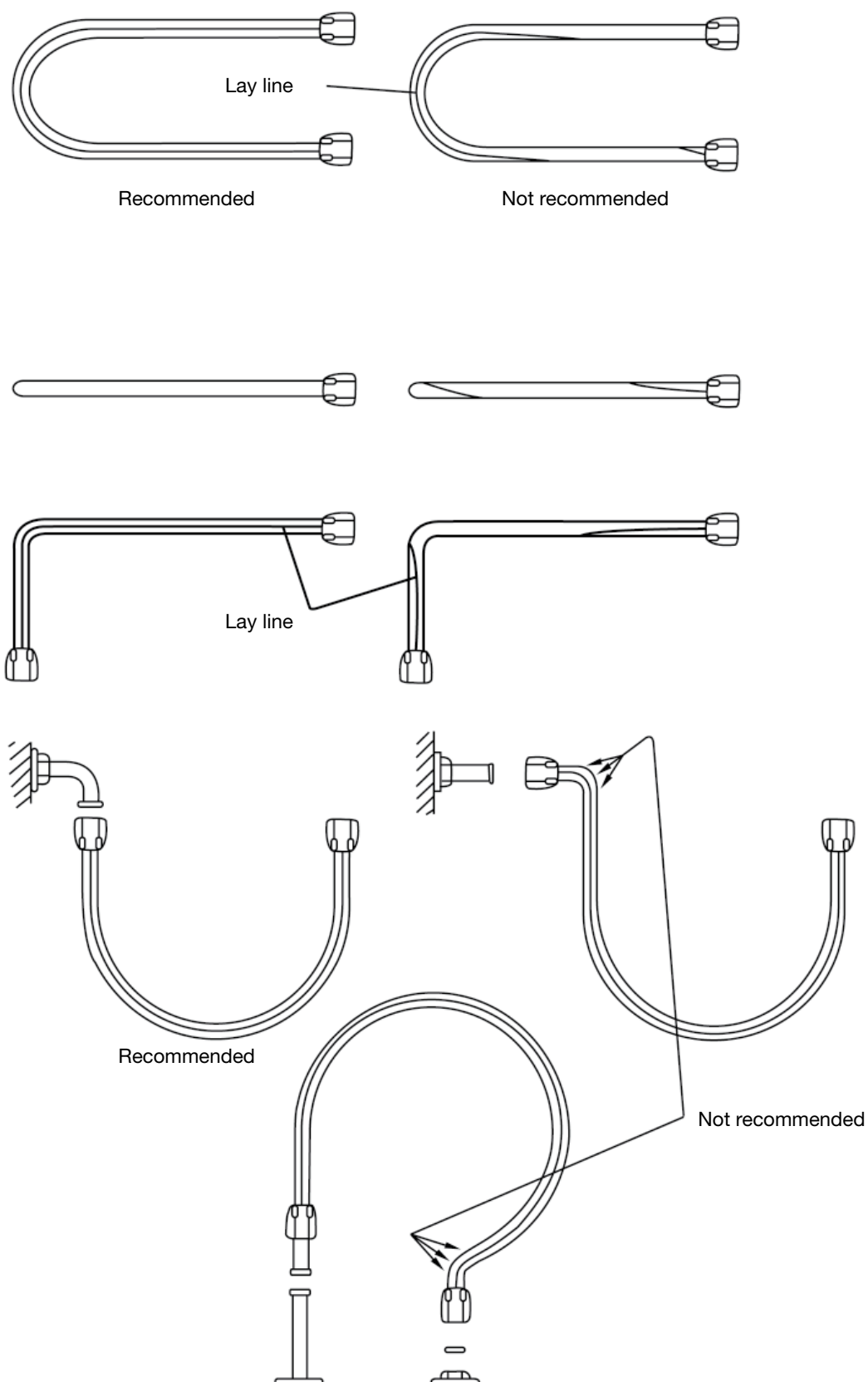
4.1 Repairs

Hose repairs are not advisable. However when deterioration occurs at an end section, and if the full length allows for such, the worn section may be eliminated.

4.2 Cleaning

If cleaning instructions are not supplied by the manufacturer clean, if necessary, with soap and water avoiding use of solvents (petrol, paraffin, etc) or detergents. Never use abrasive, pointed or cutting tools (wire brushes).

*(Attached 1)



This drawings refer to assembly installed in real conditions. Some of these may request layouts violating such recommendations. It is necessary to point out that such cases are only applicable in test conditions and cannot be used for general use.

The chemical guide in this section is offered as a general indication of the compatibility of the various materials used in ALFAGOMMA hose with the chemicals and fluids listed. The basis for the ratings in this guide include actual service experience, the advice of various polymer suppliers, and the considered opinion of our rubber chemists. When in doubt, a sample of the compound should always be tested with the particular chemical it is to handle. Some of the variables that come into play in the resistance of a compound to chemical attack are:

1. Temperature of the Material Transmitted:

Higher temperatures increase the effect of chemicals on rubber compounds. The increase varies with the polymer and the chemical. A compound quite suitable at room temperature might fail very quickly at higher temperatures.

2. Service Conditions:

A rubber compound usually swells when exposed to a chemical. With a given percent of swell, a hose tube may function satisfactorily if the hose is in a static condition, but fail quickly if the hose is subject to flexing.

3. The Grade or Blend of the Rubber Compound:

Basic rubber polymers are sometimes mixed or blended together to enhance a particular property for a specific service. The reaction to a particular chemical blend of polymers may, therefore, somewhat different from the reaction to the single ones. When in doubt, a sample of the compound should always be tested with the particular chemical it is to handle.

GENERAL CHEMICAL RESISTANCE OF ALFAGOMMA HOSE COMPOUNDS

COMMON NAME	ASTM Designation D1418-93	COMPOSITION	GENERAL PROPERTIES
Natural rubber	NR	Isoprene rubber	Excellent physical properties, including abrasion resistance. Not oil resistant.
SBR	SBR	Styrene-butadiene rubber	Good physical properties, including abrasion resistance. Not oil resistant.
Butyl rubber	IIR	Isobutene-isoprene rubber	Very good weathering resistance. Low permeability to air. Good physical properties. Poor resistance to petroleum based fluids.
EPDM	EPDM	Ethylene-propylene-diene-terpolymer	Good general purpose polymer. Excellent heat, ozone and weathering resistance. Not oil resistant.
Cross linked polyethylene	XLPE	Cross linked polyethylene	Excellent resistance to most solvents, oils and chemicals. Do not confuse with chemical properties of standard polyethylene.
Ultra high molecular weight polyethylene	UHMWPE	Ultra high molecular weight polyethylene	Excellent resistance to most solvents, chemicals and hydrocarbons. Excellent abrasion and wear resistance. Inert and suitable for food contact. Do not confuse with chemical properties of standard polyethylene.
Teflon/Fluorocarbon resin	PTFE	Polytetra-fluoroethylene	Excellent chemical and solvent resistance. Inert to most materials. Smooth anti-adhesive surface, easy to clean.
Nitrile rubber	NBR	Acrylonitrile-butadiene rubber	Excellent oil resistance. Good physical properties.
Neoprene	CR	Chloroprene rubber	Excellent weathering resistance. Flame retardant. Good oil resistance. Good physical properties.
Hypalon®	CSM	Chloro-sulfonated polyethylene	Excellent ozone, weathering and acid resistance. Good abrasion and heat resistance. Can be compounded for good oil resistance.
Polyurethane	AU	Polyester urethane	Excellent abrasion and wear resistance. Not resistant to hydrolysis.
Viton	FKM	Fluorocarbon rubber	Excellent high temperature resistance, particularly in air or oil. Very good resistance to chemicals.

The following data is based on tests and believed to be reliable; however, we emphasise that the tabulation should be used as a guide only, since it does not take into consideration all variables such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested. Contact ALFAGOMMA for recommendation and assistance.

Note : All data based on 20 °C (68 °F) unless otherwise noted.

Key:

Blank	=	No Data
E	=	Excellent
G	=	Good
F	=	Fair
C	=	Conditional
X	=	Unsatisfactory

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
ACETALDEHYDE		X	E	E	E	E	G	X	C	C	X	
ACETIC ACID, GLACIAL	X	X	G	G	E	E	C	X	F	X	X	X
ACETIC ACID, 10%	F	F	E	E	E	E	G	E	E	F	X	C
ACETIC ACID, 50%	G	X	E	E	E	E	G	F	F	X	X	C
ACETIC ANHYDRIDE	F	X	E	G	E	E	G	X	G	G	X	X
ACETIC OXIDE	F	G	E	G	E	E	E	X	G	G		X
ACETONE	C	C	E	E	E	E	G	X	C	F	X	X
ACETONE CYANOHYDRIN	F	F	E	E				X	G	F		X
ACETONITRILE				E				X	E			
ACETOPHENONE	X	X	E	E	E	E	E	X	X	X	X	X
ACETYL ACETONE	X	X	G	E				X	X	X	X	X
ACETYL CHLORIDE	X	X	X	X			G	X	X	X	X	E
ACETYL OXIDE	F	G	E	G	E	E		X	G	G		X
ACETYLENE	E	E	E	E	E	E	F	E	E	E	C	F
ACETYLENE DI-+TERA CHLORIDE	X	X	X	C				X	C	X		G
ACROLEIN	G	F	E	E				F	G	G		E
ACRYLONITRILE	X	X	X	E	E	E	G	X	X	C	X	X
ACRYLIC ACID				X				X	X			
ADIPIC ACID		G	E	C	E	E		E	E	E	E	
AIR, +300 °F	X	X		G				G	G	X	X	X
ALK-TRI	X		X	X				X	X	X		E
ALLYL ALCOHOL	E	E	E	E	E	E		E	E	E		E
ALLYL BROMIDE	X	X	X	X				X	X	X		G
ALLYL CHLORIDE	X	X	F	X	E	F		G	X	X		G
ALUM	E	E	E	G	E	E	E	C	E	E		E
ALUMINIUM ACETATE	X	X	G	E			E	C	C		X	X
ALUMINIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E
ALUMINIUM FLUORIDE	G	E	E	E	E	E	E	E	E	E	C	C
ALUMINIUM FORMATE	X	X	G	E				X	E	X		X
ALUMINIUM HYDROXIDE	E			E	E	E		E	E	G		
ALUMINIUM NITRATE	E	E	E	E			E	E	E	E	C	E
ALUMINIUM SULFATE	E	E	E	E	E	E	E	E	G	E	X	E
ALUMUS-NH3-CR-K	E	E	E	E			E	E	E	E		E
AMINES-MIXED	G	G	G	G				X	C	X	X	X
AMINO BENZENE				G	E	E		X	X			
AMINODIMETHILBENZENE				C				C	X			
AMINOETHANE				E	E	E		C	C			
AMINOXYLENE				E				C	X			
AMMONIUM CARBONATE	E	E	E	E				C	E		G	C
AMMONIUM CHLORIDE	E	E	E	E	E	E	E	G	E	E	E	C
AMMONIUM HYDROXIDE	X	X	E	E	E	E	E	C	E	G	X	C
AMMONIUM NITRATE		E	E	E	E	E	E	E	E	E	X	C
AMMONIUM PHOSPHATE, DIBASIC	E	E	E	E	E	E	E	E	E	E		C
AMMONIUM SULFATE	E	E	E	E	E	E	E	E	E	E	E	X
AMMONIUM SULFIDE	E	E	E	E	E	E		C	E	E		E
AMMONIUM THIOSULFATE	E	E	E	E			E	C	E	E	G	E
AMYL ACETATE	X	X	E	C	E	E	C	X	X	X	X	X
AMYL ACETONE	X	X	G	G				X	X	X		X
AMYL ALCOHOL	E	E	E	E	E	E	E	C	C	E	X	G
AMYL BROMIDE				C				X	X			
AMYL CHLORIDE	X	X	X	X	E	E	E	X	X	X	C	G
AMYL ETHER				X				C	X			
AMYLAMINE	G	G	E	X				F	C	F		
ANETHOLE	X	X	X	X				X	X	X		G
ANILINE	X	X	E	C	E	E	E	X	X	X	X	C
ANILINE DYES	G	G	G	C	E	E	F	X	C	G	X	G

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
ANILINE OIL	X	X	G	C	E	E		X	X	X	X	C
ANIMAL FATS	X	X	G	C	E	E		E	C	X	C	E
ANTIMONY PENTACHLORIDE	X	X	X	C	E	E		X	C	X		
AQUA REGIA	X	X	X	C	X	X	E	X	X	C	X	G
ARGON	X	X	G	E			E	E	G	X	E	
ARSENIC ACID	E	E	E	E	E	E	E	E	E	E	C	E
ASPHALT	X	X	X	X	E	E	E	C	C	X	G	E
ASTM FUEL A	X	X	X	X			E	E	C	G	E	E
ASTM FUEL B	X	X	X	X			E	C	X	X	E	E
ASTM FUEL C	X	X	X	X			E	C	X	X	X	E
ASTM OIL NO.1	X	X	X	X	E	E	E	E	E	G	E	E
ASTM OIL NO.2	X	X	X	X	E	E	E	E	C	X	E	E
ASTM OIL NO.3	X	X	X	X	E	E	E	E	C	X	E	E
ASTM OIL NO.4	X	X	X	X				C	X	X	X	E
AUTOMATIC TRASMISSION FLUID	X	X	X	X				E	C	C	G	E
BANANA OIL		X	C	C				X	X			
BARIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	G	E
BARIUM HYDROXIDE	E	E	E	E	E	E	E	E	E	E	E	E
BARIUM SULPHIDE	E	E	E	E	E	E	E	E	E	E	E	E
BEER	E	E	E	E	E	E	E	E	E	E	X	E
BEET SUGAR LIQUORS	E	E	E	E	E	E	E	E	C	E	X	E
BENZAL CHLORIDE			G					X				
BENZALDEHYDE	X	X	E	E	E	E	C	X	X	X	X	X
BENZENE	X	X	X	C	E	F	G	X	C	X	X	E
BENZENE CARBOXYLIC ACID				C				X	E			
BENZINE	X	X	X	X	E	E	E	E	C	X	G	E
BENZOIC ACID	X	X	X	C			G	X	E	X	X	E
BENZOL				C	E	F	E	X	C			
BENZOTRICHLORIDE				E				X	X			
BENZYL ACETATE	X	X	G	E				X	E	X		X
BENZYL ALCOHOL	X	X	X	C			E	X	C	F	X	E
BENZYL CHLORIDE	C	C	G	X			E	X	X	C		C
BENZYL ETHER				C				X	X			
BLACK SULFATE LIQUOR	G	G	E	G	E	E	E	G	G	G	X	E
BLEACH	X	X	G	E	G	F	E	X	C	F	X	G
BORAX SOLUTION	G	G	E	E	E	E	E	C	E	E	G	E
BORIC ACID	E	E		E	E	E	E	E	E	E	E	E
BRAKE FLUID (HD-557) 12 DAYS		E	G	E			E	C	C	G		X
BRINE	E	E	E	E	E	E	E	E	E	E		E
BROMOBENZENE	X	X	X	X				X	X	X	X	G
BROMOCHLOROMETANE	X	X	G	G	F	F		X	X	X		X
BROMOETHANE				X	E	E		C	X			
BROMOTOLUENE	X	X	X					X		X		G
BUNKER OIL	X	E	X	X			E	E	G	X	G	E
BUTADIENE	X	X	X	X	E	E	E	X	X	C	X	G
BUTANE	X	X	E	X	E	E	E	E	E	G	E	E
BUTANOIC ACID				C				C	X			
BUTANOL (BUTYL ALCOHOL)	E	E	E	C	E	E	E	E	E	E	G	E
BUTANONE				E	E	E	G	X	X		X	
BUTOXYETHANOL				E				C	X			
BUTYL ACETATE	X	X	G	C	E	E	C	X	X	X	X	X
BUTYL ACRYLATE	X		X	C	E	E		X	X	X		X
BUTYL ALCOHOL	E	E	E	C	E	E	G	E	E	E	G	E
BUTYL ALDEHYDE	F		E	C	E	E		X	X			X
BUTYL BENZYL PHTHALATE	X	X	E	E	E	E		X	E	X		C
BUTYL CARBITOL	X	X	E	E			E	X	X	C		C
BUTYL CELLOSOLVE	X	X	E	C	E	E	E	C	X	X	E	X
BUTYL CHLORIDE	X	X	F	X				X	X	X		G
BUTYL ETHER	X	X	C	C	E	E		X	C	X	G	X
BUTYL ETHER ACETALDEHYDE	X	X	E	X				X	X	X		X
BUTYL ETHYL ETHER	X	X	G	F				G	X	X		
BUTYL OLEATE	X	X	G	C				X	X	X		E
BUTYL PHTHALATE	X	X	E	E	E	E		X	X	X		F
BUTYL STEARATE	X	X	X	X	E	E	E	C	X	X		C
BUTYLENE	X	X	X	X				C	C	X	X	E
BUTYRALDEHYDE	X	X	E	C	E	E	E	X	X	X	X	X
BUTYRIC ACID	F	X	F	C	E	E	E	C	X	X		G
BUTYRIC ANHYDRIDE	F	X	F	E				C	G	G		X
CADMIUM ACETATE	X	X	G					X		X		
CALCIUM ALUMINATE	E	E	E					E		E		E
CALCIUM BICHROMATE			E	E				C	E	F		
CALCIUM BISULFIDE				E			E	C	E			
CALCIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
CALCIUM HYDROXIDE	E	G	E	E	E	E	E	E	E	G	E	E
CALCIUM HYPOCHLORITE	X	X	G	E	E	E	E	C	C	F	X	X
CALCIUM NITRATE	E	E	E	E			E	E	E	E	E	E
CALCIUM SULFIDE	E	E	E	E			E	E	E	E	E	E
CALCIUM ACETATE	X	X	G	E			E	C	C	X	X	X
CAPRYLIC ACID	F	X	F					F		G		
CARBAMIDE				E	E	E		G	G			
CARBITOL	X	X	F	C	E	E	E	C	C	X	X	G
CARBOLIC ACID PHENOL	X	X	E				E					E
CARBON DIOXIDE	E	E	E	G	E	E	E	E	G	E	E	G
CARBON DISULFIDE	X	X	X	X	C	C	E	X	X	X	X	E
CARBON MONOXIDE	E	G	E	E	E	E	E	E	C	E	G	E
CARBON TETRACHLORIDE	X	X	X	X	E	E	E	X	X	X	X	E
CARBONIC ACID	E	E	E	E	E	E	E	C	E	E	X	E
CASTOR OIL	F	G	E	C	E	E	E	E	E	E	G	E
CAUSTIC SODA				G	E	E		C	G			
CELLOSOLVE ACETATE	X	X	E	G	E	E	E	X	X	X	X	X
CELLUGUARD	E	E	E	E			E	E	E	E	X	E
CETYLIC ACID				C	E	E		E	G			
CHINA WOOD OIL (TUNG OIL)	X	X	C	X	E	E		E	C	X	C	E
CHLORINATED SOLVENTS	X	X	X	X	E	E	E	X	X	X	X	E
CHLOROACETIC ACID	X	X	F	C	E	E	C	X	X	X	X	X
CHLOROACETONE	X	X	G	E	E	E	E	X	X	X	X	X
CHLOROBENZENE	X	X	X	X	E	E	E	X	X	X	X	E
CHLOROBUTANE	X	X	F	X				X	X	X		E
CHLORODANE				X				C	C			
CHLOROTHYL BENZENE	X	X	X	X				C	X	X		G
CHLOROFORM	X	X	X	X	F	F	E	X	X	X	X	E
CHLOROPENTANE	X	X	X	X				X	X	X		E
CHLOROSULFONIC ACID	X	X	X	X	F	X	C	X	X	X	X	X
CHLOROTOLUENE	X	X	X	X			E	X	X	X	X	G
CHLOROX	X	X	G	G				C	C	G	X	E
CHROME PLATING SOLUTIONS	X	X	X	C				X	X	X	X	E
CHROMIC ACID	X	X	F	C	E	E	E	X	X	G	X	C
CHROMIUM TRIOXIDE				C				X	X			
CINNAMENE				X				C	X			
CIS-9-OCTADECENOIC ACID	X	X	G	C	E	E		G	C	X		C
CITRIC ACID	E	E	E	E	E	E	E	E	E	E	E	C
COAL TAR OIL	X	X	X	X	E	E		E	G	X		E
COAL TAR	X	X	X	X	E	E		C	C	X		E
COAL TAR NAPHTHA	X	X	X	X	E	E		X	X	X		E
COCONUT OIL	X	X	G	C	E	E	E	E	C	X	C	C
COKE OVEN GAS	X	X	X	X	E	E	C	X	X	X	X	E
COOLANOL (MONSANTO)	X	X		X				E	C	G	X	E
COPPER CHLORIDE	F	E	E	E	E	E	X	E	C	E	G	E
COPPER CYANIDE	E	E	E	E	E	E	E	E	E	E	E	E
COPPER HYDRATE	F	G	E					G		G		F
COPPER HYDROXIDE	F	G	E					G		G		F
COPPER SULFATE	F	E	E	E	E	E	E	E	E	E	G	E
CORN OIL	X	X	E	C	E	E	G	E	C	X	G	E
COTTONSEED OIL	X	X	C	C	E	E	E	E	C	X	G	E
CREOSOTE	X	X	X	X	E	E	E	C	C	X	C	E
CRESOLS	X	X	X	X	E	E	E	X	X	X	X	E
CRESYLIC ACID	X	X	X	X	E	E	E	X	X	X	X	E
CROTONALDEHYDE	X	X	E	E	E	E		X	X	X		X
CRUDE OIL	X	X	X	X	E	E	E	C	C	X		E
CUMENE	X	X	X	X			E	X	X	X	X	E
CUPRIC CARBONATE	F	E	E							E		E
CUPRIC HYDROXIDE (COPPER HYDROXIDE)								G				
CUPRIC NITRATE	F	E	E	C	E	E		C	E	E	G	E
CUPRIC SULFATE	F	E	E	E	E	E		E	E	E	G	E
CUTTING OIL	X	X	X	X			E	E	C	G	E	E
CYCLOHEXANE	X	X	X	X	E	E	E	E	X	X	G	X
CYCLOHEXANOL	X	X	X	X	E	E	E	G	C	X		E
CYCLOHEXANONE	X	X	X	C	E	E	E	X	X	X	X	X
CYCLOPENTANE	X	X	X	X				G	C	X		E
CYCLOPENTANOL	X	X	X							X		G
CYCLOPENTANONE	X	X	X					X		X		
D-FURALDEHYDE				E				G	F			
DDT IN KEROSENE	X	X	X	X			E	E	C	X		E
DECAHYDRONAPHTHALENE				X	E	E		X	X			
DECALIN	X	X	X	X	E	E	E	X	X	X		E

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
DECYL ALCOHOL	E	E	E	X				E	X	E		G
DECYL ALDEHYDE	X	X	E	X				X		X		X
DECYL BUTYL PHTHALATE	X	X	E					X		X		F
DETERGENT, WATER SOLUTION	G	G	E	E	E	E	E	E	C	G	X	E
DEVELOPING FLUID (PHOTO)	E	G	G	C				E	E	E		E
DEXTRON	X	X	X	X				E	C	X	G	E
DI (2ETHYLHEXYL) ADIPATE				G	G	G		X	X			
DI (2ETHYLHEXYL) PHTHALATE				C	E	E		X	X			
DI-ISO-BUTYLENE	X	X	X	X	E			C	C	X	X	E
DI-ISO-DECYL PHTHALATE				E				X	X			
DI-ISO-PROPANOLAMINE			E	E				G	G			
DI-ISO-PROPYL ETHER	X	X	F	X	E	E		G	C	X		
DI-ISO-PROPYL KETONE	X	X	G	E	E		E	X	X	X	X	X
DI-P-MENTHA-1,8-DIENE				X				C	X			
DIACETONE ALCOHOL	X	X	E	E	E	E	E	X	F	X	X	X
DIACETYL METHANE				E				X	X			
DIAMMONIUM PHOSPHATE				E				E	E			
DIAMYL NAPHTHALENE	X	X	E		E	E				X		F
DIAMYLAMINE	F	G	E	E				G	C	G		
DIAMYLENE	X	X	X	X					X	X		E
DIAMYLPHENOL	X	X	X		E	E		X		X		E
DIBENZYL ETHER	X	X	E	C			E	X	X	X	G	X
DIBROMOBENZENE	X	X	X	X				X	X	X		E
DIBROMOMETHANE				C				X	X			
DIBUTYL ETHER	X	X	G	C	E	E	E	X	C	X	C	C
DIBUTYL PHTHALATE	X	X	C	C	E	E	E	X	X	X	X	C
DIBUTYL SEBACATE	X	X	E	C	E	E		X	X	X	X	F
DIBUTYLAMINE	X	X	X	F			E	X	C	X	X	X
DICALCIUM PHOSPHATE	E	E	E	E				E	E	E		E
DICHLOROETHYLENE				C	F	F		X	X		C	
DICHLOROACETIC ACID	G	X	F	X	E	E		X	X	X		X
DICHLOROBENZENE	X	X	X	X			G	X	X	X	X	E
DICHLOROBUTANE	X	X	X	X				C	X	X	X	E
DICHLORODIFLUOROMETHANE	X	X	X	C	E	G		C	C	X		G
DICHLOROETHANE	X	X	X	X	E	E		X	X	X		E
DICHLOROETHYL ETHER	X	X	X	X				X	X	X		
DICHLOROHEXANE	X	X	X	X				X	X	X		E
DICHLOROMETHANE	X	X	X	X				X	X	X		E
DICHLOROPENTANE	X	X	X	X				X	X	X		E
DICHLOROPROPANE	X	X	X	X	G	G	E	F	X	X		E
DICHLOROPROPENE				X	G	G	E	C	X			E
DIESEL OIL	X	X	X	X	E	E	E	E	C	C	C	E
DIETHANOL AMINE	G	G	E	G				C	G	F		
DIETHYLBENZINE	X	X	X	X				X	X	X	X	E
DIETHYL ETHER	X	X	X	X	E	E	G	X	X	X	G	X
DIETHYL KETONE	F	X	G	G	E	E		X	X	X		X
DIETHYL OXALATE	E	E	E	X				X	X	X		
DIETHYL PHTHALATE	X	X	E	F	E	E	E	X	X	X		F
DIETHYL SEBACATE	X	X	E	F				C	X	X	X	E
DIETHYL SULFATE				E				X	E			
DIETHYL AMINE	G	G	E	C	E	E	E	C	C	C	C	X
DIETHYLENE GLYCOL	E	E	E	E	E	E		E	E	E	X	E
DIETHYLENE OXIDE				E				X	X			
DIETHYLENETRIAMINE	G	G	E	E				G	X	F		
DIETHYLTRIAMINE	G	G	E							F		
DIHYDROXY SUCCINIC ACID				G				G	G			
DIHYDROXYDIETHYL ETHER	E	E	E	E	E	E		E	E	E		E
DIISOBUTYL KETONE	X	X	G	E	E	E		X	X	X		X
DIISODECYL PHTHALATE	X	X	E	E	E	E		X	X	X		F
DIISOCTYL ADIPATE	X	X	E	E				X	X	X		F
DIISOCTYL PHTHALATE	X	X	E	G	E	E		X	X	X		F
DIMETHYL CARBINOL				E	E	E		C	G			
DIMETHYL KETONE				E	E	E		X	C			
DIMETHYL PHTHALATE	X	X	G	C	E	E	E	X	X	X		G
DIMETHYL SULFATE				X	E	E		X	X			
DIMETHYL SULFIDE				X				X	X			
DIMETHYLAMINE				E	E	E	E	F	X			
DIMETHYLANILINE		C	C	E			E	X	X	X		
DIMETHYLBENZENE				X				X	X			
DIOCTYL ADIPATE				G				X	X			
DIOCTYL PHTHALATE	X	X	E	C	E	E	G	X	X	X	X	G
DIOXALANE	X	X	C				E				X	X

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
DIOXANE	X	X	G	C	E	E	E	X	X	X	X	X
DIPENTENE	X	X	X	X			E	C	X	X	X	E
DIPENTYLAMINE				X				C	X			
DIPROPYLAMINEOLAMINE	G	G	E							G		
DIPROPYLENE GLYCOL	E	E	E	E				E	E	E		E
DISODIUM PHOSPHATE	E	E	E	E				E	E	E		
DIVINYL BENZENE	X	X	X	X				X	X	X		E
DOWTHERMN, A AND E	X	X	X	X			E	X	X	X		E
DRY CLEANING FLUIDS		X	X	X				C	X	X		E
DUCGKIRIOEBAANE			X									
DURD AW-16,31							E					
DURO FR-HD							E					
ETHANOIC ACID				C	E	E	C	C	C			
ETHANOL (GRAIN ALCOHOL)	E	E	E	E	E	E	C	C	E	E	X	C
ETHANOLAMINE	G	G	E	E			E	C	C	C		X
ETHERS	X	X	X	X	E	E	E	F	X	X	G	C
ETHYL ACETATE	X	X	G	C	E	E	E	X	X	X	X	X
ETHYL ACETOACETATE	X	X	G	C			E	X	X	X		X
ETHYL ACETONE				G				X	X			
ETHYL ACRYLATE	X	X	G	C				X	X	X		X
ETHYL ALCOHOL	E	E	E	E	E	E	C	C	E	E		C
ETHYL ALDEHYDE	F		E	E	E	E		X	X			X
ETHYL ALUMINIUM DICHLORIDE	X	X	X					X		X		G
ETHYL BENZENE	X	X	X	X	E	E	E	X	X	X		E
ETHYL BROMIDE	X		X	X	E	E		C	X	X	C	E
ETHYL BUTYL ACETATE	X	X	G					X		X		X
ETHYL BUTYL ALCOHOL	E	E	E							E		G
ETHYL CELLULOSE	G	G	G	C	E	E	E	C	C	G	G	X
ETHYL CHLORIDE	X	X	F	C	E	E	E	E	X	X	C	E
ETHYL DICHLORIDE	X	X	X	X	E	E		X	X	X		G
ETHYL DIISOBUTYLTHIO-CABARMATE	E	E										
ETHYL ETHER	X	X	C	X	E	E	E	X	X	X	G	X
ETHYL FORMATE	X	X	G	C			E	X	C	X		X
ETHYL IODIDE	X	X	X	F	E	E		X	X	X		G
ETHYL OXALATE	X	X	X	E			E	X	X	X	E	E
ETHYL PHTHALATE				F	E	E		X	X			
ETHYL SILICATE	F	F	E	E			E	E	E	G		E
ETHYL-N-BUTYL KETONE	X	X	G	G				X	X	X		X
ETHYL-1-BUTANOL	E	E	E	E				E	E	E		E
ETHYLAMINE	F	F	G	E				C	C	F		
ETHYLENE CHLOROXYDRIN	G	G	G	C			E	X	C	G	X	E
ETHYLENE DIAMINE	G	G	E	E	E	E	E	C	E	F	X	X
ETHYLENE DIBROMIDE	X	X	X	C	F	F		X	X	X	X	G
ETHYLENE DICHLORIDE	X	X	X	X	F	F	E	X	X	X	X	G
ETHYLENE GLYCOL MONOETHYL ACETATE		E										
ETHYLENE GLYCOL MONOBUTYL ETHER				E	E	E		F	X			
ETHYLENE GLYCOL MONOETHYL ETHER				C	E	E		C	X			
ETHYLENE GLYCOL	E	E	E	E	E	E	E	E	E	E	E	E
ETHYLENE OXIDE	X	X	C	C	E	E	X	X	X	X	X	X
FATTY ACIDS	X	X	X	X	E	G	E	C	C	X		E
FERRIC BROMADE	E	E	E					E		E		E
FERRIC CHLORIDE	E	E	E	E		E	E	E	C	E	E	E
FERRIC NITRATE	E	E	E	E		E	E	E	E	E	E	E
FERRIC SULFATE	E	E	E	E		E	E	E	E	E		E
FERROUS ACETATE	X	X	G	G				X	X	X		X
FERROUS CHLORIDE	E	E	E	E		E	E	E	E	E	E	E
FERROUS SULFATE	E	E	E	E		E	E	E	E	E	E	E
FLUOBORIC ACID	E	G	E	E	E	E	E	E	E	E		C
FLUORINE	X	X	C	E	G	G	X	X	X		X	G
FLUOSILICIC ACID	E	C	E	E	E	E	E	E	E	E		C
FORMALDEHYDE	G	C	E	C	E	E	E	C	C	C	X	X
FORMALIN	G	G	E	E	E	E		G	G	E		E
FORMIC ACID	G	G	E	E	E	E	E	C	C	F	X	X
FREON SO2							E					
FREON 113	C	G		X			E	E	E	E		G
FREON 12	X	X	X	C	F	G	X	C	C	X	G	G
FREON 22	X	X	F	C	F	E	X	X	E	X	X	X
FUEL A (ASTM)	X	X	X	X				E	C	X		E
FUEL B (ASTM)	X	X	X	X				C	X	X		E
FUEL OIL	X	X	X	X	E	E	E	E	C	C	X	E
FURAN	X	X	X	X	E	E		X	X	X		
FURFURAL	X	X	E	C	E	E	E	X	X	X		X

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
FURFURAN	X	X		X	E	E	E	X	X	X		
FURFURYL ALCOHOL	X	X	F	C	E	E	G	X	X	X	X	G
GALLIC ACID	E	C	G	C	E	E	E	C	C	C	X	C
GALLOTANNIC ACID				E					E			
GAS, COAL				E				X	E			
GAS, HIGH OCTANE				X			E	C	G		C	
GASOLINE	X	X	X	X	E	E	E	E	X	X	G	E
GLACIAL ACRYLIC ACID				X				C	X			
GLUCONIC ACID	X	X	F	E				C	E	G		
GLUCOSE	E	E	E	E	E	E	G	E	C	E	X	E
GLYCERINE	E	E	E	E	E	E	E	E	E	E	X	E
GLYCEROL	E	E	E	E	E	E	E	E	E	E	X	E
GLYCOGENIC ACID				E				F	E			
GLYCOLS	E	E	E	E	E	E	E	E	E	E	X	E
GLYCONIC ACID				E				F	E			
GREASE	X	X	X	X			E	E	F	X	E	E
GREEN SULPHATE LIQUOR	E	E	E	E			E	C	C	E		E
HELIUM	E	E	E	E			G	E	E	E	G	E
HEPTALDEHYDE				C				E	C			
HEPTANAL	X	X	E	C				E	C	X		
HEPTANE	X	X	X	X		E	E	E	C	X	G	E
HEPTANOIC ACID				X				E	C			
HEXADECANOIC ACID				G	E	E		E	X			
HEXALDEHYDE	X	X	G	C	E	E	E	X	C	C	G	X
HEXANE	X	X	X	X	E	E	E	E	C	X	G	E
HEXANOL	E	E	E	C	E	E		C	C	E		G
HEXENE	X	X	X	X			E	C	C	G		E
HEXYL ALCOHOL	E	E	C	C	E	E	E	C	C	C	X	G
HEXYL METHYL KETONE	X	X	G	G				X	C	X		X
HEXYLAMINE	G	G	E	G				F	G	F		
HEXYLENE GLYCOL	E	E	E	F				C	E	E		E
HYDRAULIC & MOTOR OIL	X	X	X	C	E	E	E	C	C	G	E	E
HYDRAZINE	X		E	E			X	C	C	E	X	
HYDROBROMIC ACID	E	X	E	E	E	E	E	X	C	E	X	C
HYDROCHLORIC ACID	E	X	F	C	C	C	E	C	C	X	C	E
HYDROCIANIC ACID	X		E	E			E	C	C	C		
HYDROFLUORIC ACID	X	X	E	C	E	E	E	C	C	E	X	G
HYDROFLUOSILICIC ACID	X		E	E	E	E	C	X	C	E		C
HYDROGEN CHLORIDE ANHYDROUS				E				X	C			
HYDROGEN DIOXIDE (10%)	X	X	F	G				F	F			E
HYDROGEN GAS	G	G	E	E	E	E	E	E	E	G	E	C
HYDROGEN PEROXIDE OVER 10%	X	X	X	C	C	F	E	X	X	X		E
HYDROGEN PEROXIDE 10%	X	X	F	G	E	E	E	F	F			E
HYDROGEN SULFIDE (WET)	X	X	E	E	E	E	E	X	E	X	X	X
HYDROXY BENZENE				C				X	X			
HYDROXYTOLUENE				C				X	C			
IMINODIETHANOL				G				C	G			
IODINE	C	C	C	C	E	E		C	C	E		C
IODINE PENTAFLUORIDE	X	X	X	X				X	X	X	X	X
IODOFORM	X	X		E				E	X			
ISO-BUTANAL				G	E	E		X	F			
ISO-BUTYLAMINE				G				X	X			
ISO-BUTYLBROMIDE				X				X	X			
ISO-BUTYLCARBINOL				E				E	E			
ISOCYANATES				G	E	E		C	X			
ISOCTANE	X	X	X	X	E	E	E	E	C	X	E	E
ISOPROPYL ACETATE	X	X	G	C	E	E	E	X	X	X	X	X
ISOPROPYL ALCOHOL	E	E	E	E	E	E	E	C	C	E	X	E
ISOPROPYL ETHER	X	X	X	X	E	E	E	G	X	C	E	X
JET FUELS	X	X	X	X	E	E		C	C	X		E
JP-4 OIL	X	X	X	X			E	E	X	X	C	E
KEROSENE	X	X	X	X	E	E	E	E	C	X	E	E
KETONES	X	X	E	E	E	E	E	C	C	X	X	X
LACQUER SOLVENTS	X	X	X	X	E	E	E	X	X	X	X	X
LACTIC ACID - COLD	G	G	E	C	G	G	E	C	C	G	E	C
LACTIC ACID - HOT	X	X		C	G	G	E	C	C	C		E
LARD	X	X	X	C	E	E	E	E	C	X		C
LAVENDER OIL	X	X	X	X			E	C	X	X	X	E
LEAD ACETATE	E	X	G	E	E	E	E	C	C	X	X	X
LEAD NITRATE	E	E	E	E				E	E	X		
LEAD SULFATE				E	E	E		E	E	E		E
LIME				E	E	E	G	G	G			

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
LIME BLEACH	E	G	E									E
LIME SULFUR	X	X	E	E	E	E	E	E	E	E		E
LIMONENE				X				C	X			
LINOLEIC ACID	X	X	X	X			E	C	C	X		G
LINSEED OIL	X	X	C	C	E	E	E	E	C	C	G	E
LIQUID PETROLEUM GAS (LPG)	X	X	X	X	E	E	E	E	G	X	E	E
LUBRICATING OIL	X	X	X	X	E	E	E	C	C	F	E	E
LYE SOLUTIONS	G	G	E	G				C	G		X	G
MEK	X	X	G	E	E	E	E	X	X	X	X	X
MAGNESIUM ACETATE			G	G				X	X			
MAGNESIUM CHLORIDE	E	E	E	E	E	E		E	E	E	E	E
MAGNESIUM HYDRATE	E	G	E	E	E	E		C	C	G		G
MAGNESIUM HYDROXYDE	E	G	E	E	E	E	E	C	C	G	G	G
MAGNESIUM SULFATE	E	E	E	E	E	E	E	E	E	E		E
MALEIC ACID	X	X	X	C	E	E		X	X	X		E
MALEIC ANHYDRIDE	X	X	X	C				X	X	X		X
MALIC ACID	C	C	X	C	C	C	E	E	C	G		C
MANGANOUS SULFATE				E				E	E			
MAPP		G										
MERCURY	E	E	E	E	E	E	E	E	E	E	G	E
MERCURY VAPORS	E	E	E	E				E	G	E		E
MESITYL OXIDE	X	X	G	C			E	X	X	X	X	
METHALLYL ALCOHOL	E	E	E	E				E	E	E		X
METHALLYL CHLORIDE									X			
METHANE CARBOXYLIC ACID				X	E	E	E		G			
METHANOIC ACID				E	E	E		G	E			
METHANOL	E	E	E	E	E	E	E	C	E	E	X	E
METHANOL	E	E	E	E	E	E	E	C	E	E	E	X
METHOXY ETHANOL				E	E	E		C	E			
METHYL ACETATE	X	X	G	C			E	X	C	X	X	X
METHYL ACETOACETATE	X	X	G	C				X	X	X	X	X
METHYL ACETONE	F	X	G	E	E	E		X	X	X		X
METHYL ALLYL CHLORIDE	X	X	F						X	X		F
METHYL AMYL CARBINOL	E	E	E	E				E	G	E		X
METHYL BENZENE	X	X	X	X	F	F		X	X	X		E
METHYL BROMIDE	X	X	X	X	F	F	E	C	X	X		E
METHYL BUTANE				X				E	X			
METHYL BUTYL KETONE	X	X	G	E	E	E		X	X	X	X	X
METHYL CARBITOL	X	X	F	G				F	F	X		
METHYL CELLOSOLVE	X	X	E	C	E	E	E	C	C	X	X	X
METHYL CHLORIDE	X	X	C	C	F	F	E	X	X	X	X	E
METHYL CYANIDE				E				C	E			
METHYL ETHYL KETONE	X	X	G	E	E	E	E	X	X	X	X	X
METHYL HEXANOL	E	E	E	E				E	E	E		F
METHYL METHACRYLATE	X	X	X	X	E	E	E	X	X	X		X
METHYL NORMAL AMYL KETONE	X	X	G	E				C	E	X		X
METHYL PROPYL ETHER	X	X	G	X				X	X	X		
METHYL SALICYLATE	C	C	G	C	E	E	E	X	X	X		C
METHYL SULFIDE				X				X	X			
METHYL TERTIARY METYL ETHER		X	G				G					X
METHYL-2-BUTANOL	E	E	E							E		F
METHYL-2-BUTANONE	X	X	G	C				X	X	X		X
METHYL-2-HEXANONE	X	X	G							X		X
METHYL-2-PENTANOL				E				G	G			
METHYL-4-ISOPROPYL BENZENE				X				X	X			
METHYLALLYL ACETATE	X	X	G							X		X
METHYL AMYL ALCOHOL	E	E	E	E				G	G	E		X
METHYLCYCLOEXANE	X	X	X	X				X	X	X		G
METHYLENE BROMIDE				X	E	E		C	X			
METHYLENE CHLORIDE	X	X	X	C	F	F	E	X	X	X	X	G
METHYLETHYL KETONE				E				X	X			
METHYL HEXYL KETONE	X	X	G	G	E			X	C	X		X
METHYL ISOBUTYL CARBINOL	G	G	E	C				X	X	C		C
METHYLISOBUTYL KETONE	X	X	C	C	E	E	E	X	X	X	X	X
METHYLISOPROPYL KETONE	X	X	G	C			E	X	X	X	X	X
METHYLPROPYL CARBINOL	G	G	E					E		G		F
METHYLPROPYL KETONE	X	X	G	G	E	E		X	X	X		X
MIL-A-6091	E	E	E	E				C	E	E	X	E
MIL-C-4339	X	X	X	X				E	X	X	X	E
MIL-C-7024	X	X	X	X				E	C	X	G	E
MIL-E-9500	E	E	E	E				E	E	E	X	E
MIL-F-16884	X	X	X	X				E	C	C	C	E

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
MIL-F-17111	X	X	X	X				E	C	X	C	E
MIL-F-25558 (RJ-1)				X				E	C			E
MIL-G-10924	X	X	X	X				E	C	G	G	E
MIL-G-25013	X	X	X	E				E	C	G	C	E
MIL-G-25537				X				E	C			E
MIL-G-3545	X	X	X	X				E	C	C	C	E
MIL-G-5572	X	X	X	X				E	X	X	G	E
MIL-G-7711	X	X	X	X				E	X	X	E	E
MIL-H-05606 (HFA)				C				E	C			E
MIL-H-13910	G	E	G	E				E	E	G	X	E
MIL-H-19457	X	X	E	C				X	X	X	X	X
MIL-H-22251		G	E	E				C	C	G		C
MIL-H-27601				X				G	C			E
MIL-H-5606 (J43)				C			E	E	C			E
MIL-H-6083	X	X	X	X			E	E	E	G	G	E
MIL-H-8446 (MLO-8515)	X	X	X	X				G	E		X	E
MIL-J-5161	X	X	X	X				C	X	X	C	E
MIL-J-5624 (JP-3,JP-4,JP-5)	X	X	X	X				E	X	X	C	E
MIL-L-15016	X	X	X								E	E
MIL-L-17331	X	X	X								E	E
MIL-L-2104	X	X	X	X			E	E	C	C	E	E
MIL-L-21260	X	X	X	X				E	C	G	E	E
MIL-L-23699	X	X	X	X				C	C	C	C	E
MIL-L-25681				E				C	C			E
MIL-L-3150	X	X	X	X				E	C	G	G	E
MIL-L-4343	X	X	C							G	E	E
MIL-L-6082	X	X	X							G	E	E
MIL-L-6085	X	X	X	X				C	X	X	C	E
MIL-L-7808	X	X	X	X			E	G	X	X	X	E
MIL-L-7870	X	X	X	X				E	C	X	X	E
MIL-L-9000	X	X	X	X				E	C	C	C	E
MIL-L-9236	X	X	X	X				C	X	X	X	E
MIL-P-27402				E				C	C			C
MIL-R-25567 (RP-1)							E					
MIL-S-3136 TYPE 1 FUEL	X	X	X	X				E	C	C	G	E
MIL-S-3136 TYPE 2 FUEL	X	X	X	X				C	X	X	C	E
MIL-S-3136 TYPE 3 FUEL	X	X	X	X				G	X	X	C	E
MIL-S-3136 TYPE 4 OIL, LOWSWELL	X	X	X	X				E	X	E	E	E
MIL-S-3136 TYPE 5 OIL, MEDSWELL	X	X	X	X				E	G	G	G	E
MIL-S-3136 TYPE 6 OIL, HI SWELL	X	X	X	X				E	X	X	G	E
MIL-S-81087				E				E	E			E
MINERAL OIL	X	X	X	X	E	E	E	E	C	F	E	E
MINERAL SPIRITS	X	X	X	X				C	C	X		E
MOBILE HF A				X			E	E	C			
MOLTEN SULFUR	X	X	G							F		G
MONO-CHLOROACETIC ACID	G	X	F	G	E	E		X	C	X		C
MONOBUTYL ETHER	X	X	F	C				G	C	X		X
MONOCHLOROBENZENE	X	X	X	X	F	F	E	X	X	X	X	E
MONOCHLORODIFLUOROMETHANE (chlorodifluoromethane)	X	X	F	C	E	E		X	C	X		X
MONOETHANOL AMINE	E	X	E	C				G	G	X	X	X
MONOETHYL AMINE	F	F	G	E			E	C	C	F		C
MORPHOLINE				C			E	X	X			
MOTOR OIL, 40W				X				E	C			
MTBE		X	G				G	X	X			X
MURIATIC ACID	E	X	F	E				X	C	X		E
N-BUTANAL				C	E	E		X	X			
N-BUTYLAMINE	X	X	X	C				C	X	X	X	X
N-BUTYLBENZENE	X	X	X	X				X	X	X		E
N-BUTYLBROMIDE	X	X	X	X				X	X	X		G
N-BUTYLBUTYRATE	X	X	F	E				X	X	X		X
N-BUTYLCARBINOL				E	E	E		E	E			
N-NONYL ALCOHOL				E				E	E			
N-OCTANE	X	X	X	X	E	E		C	G	X	X	E
N-SERV (75% XYLENE)				X			E	X	X			E
NA-K							X					
NAPHTHA	X	X	X	X	E	E	E	C	X		E	E
NAPHTHALENE	X	X	F	X	E	E	E	X	X	X	C	C
NAPHTHENIC ACID	X	X		X			E	C	X	X		E
NATURAL GAS	X	X	X	X	E	E	E	E	E	F	C	C
NEOHXANE	X	X	X	X				E	G	X		E
NEON GAS	E	E	E	E			E	E	E	E	E	E
NEU-TRI	X	X	X							X		E

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
NICKEL ACETATE	E	X	E	E			E	C	G	X	X	X
NICKEL CHLORIDE	E	E	E	E	E	E	E	E	C	E	C	E
NICKEL NITRATE	E	E	E	E	E	E		E	E	E		E
NICKEL SULFATE	E	E	E	E	E	E	E	E	E	E		E
NIETYLENE	E											
NITRIC ACID, CONC (16N)	X	X	C	X			E	X	X	G	X	C
NITRIC ACID, RED FUMING	X	X	G	X	X	X	E	X	X	X	X	X
NITRIC ACID, 10%	X	X	G	E	E	E	E	X	G	X	X	X
NITRIC ACID, 13N							E	X	X			
NITRIC ACID, 13N +5%							E	X	X			
NITRIC ACID, 20%	X	X	G	E	E	E	E	X	X	X		C
NITRIC ACID, 30%	X	X	F	F	G	G	G	X	X	X	C	C
NITRIC ACID, 30% - 70%	X	X	F	X	F	F		X	X	F		C
NITRILOTRIETHANOL				E	E	E		F	C			
NITROBENZENE	X	X	F	C	E	E	E	X	X	X	X	G
NITROETHANE	G	G	G	C			E	X	C	G	X	X
NITROGEN	E	E	E	E	E	E	E	E	E	E	E	E
NITROMETHANE	G	C	G	C			E	X	C	C	X	X
NITROUS OXIDE GAS				E			E	E	G			
NONANOIC ACID					E	E						
NUTO H							E					
NYVAC LIGHT							E					
OCTANOL	G	G	E							G		G
OCTYL ACETATE	X	X	G	G	E	E		C	C	X		X
OCTYL ALCOHOL	E	E	E	C			E	C	C	E	X	E
OCTYL ALDEHYDE	X	X	E		E	E				X		X
OCTYL AMINE	G	G	E	G				F	G	F		C
OCTYL CARBINOL	E	E	E	E				E	E	E		G
OCTYLENE GLYCOL	E	E	E	E				E	E	E		E
OIL-PETROLEUM	X	X	X		G	G				F		E
OLEIC ACID	X	X	G	X	E	E	E	G	F	X	G	G
OLEUM (FUMING SULFURIC ACID)	X	X	X	X	X	X	E	X	X	X	C	X
OLIVE OIL	X	X	E	G			E	E	G	F	E	E
ORTHO-DICHLOROBENZENE	X	X	X	X			G	X	X	X	X	E
ORTHO-DICHLOROBENZOL	X	X	X	X				X	X	X		G
ORTHOXYLENE	X	X	X	X				X	X	X		E
OXALIC ACID	X	X	E	E	E	E	E	G	G	X	E	C
OZONE	X	X	G	E	E	E	E	X	F	G	G	C
P-CYME	X	X	X	X			E	X	X	X	X	E
PAINT THINNER	X	X	X	X			E	X	X	X	X	G
PALMITIC ACID	X	X	E	C	E	E	E	E	G	C	E	C
PAPERMAKERS ALUM	E	E	E									E
PARA-DICHLOROBENZENE	X	X	X	X				X	X	X	X	E
PARAFFIN WAX	X	X	X	X				E	G	X		E
PARALDEHYDE	F		E	E				C	G			X
PARAXYLENE	X	X	X	X				X	X	X		E
PCB							E					E
PELARGONIC ALCOHOL	X	X	E	E	E	E		E	E	X		
PENTACHLOROETHANE	X	X	X					X	X	X		E
PENTAMETHYLENE				X				G	C			
PENTANE	X	X	X	X	E	E		E	E	F	X	E
PENTANOL					E	E						
PENTANONE	X	X	G	G				X	X	X		X
PENTASOL	E	E	E	G	E	E		C	G	E		E
PENTYL ACETATE				C	E	E		X	X			
PENTYL ALCOHOL				E	E	E		C	C			
PENTYL BROMIDE				C				X	X			
PENTYL CHLORIDE				X	E	E		X	X			
PENTYL ETHER				X				C	X			
PENTYLAMINE				X				F	F			
PERCHLORIC ACID	X	X	G	G	E	E	E	X	E	G	X	E
PERCHLOROETHYLENE	X	X	X	X	E	E	E	F	X	X	X	E
PERCHLOROMETHANE				X				X	X			
PETROLEUM CRUDE	X	X	X	X	E	E		G	G	X	E	E
PETROLEUM ETHER	X	X	X	X			E	E	X	X		E
PETROLEUM OILS	X	X	X	X	E	E	E	X	G	X		E
PHENBO											X	
PHENOL	X	X	E	X	E	E	E	X	X	X	X	E
PHENOLSULFONIC ACID	X	X	F	E				C	C	X		X
PHENYLAMINE				C	E	E		X	X			
PHENYLCHLORIDE	X	X	X	X	E	E		X	X	X		E
PHENYLETHYLENE				X				X	X			

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
PHENYLMETHANE				X	E	E		X	X	X		
PHENYLMETHANOL				C				X	C			
PHENYLMETHYL ACETATE				E				C	E			
PHOSPHATE ESTERS				E			E	X	X		X	
PHOSPHORIC ACID 10%	E	E	E	E	E	E	E	E	E	E		E
PHOSFORIC ACID 10% - 85%	G	X	G	E	E	E	E	G	G	E	X	E
PHOSPHORUS TRICHLORIDE	X	X	E	E	E	E	E	X	X	X		E
PICRIC ACID, H2O SOLUTION	G	G		E			E	E	E	G	X	E
PINE OIL	X	X	X	X	E	E	E	E	X	X		E
PINENE	X	X	X	X			E	C	C	X	G	E
POLY CHLORINATED BIPHENOL							E					E
POLYETHYLENE GLYCOL E-400	E	E	E	E				C	G	E		E
POLYOL ESTER	X		X	X				G	X			G
POLYPROPYLENE GLYCOL	E	E	E		E	E		E	E	E		E
POTASSIUM ACETATE	X	X	G	E			E	C	E	X	X	X
POTASSIUM BISULFATE	E	E	E	E				E	E	E		E
POTASSIUM BISULFITE	E	E	E	E				E	E	E		E
POTASSIUM CARBONATE	E	E	E	E	E	E		E	E	E		E
POTASSIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E
POTASSIUM CHROMATE			E	E				G	E	F		
POTASSIUM CYANIDE	E	E	E	E	E	E	E	E	E	E	E	E
POTASSIUM DICHROMATE	G	G	E	E	E	E	E	E	E	F	G	E
POTASSIUM HYDRATE	E	G	E		E	E				G		F
POTASSIUM HYDROXYDE	E	G	E	E	E	E	E	G	G	G	C	X
POTASSIUM NITRATE	E	E	E	E	E	E	E	E	E	E	E	E
POTASSIUM PERMANGANATE, 5%				E	E	E		F	E			
POTASSIUM SILICATE	E	E	E	E				E	E	E		E
POTASSIUM SULFATE	E	E	E	E	E	E	E	E	E	E	G	E
POTASSIUM SULFIDE				E				C	E			
POTASSIUM SULFITE	E	E	E	E	E	E		E	E	E		E
PRESTONE ANTIFREEZE				E				E	E			E
PRODUCER GAS	X	E	X	X			E	E	G	G		E
PROPANE	X	X	X	X	E	E	E	E	E	G	E	E
PROPANEDIOL	E	E	E	E	E	E		E	G	E		E
PROPANETRIOL				E	E	E		E	E			
PROPANOL	E	E	E	E	E	E		E	E	E		F
PROPANONE				E	E	E		X	X			
PROPENENITRILE					E	E						
PROPENYL ALCOHOL				E	E	E		E	E			
PROPENYLANISOLE					E	E		X				
PROPIONIC ACID				E				C	C			
PRIOPIONITRILE				C				E	C			E
PROPYL ACETATE	X	X	G	C	E	E		X	X	X	X	X
PROPYL ALCOHOL	E	E	E	E	E	E		E	E	E	C	E
PROPYL ALDEHYDE	F		E	G				X	X			X
PROPYL BENZENE									X			
PROPYL CHLORIDE	X	X	F	F				X	F	X		G
PROPYL NITRATE	X	X	G	C				X	X	X		X
PROPYLENE	X	X	X	X				X	X	X	X	E
PROPYLENE DIAMINE	G	G	E							F		
PROPYLENE GLYCOL	E	E	E	E	E	E	E	E	E	E	E	E
PYDRAUL, 'E' SERIES	X	X		C			E	X	X	X		X
PYDRAULIC 'C'				X			E	X	X			E
QUINTOLUBRIC 822 SERIES	X		X									G
RED OIL	X	X	X	F	E	E	E	E	F	G	G	E
REFRIGERANT 11					E	E						G
REFRIGERANT 12					E	E						G
REFRIGERANT 22					E	E						G
RESORCINOL				G			E	C	A		X	
SAE NO. 10 OIL				X			E	E	C	X	E	X
SAL AMMONIAC	E	E	E	E	E	E		G	E	E	E	E
SEA WATER	E	E	E	E	E	E	E	E	E	E	E	E
SEWAGE	F	F	F	G	E	E	E	E	C	E	X	C
SILICATE ESTERS	X	X	X	X			E	G	E	E		E
SILICATE OF SODA	E	E	E	E				E	E	E		E
SILICONE GREASE	E	E	E	E	E	E	E	E	E	E		E
SILICONE OIL	E	E	E	E	E	E		E	E	E		E
SILVER NITRATE	E	E	E	E	E	E	E	C	E	E	E	E
SKYDROL 500 TYPE 2				E			E	X	X	X		X
SKYDROL 500B			G	E			E	X	X	X	C	X
SKYDROL 500C			G				E		X	X		X
SKYDROL 7000 TYPE 2				E			E	X	X			G

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
SOAP SOLUTIONS	G	E	E	E	E	E	E	E	G	E	C	E
SODA ASH	E	E	E	E	E	E	E	E	E	E		E
SODA LIME	E	G	E	E				G	G	G		F
SODA NITER	E	E	E	E	E	E		E	G	E		E
SODIUM ACETATE	X	X	G	E	E	E	E	G	C	X	E	X
SODIUM ALUMINATE	E	E	E	E				E	E	E		E
SODIUM BICARBONATE	E	E	E	E	E	E	E	E	E	E		E
SODIUM BISULFATE	F	F	F	E	E	E	E	E	E	E		C
SODIUM BISULFITE	E	E	E	E	E	E	E	E	E	E		E
SODIUM BORATE	E	E	E	E	E	E	E	E	E	E		E
SODIUM CARBONATE	E	E	E	E	E	E		E	E	E		E
SODIUM CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E
SODIUM CYANIDE	E	E	E	E	E	E	E	E	E	E		C
SODIUM DICHROMATE	C	C	E	E				E	E			C
SODIUM HYDRATE	E	G	E	E	E	E		X	G	G		F
SODIUM HYDROCHLORITE	X	X	G									G
SODIUM HYDROXIDE (CAUSTIC SODA)	E	G	E	E	E	E	E	X	G	G	G	G
SODIUM HYPOCHLORITE	X	X	G	E	E	E	E	C	C	F	X	E
SODIUM METAPHOSPHATE	E	E	E	E	E	E	E	E	E	G		E
SODIUM NITRATE	E	E	E	E	E	E	E	C	G	E	X	C
SODIUM PERBORATE	G	G	E	E			E	C	G	G		E
SODIUM PEROXIDE	G	G	E	E	E	E	E	C	G	G	X	E
SODIUM PHOSPHATE	E	E	E	E	E	E	G	E	G	E	E	E
SODIUM SILICATE	E	E	E	E	E	E	E	E	E	E		E
SODIUM SULFATE	E	E	E	E	E	E	E	E	E	E		E
SODIUM SULFIDE	E	E	E	E	E	E		E	E	E	E	E
SODIUM SULFITE	E	E	E	E	E	E		E	E	E	E	E
SODIUM THIOSULFATE	E	E	E	E	E	E	E	C	E	E	E	E
SOYBEAN OIL	X	X	E	C			E	E	E	G	G	E
STANNIC CHLORIDE	E	E	E	E	E	E	E	E	G	E		
STANNIC SULFIDE	E	E	E	E				E	E	E		
STANNOUS CHLORIDE	E	E	E	G	E	E	E	E	E	E		C
STANNOUS SULFIDE	E	E	E	E				E	E	E		
STEAM, BELOW 350 DEG F	X	X	G	E	X	X	E	X	X	X	X	X
STEARIC ACID	X	X	G	G	E	E	E	G	G	X	E	C
STODDARD SOLVENT	X	X	X	X	E	E	E	E	G	X	E	E
STYRENE	X	X	X	X	F	F	E	X	X	X	E	G
SULFAMIC ACID	G	G	E	E				C	G	G		C
SULFUR	X	X	F	E	E	E	E	X	E	F		G
SULFUR CHLORIDE	X	X	X	E			E	C	E	G		E
SULFUR DIOXIDE	C	C	G	E		G	E	X	C	G		C
SULFUR TRIOXIDE, DRY	G	G	G	E	X	X	E	X	X	X		E
SULFURIC ACID 60% (200 °F)				E	X	X		G	X			
SULFURIC ACID, CONC.	X	X	X	X	F	F	C	X	X	E	X	E
SULFURIC ACID, FUMING	X	X	X	X	X	X	E	X	X	X		X
SULFURIC ACID, 25%	G	X	E	E	E	E	E	C	C	X	X	F
SULFURIC ACID, 25%-50%	G	X	E	E	E	E	E	C	X	X	X	G
SULFURIC ACID, 50%-96%	X	X	X	X	G	G	E	X	X	G	X	E
SULFUROUS ACID, 10%	E	G	E	E	E	E	E	E	C	E		C
SULFUROUS ACID, 10%-75%	E	X	E	E	E	E	E	F	C	E		C
SUTAN							E					F
T-BUTYL AMINE				C				C	X	X		
TALL OIL	X	X	X	X				E	C	X		E
TALLOW	X	X	X	E	E	E		E	G	X		C
TANNIC ACID	E	F	E	E	E	E	E	E	E	E	C	C
TAR	X	X	X	X	X	F	E	X	X	X		E
TAR BITUMINOUS	X	X	X	X			E	G	C	X		E
TARTARIC ACID	C	X	E	G	E	E	E	E	E	E	C	C
TERTIARY BUTYL ALCOHOL	E	E	E	C			E	C	C	E	X	E
TERPINOL	X	X	C				E				G	E
TERTIARY BUTYL AMINE										X		
TERTIARY BUTYL MERCAPTAN	X	X	X	X			E	X	X	X		E
TEST ENTRY		X	G								X	
TETRACHLOROBENZENE	X	X	X	X				X	X	X		G
TETRACHLOROETHANE	X	X	X	X	F	F		X	X	X		E
TETRACHLOROETHYLENE	X	X	X	X	F	F		C	X	X	X	E
TETRACHLOROMETHANE	X	X	X		E	E				X		E
TETRACHLORONAPHTHALENE	X	X	X	X	E	E		X	X	X		G
TETRAETHYLENE GLYCOL	E	E	E	E				E	E	E		E
TETRAETHYLORTHOSILICATE				E				E	E			
TETRAHYDROFURAN (THF)	X	X	X	X				X	X	X	X	X
TIN CHLORIDE	E	E	E	E	E	E		E	C	E		

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
TITANIUM TETRACHLORIDE	X	X	X	X				C	C	X	X	E
TOLUENE	X	X	E	X	E	E	E	X	X	X	X	E
TOLUIDINE				X	E	F		C	X			
TOLUOL				X	E	E		X	X	X		
TRANSFORMER OIL	X	X	X	X	E	E	E	C	C	C	E	E
TRANSMISSION 'A' OIL	X	X	X	X			E	E	C	X	E	E
TRI(2-HYDROXYETHYL) AMINE				E				G	C			
TRIBUTYL PHOSPHATE	X	X	E	G			E	F		X	X	X
TRIBUTYLAMINE	G	G	E					G		F		
TRICHLOROACETIC ACID	C	G	G	C			E	C	C	X	X	C
TRICHLOROBENZENE	X	X	X	X	F	F		C	X	X		G
TRICHLOROETHANE	X	X	X	X			E	X	X	X	X	E
TRICHLOROETHYLENE	X	X	X	X	F	F	X	X	X	X	X	E
TRICHLOROMETHANE				X	F	F		X	X			
TRICHLOROTOLUENE				E				X	X			
TRICRESYL PHOSPHATE	X	X	E	E			E	X	X	X	X	G
TRITHANOLAMINE	E	X	E	E	E	E	E	C	C	G	X	X
TRIETHYLAMINE	G	G	E	E				E	G	F		
TRIETHYLENE GLYCOL	E	E	E	E	E	E		C	E	E		E
TRIHYDROXYBENZOIC ACID				C				C	C			
TRIMETHYL PENTANE (MIXED)				X				E	G			
TRIMETHYLAMINE				C			E	C	E			
TRISODIUM PHOSPHATE	E	E	E	E	E	E	E	E	E	E	E	E
TRITOYL PHOSPHATE				E				X	C			
TUNG OIL				X	E	E		E	C			
TUNG OIL (CHINA OIL)	X	X	C	X	E	E	E	E	C	C	C	E
TURPENTINE	X	X	X	X	E	E	E	E	X	X	E	E
UNSYMETRICAL DIMETHYL HYDRAZINE (UDMH)	E	E		E				C	C	E		X
UNDECYL ALCOHOL				E				E	E			
UREA			E	E	E	E	E	G	G		E	
URETHANE FORMULATIONS							E					
URIC ACID				E				C	E			
VARNISH	X	X	X	X	E	E	E	G	X	X	C	E
VEGETABLE OILS	X	X	E	F	E	E	E	E	C	X		E
VERSILUBE F44				E			E	E	E			
VERSILUBE F55				X			E	E	E			
VINEGAR	E	F	E	E	E	E	E	G	G	F	X	C
VINYL ACETATE	X	X	G	G	E	E		C	C	X		X
VINYL BENZENE	X	X	X	X	F	F		C	X	X		G
VINYL CHLORIDE	X	X	X	C	E	E	E	X	X	X		E
VINYL CYANIDE				X	E	E		X	X			
VINYL ETHER	X	X	G					G		X		
VINYL TOLUENE	X	X	X	X				X	X	X		E
VINYL TRICHLORIDE	X	X	X	X				X	X	X		E
VITAL, 4300,5310							E					
VM & NAPHTHA	X	X	X	X				G	F	X		E
WATER	E	F	E	E	E	E	E	E	G	E	E	E
WATER, BOILING				E				G	G			
WATER, SODA				E	E	E	E	E	E			
WEMCO C	X	X	X	X				E	C	X	E	E
WHISKEY	E	E	E	E	E	E	E	E	E	E	X	X
WHITE OIL	X	X	X	X	E	E	E	E	G	X	E	X
WHITE PINE OIL	X	X	X	X				C	X	X		E
WINES	E	E	E	E	E	E	E	E	E	E	X	X
WOOD ALCOHOL	E	E	E	E	E	E		E	E	E	X	X
WOOD OIL	X	X	X	X	E	E	E	E	C	C	C	E
XENON	E	E	E	E				E	E	E	E	E
XYLENE, XYLON	X	X	X	X	F	F	E	X	X	X	C	E
XYLIDINE	C	C	X	G			E	C	X	X	X	X
ZEOLITES	E	E	E	E				E	E	E		E
ZINC ACETATE	E	X	E	E			E	G	C	E	X	X
ZINC CARBONATE	E	E	E	E				E	E	E		E
ZINC CHLORIDE	E	E	E	E	E	E	E	E	E	E	E	E
ZINC CHROMATE			E	E				C	E	F		
ZINC SULFATE	E	E	E	E	E	E	E	E	E	E		E
1 UNDECANOL	E	E	E	E	E	G		E	E	E		G
1-AMINO-2-PROPANOL								C				
1-AMINO BUTANE				C				C	X			
1-AMINOPENTANE				X				F	C			
1-BROMO-2-METHYL PROPANE				X				X	X			
1-BROMO-3-METHYL BUTANE				X				X	X			
1-BROMOBUTANE				X				X	X			

CHEMICAL OR MATERIAL CONVEYED	COMPOUND											
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	PTFE	NBR	CR	CSM	AU	FKM
1-CHLORO-2-METHYL PROPANE				X				X	X			
1-CHLORO-3-METHYL BUTANE				X				X	X			
1-DECANOL	E	E	E	X	E	E		E	X	E		G
1-HENDECANOL				E				E	E			
1,4-DIOXANE	X	X	G	C	E			X	X	X		X
2(2ETHOXYETHOXY) ETHANOL				C				C	C			
2(2ETHOXYETHOXY) ETHYL ACETATE				X				X	X			
2-AMINOETHANOL	G	G	E	E				C	C	G		
2-CHLOROPHENOL	X	X	X	E				B	E	X	X	E
2-CHLOROPROPANE	X	X		E				E	E	X		X
2-ETHOXYETHANOL				C	E	E		C	X			
2-ETHOXYETHYL ACETATE				B	E	E		X	X			
2-ETHYL(BUTYRALDEHYDE)	X	X	E					X		X		X
2-ETHYL-1-HEXANOL	E	E	E	C	E	E		C	C	E	X	G
2-ETHYLHEXANOIC ACID								F				
2-OCTANONE				E				E	E			
3-BROMOPROPENE				X				X	X			
3-CHLOROPROPENE				X	E	G		C	X			
3-COAL OIL				X				E	G			
4-HYDROXY-4-METHYL-2-PENTANONE				E	E	E		X	C			

A: Satisfactory
 C: Questionable - Suggest testing
 U: Unsatisfactory
 Blank: No data available

Chemical	Concentration	Temperature 20 °C 60 °C 68 °F 140 °F	
Acetate Solvents		U	U
Acetic Acid	10%	A	C
Acetic Acid	Glacial	C	U
Acetone		U	U
Acrylonitrile		A	C
Adipic Acid		A	C
Alcohol Butyl		A	C
Alcohol Ethyl		A	C
Alcohol Isopropyl		A	C
Alcohol Methyl		A	C
Aluminum Acetate		A	
Aluminum Chloride		A	A
Aluminum Hydroxide		A	
Aluminum Sulfate		A	A
Allyl Chloride			
Ammonia	0.88 S.G. (Aqueous)	A	A
Ammonia	Dry Gas	A	
Ammonia	Liquid	U	U
Ammonium Chloride		A	A
Ammonium Hydroxide		A	
Animal Oils			
Amyl Acetate		U	U
Aniline Oils			
Aromatic Hydrocarbons		U	U
Asphalt		U	U
ASTM Fuel A		A	A
ASTM Fuel B		U	U
ASTM 1 Oil			
ASTM 3 Oil			
Barium Chloride		A	A
Barium Hydroxide		A	A
Barium Sulfide		A	A
Benzene		U	U
Benzine		C	C
Bordeaux Mixture		A	A
Borax		A	A
Boric Acid		A	A
Brine		A	A
Bromine Traces		U	U
Butyl Acetate		U	U
Calcium Hydroxide		A	A
Calcium Hypochlorite		A	A
Carbonic Acid		C	U
Carbon Dioxide		A	A
Carbon Disulphite		U	U
Carbon Monoxide		A	A
Carbon Tetrachloride		U	U
Casein		A	C
Chlorine	Dry gas	A	A
Chlorine	Wet Gas	C	U
Chlorine	Water	U	U
Chlorobenzene		U	U
Chlorinated Hydrocarbons		U	U
Chloroform		U	U
Chromic Acid	10%	A	C
Citric Acid		A	A
Coal Tar		U	U
Copper Chloride		A	A
Copper Nitrate		A	A
Copper Sulphate		A	A
Cottonseed Oil			
Creosote		U	U
Cresol		A	C

Chemical	Concentration	Temperature 20 °C 60 °C 68 °F 140 °F	
Cresylic Acid		U	U
Cyclohexane		A	C
Cyclohexanone		U	U
DDT Weed Killer		A	C
Detergent Synthetic		A	A
Developers Photographic		A	A
Dextrin		A	A
Dextrose		A	A
Dibutyl Phthalate		U	U
Dichlorobenzene		U	U
Diesel Oil			
Diethylene Glycol		A	A
Diethyl Ether		U	U
Di-isodecyl Phthalate		U	U
Dicotyl Phthalate		U	U
Emulsifiers		A	A
Emulsions Photographic		A	A
Ethyl Acetate		U	U
Ethylene Dichloride		U	U
Ethylene Glycol		A	A
Fatty Acid		A	A
Ferric Chloride		A	A
Ferric Sulphate		A	A
Ferrous Chloride		A	A
Ferrous Sulphate		A	A
Fixing Solution Photographic	A	A	
Fluorine		U	U
Formaldehyde	40%	U	U
Formic Acid	40%	A	A
Formic Acid	50%	C	U
Formic Acid	100%	U	U
Fuel Oil			
Glacial Acetic Acid		C	U
Glucose		A	A
Glycerine		A	A
Grape Sugar		A	A
Grease			
Heptane		C	U
Hexane		C	U
Hydrobromic Acid		A	A
Hydrochloric Acid	10%	A	A
Hydrochloric Acid	40%	A	U
Hydrofluoric Acid	10%	A	C
Hydrofluoric Acid	40%	A	U
Hydrofluoboric Acid		A	A
Hydrofluosilicic Acid		A	A
Hydrogen Peroxide		A	
Hydrogen Sulphide		A	
Iso-octan		A	C
Isopropyl Acetate		U	U
Kerosene		C	C
Ketones		U	U
Lactic Acid	10%	A	
Lactic Acid	100%	U	U
Lacquer Solvents		C	U
Linseed Oil			
Lubricating Oils			
Magnesium Chloride		A	A
Magnesium Hydroxide		A	A
Magnesium Sulphate		A	A
Malic Acid		A	A
Methyl Acetate		U	U
Methyl Bromide		U	U

Chemical	Concentration	Temperature	
		20 °C 68 °F	60 °C 140 °F
Methyl Ethyl Ketone		U	U
Methylene Chloride		U	U
Mineral Oils			
Monochlorobenzene		U	U
Naphtha		C	U
Napthalene		C	U
Nitric Acid	10%	A	A
Nitric Acid	40%	A	C
Nitric Acid	70%	U	U
Nitrobenzene		U	U
Nitrogen Fertilizers		A	
Oleic Acid		A	C
Oxalic Acid		A	A
Palmitic Acid		A	A
Paraffin		A	A
Pentane		C	U
Perchloroethylene		U	U
Phenol		C	U
Phosphoric Acid		A	A
Pitch		A	C
Potassium Hydroxide		A	A
Propane		A	A
Sea Water		A	A
Sodium Hydroxide (caustic soda)	10%	A	A
Sodium Hydroxide (caustic soda)	50%	A	U
Sodium Cyanide		A	A

Chemical	Concentration	Temperature	
		20 °C 68 °F	60 °C 140 °F
Soybean Oil			
Stearic Acid		A	A
Styrene		U	U
Sulphur Dioxide	Dry	A	A
Sulphur Dioxide	Moist	C	U
Sulphur Dioxide	Liquid	U	U
Sulphuric Acid	45%	A	A
Sulphuric Acid	60%	C	C
Sulphuric Acid	98%	U	U
Sulphurous Acid	30%	A	
Tannic Acid		A	A
Tartaric Acid		A	A
Tetrahydrofuran		U	U
Toluene		U	U
Trichlorethylene		U	U
Triethanolamine		A	A
Tricresyl Phosphate		U	U
Turpentine		C	U
Urea		A	A
Vinegar		A	A
Vinyl Acetate		U	U
Vinyl Chloride		U	U
Water		A	A
Xylene		U	U
Zinc Chloride		A	A
Zinc Sulphate		A	A

FORMULAS AND CONVERSION FACTORS

LENGTH	mm	in	mm x 0,03937 = in
	in	mm	in x 25,4001 = mm
	m	ft	m x 3,2808 = ft
	ft	m	ft x 0,3048 = m
WEIGHT	kg	lb	kg x 2,20462 = lb
	lb	kg	lb x 0,45359 = kg
	kg/m	lb/ft	kg/m x 0,672 = lb/ft
	lb/ft	kg/m	lb/ft x 1,488 = kg/m
PRESSURE	bar	MPa	bar x 10 ⁻¹ = MPa
	MPa	bar	MPa x 10 = bar
	bar	psi	bar x 14,504 = psi
	psi	bar	psi x 0,068948 = bar
	mm Hg	bar	mm Hg x 1,33322 x 10 ⁻³ = bar
TEMPERATURE	°C	°F	9/5 °C + 32 = °F
	°F	°C	5/9 x (°F - 32) = °C

The Products sold or distributed by Seller are warranted to its customers to be free from defects in material and workmanship at the time of shipment by us, subject to the following provisions:

all warranty claims shall be made within six (6) months after seller shipped the products. seller's liability and customer's remedy hereunder, under any theory of law or equity, including without limitation, for breach of contract, negligence, or otherwise, is limited, at seller's exclusive discretion, solely to 1) the purchase price of any products proving defective; 2) repair of any defective product or part thereof; or 3) replacement of any defective product or part upon its authorized return to seller.

This warranty is in lieu of and excludes, without limitation and to the fullest extent allowable by law, all other warranties or conditions, expressed, implied, statutory, or otherwise created under applicable law including, but not limited to, the warranty of merchantability, the warranty of fitness for a particular purpose, conditions of satisfactory quality, any obligation or warranty to remote purchasers, and those from a course of dealing or usage of trade.

In addition, this warranty shall not apply to any products or portions thereof that have been subjected to abuse, misuse, improper installation, maintenance, or operation, electrical failure or abnormal conditions, and to products that have been tampered with, altered, modified, repaired, reworked by anyone not approved by seller, or used in any manner inconsistent with any instructions or specifications provided with or for the product.

In no event shall seller or the manufacturer of the product have any liability whatsoever to any person, including without limitation, any immediate buyer, remote purchaser, or other third party, for any special, punitive, incidental, or consequential damages, including without limitation, loss of profits of customer or any other person, loss or damage to physical property of customer or any other person, and loss of anticipated revenue, profits, goodwill, savings, or other economic loss of customer or any other person, even if advised of the possibility thereof in advance, whether or not arising in, caused by, or resulting from, breach of contract, the negligence of seller and/or the manufacturer of the product, or otherwise, unless specifically provided herein and except any liability that cannot be excluded or limited by applicable law.

There are no warranties that extend beyond the description on the face hereof.