

# Flange insulation kits

For insulation of flanges in pipe systems



**APPLICATIONS:**

Standard pipe flanges in EN and ASME standard. Insulation of flanges in connection with cathodic corrosion protection is a common application.

**MATERIAL DESCRIPTION:**

Flange insulation kits are used to insulate sections of pipe systems from creeping currents and static electricity. Their job is to prevent metallic contact between flanges. To achieve the greatest possible insulation properties, a Gylon® Style 3510 restructured PTFE gasket in full flange version (type FF) is used in combination with insulating sleeves of Mylar around bolts together with insulator washers of fabric-reinforced phenol resin under nuts and bolt heads.

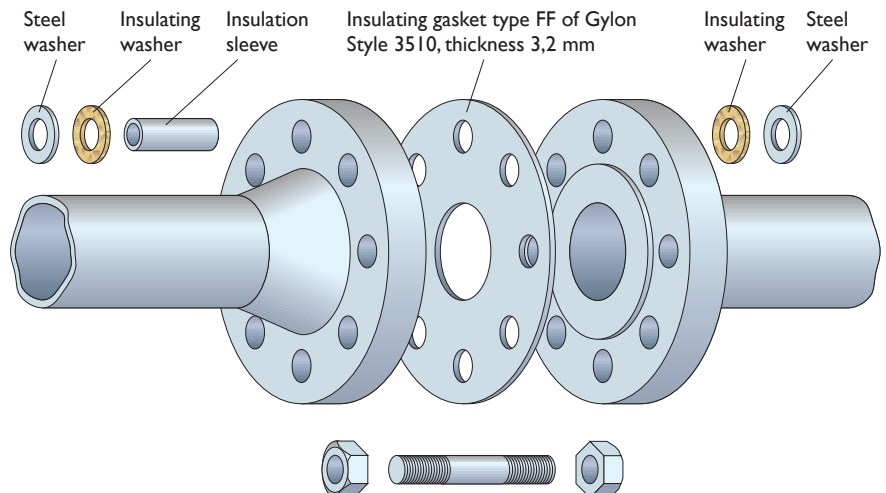
**PROPERTIES:**

Gylon® Style 3510 has excellent chemical resistance and withstands nearly all substances, with the exception of molten alkali metals and certain fluorine compounds. This material is characterised by very good electrical insulating properties, which makes it particularly suitable for isolating sections in pipe systems. Gylon® Style 3510 also has considerably less hot- and cold-flow than conventional PTFE material, is anti-static and does not age.

**TECHNICAL DATA FOR GYLON® STYLE 3510:**

Temperature range:	-210°C to +260°C
Max. internal pressure:	40 bar
Recommended seating stress:	min. 19 N/mm2, max. 70 N/mm2
pH range:	0-14
Gasket group, as per TKN 87:	2
m-factor (T=3.2 mm):	2
y-factor (T=3.2 mm):	17 N/mm2
Gas leakage (DIN 3535-6):	<0.1 ml/min
Compressibility (ASTM F36):	4-10%
Recovery (ASTM F36):	40%
Compression set (ASTM F38):	11%
Density:	2.8 g/cm3

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**DIMENSION LIST FOR GYLON® STYLE 3510 FLANGE INSULATION KITS:**

DN/PN	Gasket dim. mm	No. of holes	Hole diam. mm	P.C.D. mm	Insul. sleeves mm	No. of sleeves	Insul. washers mm	No. of washers	Part number
DN 15 PN 10-40	22 x 95	4	14	65	13.2 x 14.2 x 40	4	15.7 x 28.6 x 3	8	3020057
DN 20 PN 10-40	28 x 105	4	14	75	13.2 x 14.2 x 40	4	15.7 x 28.6 x 3	8	3020058
DN 25 PN 10-40	35 x 115	4	14	85	13.2 x 14.2 x 40	4	15.7 x 28.6 x 3	8	3020059
DN 32 PN 10-40	43 x 140	4	18	100	17.2 x 18.2 x 40	4	18.7 x 33.3 x 3	8	3020060
DN 40 PN 10-40	49 x 150	4	18	110	17.2 x 18.2 x 40	4	18.7 x 33.3 x 3	8	3020061
DN 50 PN 10-40	61 x 165	4	18	125	17.2 x 18.2 x 45	4	18.7 x 33.3 x 3	8	3020062
DN 65 PN 10-40	77 x 185	8	18	145	17.2 x 18.2 x 45	8	18.7 x 33.3 x 3	16	3020064
DN 80 PN 10-40	90 x 200	8	18	160	17.2 x 18.2 x 50	8	18.7 x 33.3 x 3	16	3020065
DN 100 PN 10-16	115 x 220	8	18	180	17.2 x 18.2 x 50	8	18.7 x 33.3 x 3	16	3020066
DN 100 PN 25-40	115 x 235	8	22	190	21.2 x 22.2 x 55	8	22.5 x 38.0 x 3	16	3020067
DN 125 PN 10-16	141 x 250	8	18	210	17.2 x 18.2 x 55	8	18.7 x 33.3 x 3	16	3020068
DN 150 PN 10-16	169 x 285	8	22	240	21.2 x 22.2 x 55	8	22.5 x 38.0 x 3	16	3020069
DN 200 PN 10	220 x 340	8	22	295	21.2 x 22.2 x 55	8	22.5 x 38.0 x 3	16	3020070
DN 200 PN 16	220 x 340	12	22	295	21.2 x 22.2 x 60	12	22.5 x 38.0 x 3	24	3020071
DN 250 PN 10	274 x 395	12	22	350	21.2 x 22.2 x 60	12	22.5 x 38.0 x 3	24	3020072
DN 250 PN 16	274 x 405	12	26	355	25.2 x 26.2 x 60	12	26.0 x 42.0 x 3	24	3020073
DN 300 PN 10	325 x 445	12	22	400	21.2 x 22.2 x 60	12	22.5 x 38.0 x 3	24	3020074
DN 300 PN 16	325 x 460	12	26	410	25.2 x 26.2 x 60	12	26.0 x 42.0 x 3	24	3020075
DN 400 PN 10	420 x 565	16	26	515	25.2 x 26.2 x 60	16	26.0 x 42.0 x 3	32	3020076

Note: The flat steel washers are not included in the kits.

**RESISTANCE TABLE FOR MYLAR SLEEVES:**

Medium	Code	
Ammonium hydroxide 2%	x	
Ammonium hydroxide 10%	xxx	
Benzyl alcohol	x	
Cyclohexanone	x	
Dimethyl formamide	x	
Dioxane (1.4)	x	
Ethyl acetate	x	
Ethyl alcohol, ethanol	x	
Phenol 5%	x	
Hydrofluoric acid 48%	xx	
Methyl ethyl ketone	x	
Sodium hydroxide 2%	x	
Sodium hydroxide 10%	xx	
Sodium hydroxide 54%	xxx	
Nitric acid 10%	x	
Nitric acid 40%	xx	
Nitric acid, fuming	xxx	
Hydrochloric acid 10%	x	
Hydrochloric acid, conc.	xx	
Sulphur hexafluoride	x	
Sulphuric acid 3%	x	
Sulphuric acid 30%	x	
Tetrahydrofuran	x	
Toluene	x	
Trichloroethylene	x	
Detergent, 0.25%	x	
Water	x	
Hydrogen peroxide 48%	x	
Acetic acid, water-free	x	
Sodium hydroxide 54%	xxx	

**Key:**  
x Suitable  
xx Limited media resistance, depending on operating conditions  
xxx Unsuitable

For further information on Gylon® Style 3510, people see separate information.

**TECHNICAL DATA FOR MYLAR SLEEVES:**

Temperature range:	-70°C - +150°C
Tensile strength:	200 MPa
Density:	1.4 g/cm <sup>3</sup>
Dielectric strength (ASTM D149-64):	6400V/mm
Dielectric constant (+25°C, 1 KHz):	3.2
Volume resistivity (+25°C):	1018 Ω cm
Surface resistivity (+25°C and 30% rel. humidity):	1016 Ω cm
Moisture absorption (24 h +23°C, ASTM D570-63):	< 0.8%
Melting point:	+250°C
Thermal conductivity:	0.15 W/m <sup>2</sup> K