

Product Specification

SealEco EPDM Geomembrane Products

Elastoseal T EPDM

EPDM membrane rolls for prefabrication to panels using a hot wedge.

Thickness, mm	Rollsize, width x length, m	Package	Weight, kg/m ²
0,80	1,70 x 25 or 125	20 alt. 6 rolls on pallet	0,9
1,00	1,70 x 25 or 125	20 alt. 6 rolls on pallet	1,2
1,20	1,70 x 25 or 100	15 alt. 6 rolls on pallet	1,4
1,50	1,70 x 25 or 75	15 alt. 6 rolls on pallet	1,8

Elastoseal EPDM Geomembrane panels

EPDM membrane prefabricated to panels, with Thermobond splice edge for site seaming with dual track hot wedge.

Thickness, mm	Size, m ²	Package	Weight, kg/m ²
0,80	Specified, max 300 m ²	Rolled on paper core	0,9
	Specified, max 1000 m ²	Rolled on paper core	0,9
1,00	Specified, max 300 m ²	Rolled on paper core	1,2
	Specified, max 1000 m ²	Rolled on paper core	1,2
1,20	Specified, max 1000 m ²	Rolled on paper core	1,4
1,50	Specified, max 1000 m ²	Rolled on paper core	1,8

The following panels sizes are preferred on Elastoseal EPDM, irrespective of thickness. The overlap between two panels can be calculated to 200 mm.

Panel without splice edge	Panel with one splice edge 300 mm	Panel with two splice edges 300 mm	Length
1,70 m	1,95 m	2,20 m	max 125 m
3,35 m	3,60 m	3,85 m	max 70 m
5,05 m	5,30 m	5,55 m	max 70 m
6,70 m	6,95 m	7,20 m	max 70 m
8,40 m	8,55 m	8,90 m	max 70 m
10,10 m	10,35 m	10,60 m	max 70 m
11,75 m	12,00 m	12,25 m	max 70 m
13,40 m	13,65 m	13,90 m	max 70 m
15,10 m	15,35 m	15,60 m	max 70 m

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Accessories and Components

Thermobond Splice Strip

Laminate EPDM/TPE, for hot wedge seaming. Thickness 1,50 mm.

Width, mm	Length, m	Weight kg/lin.m
150	20	0,2
300	20	0,5
450	20	0,7
600	20	0,9
900	20	1,4



Thermobond TPE 100 strip

Homogenous TPE sheet, thermoplastic, for details and connections. Thickness 2,00 mm.

Width, mm	Length, m	Weight kg/lin.m
300	10	0,7
450	10	1,1
600	10	1,4
1700	10	4,1



Thermobond Hot Melt Sealant

Homogenous TPE rod for sealing of T-splices. Diameter 4 mm. Delivered in 30 meter rolls.

Thermobond Hot Melt Strip

Homogenous TPE strip for heat seaming applications. Width 40 mm, thickness 0,7 mm. Delivered in 20 meter rolls.

Thermobond Pipe Boots

EPDM Pipe Boots with EPDM/TPE laminate flange for heat splicing to membrane. Available in 90° and 45° angel and in closed or open design. Stock sizes are Ø 50, 70, 100, 125, 150 mm.



Thermobond PE drain/overflow

Black polyethylene pipe with flange of EPDM/TPE laminate, for heat splicing to membrane. Stock sizes inner Ø 63, 75, 90, 110, 125 mm.

Cleaning Wash 9700

For cleaning of EPDM membrane. Delivered in 5 l tin.

Contact Adhesive 5000

For adhering EPDM membrane to substrates like concrete, wood etc. Delivered in 5 l bucket.



Sealant 5590

Silicone sealant for EPDM membrane. Delivered in 310 ml cartridge, 15 pcs. per box.

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Elastoseal EPDM Geomembrane

Dok: 2010,04

Physical Properties	Unit	0,80 ± 0.1 mm	1,00 ± 0.1 mm	1,20 ± 0.1 mm	1,50 ± 0.1 mm	Test methods
Rolls are prefabricated into customer adapted panels.						
Thickness (nominal)	%	±10	±10	±10	±10	ASTM D5199
Hardness	°IRH	65 ± 5	65 ± 5	65 ± 5	65 ± 5	S-ISO 48
Density (Elastoseal/EPDM)	g/cm ³	1.2±0.05	1.2±0.05	1.2±0.05	1.2±0.05	ASTM D792
Modulus at 100% Elongation	N/mm		> 2.8	> 3.4	> 4.2	SS-ISO 37
Mechanical Properties						
Tensile Strength	N/mm		7.5	9	11	ASTM D412/D882/SS-ISO 37
Wide Width Tensile Strength	N/mm	6.2	6,4	7,0		ASTM D4885/EN ISO 10319
Wide Width Tensile Strain	%	160	180	250		ASTM D4885/EN ISO 10319
Elongation at Break	%	320	320	320	320	ASTM D882/SS-ISO 37
Tear Resistance	N		30	40	50	ASTM D1004
Tear Resistance	N		40	50	60	SS-ISO 34
Multiaxial Stress	kPa	1100	1350	1600		ASTM D5617
Multiaxial Strain	%	130	130	130		ASTM D5617
Hydrostatic Burst	kPa	350	450	480		ASTM D751 A
Puncture Resistance						
Flat Tip Rod	N	100	140	165		ASTM D4833
Radius Rod	N	95	135	140		FTMS 101C/2065
Sharp Point	N	340	470	560		FTMS 101C/2031
Pyramid	N			111		ASTM D5494
CBR Piston	N	600	750	850		ASTM D6241/EN ISO 12236
CBR Piston Strain at Yield	%	250	250	250		ASTM D6241/EN ISO 12236
Hydrostatic Puncture Resistance	kPa	600	600	600		ASTM D5514, method B
Critical Cone Height	mm	90	90	90		ASTM D5514, method A
Low Temp Impact (-40°C)						
Impact Energy	Joule				>159	CGSB 148.1-113
Dimensional Stability	%	±1	±1	±1	±1	ASTM D1204
Brittle Point	°C	-63	-63	-63	-63	ISO 812
Hydraulic Burst	kPa			600		ASTM D3786

Product Specification

Elastoseal EPDM Geomembrane

Physical Properties	Unit	0,75 ± 0,1 mm	1,00 ± 0,1 mm	1,20 ± 0,1 mm	1,50 ± 0,1 mm	Test methods
Properties after Ageing 4 weeks 80°C						SS-ISO 188
Tensile Strength	%	<25	<25	<25	<25	SS-ISO 37
Tensile Strain	%	<40	<40	<40	<40	SS-ISO 37
Seam Strength						
Shear Strength	kN/m			9	10	ASTM D6392
Shear Strain	%			490	571	ASTM D6392
Peel Strength	kN/m			6	6	ASTM D6392
Peel Incursion	%			<10	<10	ASTM D6392
Multiaxial Stress	kPa				2133	ASTM D5617
Multiaxial Strain	%				102	ASTM D5617
Low Temp(-40°C) Impact Resistance	Joule				>159	CGSB 148.1-113
Interface Direct Shear (Max Friction Angle)						
Sand (SW)	°			23		ASTM D5321
Lean Clay (CL)	°			14		ASTM D5321
Glacial Till (GM)	°			26		ASTM D5321
Non Woven Geotextile	°			23		ASTM D5321
Interface Direct Shear (Large Displacement)						
Ottawa Sand	°			22.7		ASTM D5321
Sandy Clay	°			17.3		ASTM D5321
Non Woven Geotextile	°			10.7		ASTM D5321
Water Vapour Permeability			98000			pr EN 1931
UV-resistance at 4500 MWs/m2						
Change in mechanical strength	%		-12			DIN 53387
Change In Elongation	%		-3			DIN 53387

Product Specification

Elastoseal EPDM Geomembrane

Chemical properties	Excellent	Moderately Resistant	Non resistant
Inorganic Salts	x		
Animal Oils	x		
Bases	x		
Organic Salts	x		
Vegetable Oils	x		
Weak Inorganic Acids	x		
Alcohols	x		
Aldehydes	x		
Amines	x		
Esters	x		
Ketones	x		
Organic Acids	x		
Ethers		x	
Phenols		x	
Mineral Oils			x
Hydrocarbons			x
Chlor (highly chlorinated water)			x

Additional requirements

Approvals

Identification

Each roll marked with product name, article- and roll number, dimensions, date of manufacture and signature.

Packing

Polyethylene-film wrapping.

Product Specification

Elastoseal T EPDM

Physical properties	Unit	Requirement	Typical value	Test methods
Hardness	°IRH	65 ± 5	65	BS 903 A26
Modulus at 300% elongation	Mpa	5,0	6,9	BS 903 A2
Tensile Strength	Mpa	min 9,0	10,1	BS 903 A2
Elongation at break	%	min 300	405	BS 903 A2
Tear Strength	kN/m	min 30	37	BS 903 A3 C
Properties after ageing 168h/121	°C			BS 903 A19
Tensile Strength	Mpa	min 7,5	9,7	BS 903 A2
Elongation at break	%	min 300	345	BS 903 A2
Brittle point	°C	max.-40	-53	BS 903 A25
Factory seam strength				
Peel strength	N/mm	min. 2,5	3	

Physical properties	Unit	Requirement	Test methods
Thickness	mm	Nom. +15/-10 %	ASTM D 412
Tensile Strength	Mpa	min 9,0	ASTM D 412
Elongation at break	%	min 300	ASTM D 412
Tear Strength	kN/m	min 26	
Ozone Resistance 168h/40	°C	-	
Properties after ageing 670h/115	°C		ASTM D 573
Tensile Strength	Mpa	min 8,3	ASTM D 412
Elongation at break	%	min 200	ASTM D 412
Tear Strength	kN/m	min 22	ASTM D 624
Linear dimensional change	%	±2	ASTM D 1204
Brittle point	°C	max -45	ASTM D 2137
Water absorption, mass	%	+8 to -2	ASTM D 471
Weather resistance, no crack		pass	Practic G26
Factory seam strength			
Peel strength	N/mm	min. 2,5	

Additional requirements

Approvals

Approved according to FFL Directive and fulfil the requirements of ASTM 4637 -67, vulcanised rubber sheeting, and UNE 53,586-86, Elastomeros.

Thickness

Nominal ±10% (±0,1 mm).

Identification

Each roll marked with product name, article- and roll number, dimensions, date of manufacture and signature.

Packing

Polyethylene-film wrapping.

Product Specification

Chemical resistance

EPDM Membranes

General Information

EPDM rubber have a good chemical resistance to the following groups of chemicals: Anorganic salts, Animal oils, Bases, Organic salts, Vegetable oils, Weak organic acids.

In general the chemical resistance to the following groups decreases as the number of C-atomes increases: Alcohols, Aldehydes, Amines, Esters, Ketones, Organic acids.

Arbitrary can be suggested that the chemical resistance of EPDM rubber diminishes to "Moderatly" or "Non-resistant" if the number of C-atoms of the chemical is higher than approximatly five.

The resistance to ethers and phenols can be rated as "Moderate".

EPDM rubber is not resistant to: Halogenated hydrocarbons, Hydrocarbons, Mineral oils.

Of the utmost importance for the effect of chemicals on EPDM is: The contact time, The temperature, The pressure, The concentration of the chemical.

Especially if the chemical resistance is rated "Moderatly resistant" above factors are of exeptional importance.

The resistance rating given in the following table are valid at room temperature if not other temperature is stated.

	Resistant	Moderately Resistant	Non-Resistant
Acetaldehyde		X	
Acetic acid 10-25 %	X		
Acetic acid 50-100 %		X	
Acetic anhydride	X		
Acetic acid glacial		X	
Acetylacetone		X	
Acetone	X		
Acetonitrile	X		
Acetylene			X
Acrylic acid	X		
Acrylonitrile		X	
Acrolein		X	

	Resistant	Moderately Resistant	Non-Resistant
Adipic acid	X		
Aluminium acetate	X		
Aluminium chlorate	X		
Aluminium chloride	X		
Aluminium fluoride	X		
Aluminium hydroxide	X		
Aluminium nitrate	X		
Aluminium oxide hydrate	X		
Aluminium phosphate	X		
Aluminium sulfate	X		
Allylchloride			X
Ammonia anhydrous	X		
Ammonium carbonate	X		
Ammonium chloride	X		
Ammonium fluoride	X		
Ammonium hydroxide	X		
Ammonium nitrate	X		
Ammonium ortophosphate	X		
Ammonium oxalate	X		
Ammonium sulfate	X		
Ammonium thiocyanate	X		
Amylacetate	X		
Amylalcohol	X		
Amylchloride			X
Aniline	X		
Animal oil	X		
Antimony chloride	X		
Antimony pentasuphide	X		
Antimomy trisulphide	X		
Asphaltite			X
A.S.T.M. fuel A-B-C			X
A.S.T.M. oil 1-2-3			X
Aqua regia			X
Argon	X		

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Chemical resistance

	Resistant	Moderately Resistant	Non-Resistant
Arsenic acid	X		
Arsenic tri-oxide	X		
Arsenic tri-sulfide	X		
Barium chloride	X		
Barium hydroxide	X		
Barium oxide	X		
Barium peroxide	X		
Barium sulfate	X		
Barium sulfide	X		
Beer	X		
Benzalchloride			X
Benzaldehyde	X		
Benzene			X
Benzene sulfonic acid - 10 %	X		
Benzoic acid	X		
Bezoylchloride			X
Benzylalcohol		X	
Benzyl benzoate	X		
Bismuth carbonate	X		
Bisulphite solution	X		
Bitumen	X		
Borax solution	X		
Boric acid	X		
Bromic acid	X		
Bromine anhydrous liquid			X
Bromo benzene			X
Butadiene			X
Butane			X
Butanol	X		
Butanon (M.E.K.)	X		
Buttermilk		X	
Butylstearate			X
Butylacetate		X	

	Resistant	Moderately Resistant	Non-Resistant
Butylalcohol	X		
Butylaldehyde		X	
Butylamine			X
Butylbenzoat	X		
Butylchloride			X
Butylene			X
Butylether			X
Butylglycol	X		
Butyloleate			X
Butyric acid		X	
Butyraldehyde		X	
Cadmium sulfate	X		
Calcium	X		
Calciumcarbonate	X		
Calciumchloride	X		
Calciumcyanide	X		
Calciumhydroxide	X		
Calciumsulfate	X		
Calciumsulfide	X		
Calcium(bi)sulfite	X		
Calciumoxide	X		
Caproic acid	X		
Caprolactam 20-100 %	X		
Carbamide	X		
Carbitol	X		
Carbolic oil		X	
Carbondioxide	X		
Carbondisulfide			X
Carbonmonoxide	X		
Carbontetrachloride			X
Castor oil		X	
Cellulose acetate	X		
Cement	X		

Product Specification

Chemical resistance

	Resistant	Moderately Resistant	Non-Resistant		Resistant	Moderately Resistant	Non-Resistant
Cetylalcohol	X			Diacetone alcohol	X		
Chlorine dry	X			Dibenzylether	X		
Chlorine wet		X		Dibutylphthalate	X		
Chlorine dioxide	X			Dichlorobenzene			X
Chlorine water			X	Dichloroethylene			X
Chloroacetic acid	X			Dichloromethane		X	
Chlorobenzene			X	Diesel oil			X
Chlorodiphenyl			X	Diethanolamine	X		
Chloroform			X	Diethylamine			X
Chlorophenol			X	Diethylene glycol	X		
Chloroprene			X	Diethylether			X
Chlorsulfonic acid			X	Diethylketon	X		
Chronic acid 10-50 %			X	Diethylsebacate		X	
Chromium sulfate	X			Dimethylamine			X
Chromium trioxide	X			Dimethylaniline	X		
Citric acid	X			Dimethylether			X
Copper chloride	X			Dimethylformamide		X	
Copper cyanide	X			Di-n-butylsebacate	X		
Copper hydroxide	X			Diocetylphthalate		X	
Copper nitrate	X			Dioxane	X		
Copper sulfate	X			Diphenyl			X
Cottonseed oil (20° C)	X			Diphenylether			X
Cottonseed oil (100° C)		X		Dipropylene glycol	X		
Cream butter	X			Diphenyloxide			X
Creosote oil			X	Dixan 2% solution	X		
Cresol		X		Dowtherm A			X
Cyanic acid	X			Epichlorohydrin		X	
Cyclohexane			X	Ethane			X
Cyclohexene			X	Ethanolamine	X		
Cyclohexanol			X	Ethylacetate	X		
Cyclohexanone			X	Ethylacrylate	X		
Decalin			X	Ethylalcohol	X		
Dextrose	X			Ethylbenzene			X

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Chemical resistance

	Resistant	Moderately Resistant	Non-Resistant
Ethylchloride		X	
Ethylene			X
Ethylenebromide			X
Ethylene diamine		X	
Ethylene dichloride			X
Ethylene glycol	X		
Ethylene glycoldiacetate	X		
Ethylether			X
Ethyl hexanol	X		
Ethyl mercaptan			X
Ethylene oxide	X		
Fatty acids		X	
Fatty alcohols	X		
Ferric chloride	X		
Fluoboric acid 65 %	X		
Fluosilicic acid 50 %	X		
Formaldehyde	X		
Formaline	X		
Formic acid (<50%)	X		
Freon			X
Furfural	X		
Gallic acid		X	
Gasoline			X
Gelatin	X		
Glucose	X		
Glutamic acid	X		
Glycerol (glycerin)	X		
Glycerol monostearate		X	
Glycol	X		
Helium	X		
Heptane			X
Hexaldehyde		X	
Hexane			X

	Resistant	Moderately Resistant	Non-Resistant
Hexanol		X	
Hexylamine		X	
Hexylchloride			X
Hydrazine	X		
Hydrazine hydrate	X		
Hydrobromic acid	X		
Hydrochloric acid	X		
Hydrocyanic acid 20-90 %	X		
Hydrofluoric acid 40 %		X	
Hydrofluoric acid 75 %			X
Hydrogen	X		
Hydrogen peroxide 10-30%	X		
Hydrogen sulfide(dry+wet)	X		
Iodine		X	
Iron chloride	X		
Iron sulfate	X		
Iso butyl methylketon	X		
Iso octane			X
Isopropyl acetate	X		
Isopropyl alcohol	X		
Isopropylether			X
Kerosone			X
Lactic acid (milk acid)	X		
Lanolin		X	
Lauryl alcohol		X	
Lead acetate	X		
Lead arsenate	X		
Lead sulfate	X		
Linseed oil		X	
Lubrication oil			X
Magnesium chloride	X		
Magnesium hydroxide	X		
Magnesium silicate	X		

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Chemical resistance

	Resistant	Moderately Resistant	Non-Resistant		Resistant	Moderately Resistant	Non-Resistant
Magnesium silico fluoride	X			Nitrotoluene			X
Magnesium sulfate	X			Octane			X
Magnesium sulfite	X			Octanol		X	
Maleic acid	X			Oleic acid		X	
Mercury	X			Oleum			X
Mercury chloride	X			Olive oil		X	
Mercury nitrate	X			Oxalic acid	X		
Metaldehyde	X			Oxygen	X		
Methane			X	Ozone	X		
Methanol	X			Palmitic acid		X	
Methylacetate	X			Palm oil		X	
Methylamine			X	Paraffinic oil and wax		X	
Methylchloride			X	Pentane			X
Methylene chloride		X		Perchloric acid		X	
Methyl ethyl keton	X			Perchloro ethylene			X
Methyl glycol	X			Perhydrol	X		
Methyl glycol acetate	X			Petroleum			X
Methyl-isobutylketone		X		Phenol			X
Mineral oil			X	Phenylchloride			X
Mixed nitrate and sulphuric acid			X	Phosphoric acid 20-85 %	X		
Molasses	X			Phosphorus oxychloride	X		
Monochloro ethylene			X	Phtalic acid	X		
Mono ethanol amine	X			Phtalic acid antihydride	X		
Naphta			X	Picric acid		X	
Naphtalene			X	Potassium acetate	X		
Nickelsulphate	X			Potassium alum. sulphate	X		
Nitric acid 10 %		X		Potassium borate	X		
Nitric acid 65-100 %			X	Potassium bromide	X		
Nitric acid red funning			X	Potassium carbonate	X		
Nitrobenzene		X		Potassium chlorate	X		
Nitrogen	X			Potassium chloride	X		
Nitrogenoxide	X			Potassium chromium sulfate	X		
Nitropropane	X			Potassium cyanide	X		

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	Resistant	Moderately Resistant	Non-Resistant		Resistant	Moderately Resistant	Non-Resistant
Potassium dichromate	X			Sodium chloride	X		
Potassium hydroxide	X			Sodium cyanide	X		
Potassium hypochlorite	X			Sodium dichromate	X		
Potassium iodide	X			Sodium fluoride	X		
Potassium nitrate	X			Sodium fluo aluminate	X		
Potassium permanganate		X		Sodium hydroxide 20-75 %	X		
Potassium phosphate	X			Sodium hypochlorite 10-30 %	X		
Potassium sulfate	X			Sodium iron cyanide	X		
Potassium sulfite	X			Sodium meta phosphate	X		
Propane (liquid and gas)			X	Sodium nitrate	X		
Propanol	X			Sodium nitrite	X		
Propyl acetate	X			Sodium peroxide	X		
Propyl amine			X	Sodium orthophosphate	X		
Propylene			X	Sodium silicate	X		
Propylene chloride			X	Sodium (bi) sulfate	X		
Propylene glycol	X			Sodium sulfide	X		
Propylene oxide	X			Sodium (bi) sulfite	X		
Pyridine		X		Sodium thiosulphate	X		
Salad oil		X		Soybean oil			X
Salicylic acid	X			Sorbic acid	X		
Seawater	X			Starch (amyloextrin)	X		
Silicic acid	X			Stearic acid		X	
Salad oil		X		Styrene			X
Salicylic acid	X			Sugar	X		
Seawater	X			Sulfamic acid	X		
Silicic acid	X			Sulfur 90 °C	X		
Silicone oil	X			Sulfur dichloride			X
Skydrol	X			Sulfur dioxide (wet+dry)	X		
Soap solution	X			Sulfuric acid 10-75 %	X		
Sodium acetate	X			Sulfuric acid, fuming			X
Sodium borate	X			Sulfurous acid 10-75 %			X
Sodium(bi)carbonate	X			Sulfur trioxide		X	
Sodium chlorate	X						

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Chemical resistance

	Resistant	Moderately Resistant	Non-Resistant
Tannic acid	X		
Tartaric acid		X	
Tetra chloro ethylene			X
Tetra hydro furan			X
Tetra hydro naphtalin			X
Toluene			X
Tributyl phosphate		X	
Trichloroethane			X
Tricresyl phosphate		X	
Tri ethanol amine	X		
Tri ethyl amine			X
Tri methyl amine			X
Tri sodium phosphate	X		
Turpentine			X
Vegetable oil and fat	X		
Vinyl acetate	X		
Vinyl chloride			X
Vinyl pyridine			X
Washing preparation (synth.)	X		
Water	X		
Wine	X		
Xylol			X
Zinc acetate	X		
Zinc dichloride	X		
Zinc sulfate	X		