



Sheeting & Matting

Industrial & Wear resistant

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www.trelleborg.com/elastomerlaminates

Trelleborg group, **leader in polymer solutions**

Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments.

Its innovative engineered solutions accelerate performance for customers in a sustainable way.

The Trelleborg Group has annual sales of about SEK 21 billion (EUR 2.3 billion, USD 3.2 billion) in over 40 countries.

In addition, Trelleborg owns 50 percent of Trelleborg Vibracoustic, a global leader within

antivibration solutions for light and heavy vehicles, with annual sales of approximately SEK 14 billion (EUR 1.55 billion, USD 2.2 billion) in about 20 countries.

The Trelleborg share has been listed on the Stock Exchange since 1964 and is listed on NASDAQ OMX Stockholm, Large Cap.

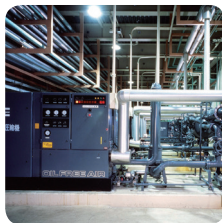
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The group comprises **5** business areas

► Trelleborg Coated Systems



► Trelleborg Offshore & Construction



► Trelleborg Wheel Systems



► Trelleborg Industrial Solutions



► Trelleborg Sealing Solutions

Trelleborg Fluid Handling Solutions

Trelleborg Fluid Handling Solutions is part of Trelleborg Industrial Solutions.

With over 1000 employees and head office located in Clermont-Ferrand (France), Trelleborg Fluid Handling Solutions is a key leading player proposing high performance and optimal solutions for every situation with low and medium pressure Industrial Hose, Oil and Marine Hoses, Rubber Sheeting & Matting and Expansion Joint based on advanced polymer technology with production sites in France, Spain, Sweden and Brazil.

Trelleborg Fluid Handling Solutions offers a very large range of competitive products, solutions and services that meet your needs and requirements for all types of application for your different businesses.



► Your Partner for Fluid Handling

Trelleborg Fluid Handling Solutions is organized around 9 applications areas:

- **Oil and Gas**
- **Construction and Mining Equipment**
- **Energy**
- **Chemical, Pharma and Food**
- **Agriculture and Farms**
- **Environment and Cleaning Waste Water**
- **Processing Equipment and Machine Tools**
- **Industrial Transportation**
- **Life Science**

This enables better reactivity to adapt our offer to fast moving application or to design special solutions tailor-made for you. In all cases we follow closely legal requirements or standard evolutions.

► Our logistics platform: availability, reactivity and reliability

Over 5000 different items are stored in our 3 logistic platforms in Clermont-Ferrand (France), Trelleborg (Sweden) and Izarra (Spain) to meet your need for immediate and reliable delivery.

► Our research and development centers through continuous innovations

Located in France and Brazil for Oil & Marine Hose, France and Sweden for Industrial Hose and Spain for Rubber Sheeting/ Matting and Expansion Joint, our R&D centers provide innovating solutions for compound, finished products and customized solutions.

All production sites are well equipped with laboratory, test bench and calculation centers to provide ready-to-use solutions based on our experience of the applications and competences.

► Our couplings technical centers

With location all over Europe (Germany, Norway, Sweden and France), Brazil and China we offer a large range of rubber hose assembly, composite hose, Stainless Steel or PTFE hose with dedicated service (24 hours to 48 hours delivery) and accessories.

► Trelleborg Oil & Marine Hoses

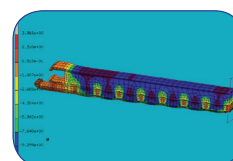
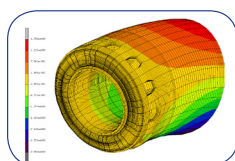
Trelleborg Oil & Marine is the leading supplier of innovative and field-proven large-bore flexible bonded hoses for crude oil, chemicals, and LPG/LNG offshore transfer applications.

Trelleborg Oil & Marine provides full service worldwide through global life cycle – engineering studies, delivery of complete solutions (hoses and ancillary equipments), on-site supervision, and recommendations for installation, maintenance and repairs. Trelleborg Oil & Marine is a technology and innovation driven company that makes flexible bonded hoses with unrivalled and undisputed performance.

Our products are designed and built with cutting edge solutions used in tire and aerospace industry, with high resistance to extreme operating environments and severe fatigue conditions. The acquisition of a Brazilian company in 2011 in Sao Paulo enlarged and completed the range of products and technologies. In Brazil, the business focuses on specially designed oil hoses for floating and submarine applications in order to answer the strongly growing local offshore oil and gas extraction industry.

Trelleborg Oil & Marine provides a wide range of products specifically designed for demanding applications with long service life and high level of reliability.

In order to help you to accelerate the development of your business, our service list also covers



| Compounding formulation | Hose configuration modeling | Finite element calculations | Hose design

| Hose testing (pressure, bending, elongation resistance, ...) | Hose certification (PED, ADR, REACH, ...) | Handling and storage instructions

| Installation instruction and supports | Hose inspection and refurbishment | Hose failure analysis

| After sales support | Training for sales team | Training for assembly workshop operators

Seal, damp and protect

Trelleborg rubber sheeting and matting range is suitable for most areas of use. Main applications are sealing (gaskets), protection (machine and process), safety (electric insulation, fire/smoke) and flooring (industrial matting).

We invest heavily in R&D. Our sales staff, chemists and engineers work to find better solutions for customers through continuous development of new materials, composites, designs and production methods. Certificates are available under request (food quality, drinking water, dielectric, fire and smoke resistance). Trelleborg is certified ISO 9001 and ISO 14001.

Trelleborg rubber sheeting and matting range is especially designed for:

- Chemical** (acids, bases, oils)
- Energy** (electrical insulation, fire protection)
- Food** (FDA and (CE) 1935/2004 certificates)
- Drinking water** (several certificates as ACS, WRAS, BELGAQUA, AS/NZS, etc.)
- Steel industry** (high temperature)
- Automotive** (acids, bases, oils)
- Construction & environment** (fire/smoke matting, bearings)
- Mining & quarries** (skirting, dust sealing)
- Sport centres** (shooting gallery, locker rooms)



Standard manufacturing dimensions and tolerances

Thickness (mm)	Thickness tolerance (mm)	Width (mm)	Length (m)	Thickness (mm)				
			Industrial	Wear resistant				
1	± 0.2	1400 ± 2 %	20 ± 2 %	20 ± 2 %	1			
1.5	± 0.3		15 ± 2 %	15 ± 2 %	1.5			
2			10 ± 2 %	10 ± 2 %	2			
3	5 ± 2 %				5 ± 2 %	3		
4						± 0.4	10 ± 2 %	4
5			5					
6			± 0.5	± 0.7		5 ± 2 %	5 ± 2 %	6
8	± 1.0		5 ± 2 %		5 ± 2 %			8
10				± 1.4		5 ± 2 %	5 ± 2 %	10
12								± 1.75
15	± 2.0		2.5 ± 2 %	2.5 ± 2 %	15			
20					± 1.4	2.5 ± 2 %	2.5 ± 2 %	20
25	± 1.75		2.5 ± 2 %	2.5 ± 2 %				25
30/40					± 2.0	2.5 ± 2 %	2.5 ± 2 %	30/40

NR SBR

NR: Natural rubber. Excellent mechanical and dynamic properties, abrasion resistance, resilience and elasticity. Flexible at low temperatures. High elongation and deformation capacity. Not resistant to oils and petroleum based products.

SBR: Alternative to natural rubber.

		Color	Density (g/cm³)	Hardness (Shore A)	Tensile strength (Mpa)	Elongation at break (%)	Working temperature (°C)	Diluted acids and bases	Concentrated acids and bases	Ozone	Oils and hydrocarbons
Basic quality	R608	1P 2P	1.50	65	4	200	-25 + 70	●	●	●	●
Standard level quality	RF48	1P 2P	1.35	65	4	200	-25 + 70	●	●	●	●
White standard level quality	R661	○	1.67	68	5	220	-25 + 70	●	●	●	●
White food quality natural rubber	R642	☞	1.30	65	10	600	-45 + 80	●	●	●	●
High performance natural rubber	R490	●	1.05	45	16	600	-40 + 85	●	●	●	●
High performance natural rubber	R499	●	1.00	43	20	650	-40 + 80	●	●	●	●

EPDM

Excellent ageing properties (heat, ozone, weathering).

Good resistance to acids, bases, solvents and steam.

Remains flexible at low temperature.

Not resistant to hydrocarbons and fat products.

Standard level quality	EF51	●	1.30	65	5	200	-25 + 120	●	●	●	●
White food quality	E569	☞	1.27	60	8	350	-40 + 115	●	●	●	●
Technical applications 50 Shore	E550	●	1.17	50	9	450	-40 + 115	●	●	●	●
Technical applications 60 Shore	ES02	●	1.30	60	7	500	-40 + 120	●	●	●	●
Technical applications 70 Shore	ES01	●	1.31	70	7	300	-40 + 120	●	●	●	●
High temperature applications	ES03	●	1.24	70	10	200	-40 + 125	●	●	●	●

IIR (Butyl)

Very good resistance to acids, bases, and steam. Good resistance to animal or vegetable fats and oils. Weathering, ozone and UV resistant.

Technical applications 60 Shore	T620	●	1.27	60	8	400	-40 + 130	●	●	●	●
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CR (Polychloroprene)

Good mechanical and physical properties, low compression set values and good bending.

Very good resistance to weathering, ozone and UV.

Good resistance to diluted acids, alifatic solvents, oils and petroleum based products.

Basic quality	C609	1P 2P	1.50	65	4	200	-25 + 90	●	●	●	●
Standard level quality	CF49	1P 2P	1.40	65	6	250	-25 + 90	●	●	●	●
Technical applications 40 Shore	C400	●	1.33	40	4	450	-30 + 90	●	●	●	●
Technical applications 50 Shore	C500	●	1.35	50	4.5	400	-30 + 100	●	●	●	●
Technical applications 60 Shore	CF03	1P 2P	1.40	60	7	250	-25 + 100	●	●	●	●
Technical applications 70 Shore	CS40	1P 2P	1.45	70	6	300	-20 + 100	●	●	●	●
High performance	CF14	●	1.30	60	10	250	-35 + 120	●	●	●	●

CSM

Good chemical resistance against acids and bases.

Technical applications 60 Shore	H630	●	1.30	60	9	350	-35 + 125	●	●	●	●
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NBR

Excellent resistance to oils, fats, petroleum based products and organic solvents.

Low resistance to weathering, ozone and UV.

Basic quality	B609	1P 2P	1.50	65	4	250	-25 + 90	●	●	●	●
Standard level quality	BF50	1P 2P	1.35	65	5	300	-25 + 90	●	●	●	●
White food quality	B571	☞	1.44	65	10	400	-35 + 110	●	●	●	●
Technical applications 50 Shore	BS11	●	1.20	50	8	450	-30 + 70	●	●	●	●
Technical applications 60 Shore	BS33	●	1.28	60	10	350	-25 + 110	●	●	●	●
Technical applications 70 Shore	BS08	●	1.30	70	10	250	-30 + 100	●	●	●	●
High performance	B668	●	1.25	70	13	250	-30 + 120	●	●	●	●
For transformer oil	BF31	☞	1.30	70	13	300	-40 + 130	●	●	●	●

Viton® (FKM)

Excellent chemical resistance.

Excellent resistance to very high temperatures.

Good mechanical and physical properties.

High technical applications	V733	●	1.85	70	7	165	-20 + 250	●	●	●	●
White food quality	V732	☞	2.16	70	10	200	-20 + 250	●	●	●	●

Consult the technical datasheet or consult us for any specific application or product in contact with Trelleborg sheeting.

1P 1 ply 2P 2 plies ● Very good ● Good ● Medium ● Non suitable

Wear resistant

Sand and gravel quarries, steel industry, foundries, metal industry, aggregate and cement industries, concrete plants, sawmills, food and pharmaceutical industry, agriculture, sewer cleaning, industrial waste and road maintenance.



High wear sheeting		Rubber compound	Color	Option (bonding layer)	Density (g/cm ³)	Hardness (Shore A)	Tensile strength (Mpa)	Elongation at break (%)	Abrasion (mm ³)	Working temperature (°C)
	Fine grain size material (dry or wet conditions)	REDFINE +	NR R397	● BL	0.95	35	24	700	60	-40 +80
	Round grain material	BLACKROCK +	NR R650	● BL	1.12	60	18	400	90	-50 +85
	Crushed material	ARMURITE	NR RF20	● BL	1.12	65	25	400	100	-40 +70
Medium wear sheeting										
	Fine grain size material (dry or wet conditions)	REDFINE/YELLOWFINE	NR R492/NR R491	● ● BL	1.05	45	16	600	83	-40 +85
		BLACKFINE	NR R353	●	1.00	38	20	650	80	-40 +90
		GREYFINE	NR R488	●	1.05	40	16	600	100	-40 +70
		WHITEFINE	NR R320	○	0.95	40	20	600	110	-40 +80
	Round grain material	BLACKROCK	NR R698	● BL	1.21	60	15	400	130	-40 +85
		BLACKHARD	NR R847	●	1.15	80	15	240	120	-40 +80
Special wear sheeting										
	Fire resistant	BLACKFIRE	CR C738	●	1.47	70	10	250	200	-30 +120
	Dust sealing	BLACKDUST	NR R431	●	1.03	45	16	600	90	-50 +85
	Skirting	BLACKSKIRT	NR R439	●	1.18	50	8.5	400	125	-40 +70
		GREENSKIRT	NR R570	●	1.20	55	13	450	170	-40 +80
	Scrapers	SANDWICH	NR R698/R492/R698	● / ● / ●	1.15	60/45/60	15	400	130	-40 +85

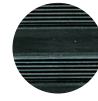
Matting



Vehicles step treads, workbenches, shelves, racks covers, walls, columns, staircases, step stools, car trunks, vessels corridors, halls, corridors, ramps, stairs, elevators in industrial premises, flooring and matting for industrial site (aisles, warehouses, locker rooms).



Circular studs (MC 2K1)



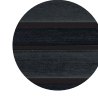
Rectangular ribbed (MR)



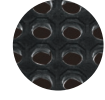
Honeycomb (MH) open



Circular studs (MC 7A)



Wide ribbed (MG)



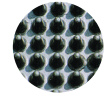
Honeycomb (MH) closed



Fine triangular ribbed (MT)



Checker (MK)



Finger-tip (MF)

Standard matting

			Color	Thickness (mm)	Width (mm)	Length (m)
CIRCULAR		Circular studs (MC 2K1)	● ●	3	1000/1200	10
		Fine triangular ribbed (MT)	●	3	1000/1200	10
GROOVED		Rectangular ribbed (MR)	●	2.5	1500	15
		Wide ribbed (MG)	●	5.8	1000/1200	10
CHECKER		Checker (MK)	●	3	1400	10
RING		Honeycomb (MH) open	●	14/22	800/1000	1.8/1.2/1.5
		Honeycomb (MH) closed	●	14	1000	1.8
PINS		Finger-tip (MF)	●	10/16	1000	10/8

Technical matting (other colors under request)

CIRCULAR +		Circular studs (MC 2K1)	● ● ● ● ● ●	3	1000/1200	10
		Circular studs (MC 7A)	●	4.5	1000	10
GROOVED +		Wide ribbed (MG)	●	5	1400	10
CHECKER +		Checker (MK)	●	3/5	1400	10
OILMAT Oil and hydrocarbon resistant			●	3	1000/1200	10
		Circular studs (MC 7A)	●	4.5	1000	10
		Checker (MK)	●	3	1400	10
FIREMAT Fire resistant			● ●	3	1000/1200	10
ELECMAT Electric insulation			●	3/4.5	1000/1200	10
		Wide ribbed (MG)	●	5	1200	10
		Checker (MK)	●	3	1400	10



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