## FLAT SEALS, RUBBER COMPONENTS AND INSULATORS

### **MACHINING CAPABILITIES**

Depending on the material, form, dimensions and precision of the seal or the punched part, we rely on the following processes for the production: parts manufactured by hand, punching, cutting or water jet cutting. All manufactures are subject to continuous quality management according to DIN EN ISO 9001:2000, supplemented by specifically agreed inspection methods.

We select appropriate punching technologies depending on the material, number of pieces and design: complete cut, sharp cut, scissor cut or steel strip dies. A large inventory of standard tools minimises the tool costs. Cutting without tools of any 2 D-contours is a supplement to classic punching. We rely on water jet technology if detailed parts are required, samples and prototypes are needed for tests or thick foams with non-contacting clean cut are required.

We cover all series sizes, starting from a batch quantity of 1 to several million parts. We supply flat seals, rubber rings and other punched parts to order according to drawing, sample or your specifications in any required design and number of pieces. In doing so, there is no limit to the material diversity.



### **MATERIAL DIVERSITY**

Our material experience includes all rubber and plastic qualities, sealing and insulating materials, high performance materials, elastomers, Gore-Tex, graphite, foams, many different composite materials – in short, all nonmetallic materials.

### FORMS, DIMENSIONS, APPLICATIONS

We supply all types of punched parts to order according to drawing, sample or specification in any forms up to very detailed and complex geometries. For the dimensions, we provide the large range from 1 millimetre to approx. 10 metres diameter (bonded from segments starting from approx. 2 metres). Strips and blanks round off the range.

- Strip cut to size from the roll for the individual strip cut.
- 2 Water jet production production of a rubber element
- **3** Free hand cut our experienced personnel produce every rubber cut according to your requirements.



### TOOLING-DEPENDENT MOULDED PARTS MADE OF RUBBER, PLASTIC AND TPE

All visible moulded parts can have very high visual requirements. The function of a vibration damper can be required for rubber moulded parts or the sealing function of a housing seal according to the IP65 standard can be required for moulded parts made of TPE. We consider ourselves to be specialists in the area of manufacture and sale of tooling-dependent moulded parts made of rubber, plastic and thermoplastic elastomers (TPE).

Due to the product specialisation of our partner companies, we reduce your search for other suitable suppliers and manufacturers of rubber moulded parts, plastic moulded parts and moulded parts made of TPE.

We support your design activities very early in the product development phase with the manufacture of prototypes so that your reach readiness for series production of your moulded parts more quickly and ultimately also at lower cost.



## PRODUCT RANGE ON THE NEXT PAGES

- Rubber sheets
- Profiled rubber mats
- Rubber honeycombed mats
- Cellular rubber plates
- Cellular rubber tapes
- Foam rubber plates
- Moulded parts
- High pressure gaskets
- Flange gaskets
- Sealing rings
- Isoplan heat shield panels
- IsoGlas® cords / tapes
- Cords / tapes
- Gore-Tex® seals
- Technical foams
- Felts
- Filter mats
- Noise protection products

## FOAM AND CELLULAR RUBBER SHEETS

### Foam rubber sheets

Skin on both sides, fine texture, open-pored cut edges 15 +/- 5° Shore A (guide value only), specific weight 0.60 kg/m<sup>3</sup>

Area of application: Sheet

Туре:	Foam rubber
Grade (material):	EPDM grade
Length:	1000 mm
Colour:	dark grey
Operating temperature range:	-35 to +120°C.



	Width	Thickness			
Item No.	mm	mm			
212660	1000	2.0	25.52	21.70	17.86
212670	1000	3.0	32.44	27.58	22.70
175690	1000	4.0	36.09	30.68	25.26
175820	1000	5.0	39.92	33.93	27.95
175830	1000	6.0	44.47	37.81	31.13
175710	1000	8.0	64.23	54.60	44.95
175730	1000	10.0	65.64	55.80	45.95
175740	1000	12.0	76.27	64.84	53.40
175760	1000	15.0	91.44	77.74	64.02
175770	1000	16.0	179.50	152.55	125.65
175910	1000	20.0	117.81	100.15	82.48
175780	1000	22.0	114.80	97.59	80.35
175790	1000	24.0	124.72	106.00	87.31
175920	1000	25.0	136.07	115.66	95.25

## **Cellular rubber sheets**

No skin on either side, closed cells bulk density 120 - 170 kg/m<sup>3</sup>, good resistance to weather, ozone effects, alkalis and ageing, poor resistance to petrol and oil

Area of application:	Sheet
Туре:	Cellular rubber
Grade (material):	EPDM grade
Length:	1000 mm
Colour:	black
Operating temperature range:	-40 to +70°C.



	Width	Thickness			
Item No.	mm	mm			
212680	1000	2.0	8.29	7.04	5.81
212690	1000	3.0	12.19	10.37	8.54
175950	1000	4.0	16.24	13.81	11.37
175960	1000	5.0	20.36	17.29	14.23
175970	1000	6.0	24.11	20.49	16.87
175990	1000	8.0	31.83	27.05	22.27
176000	1000	10.0	38.48	32.71	26.94
176020	1000	12.0	46.35	39.41	32.45
176050	1000	15.0	54.55	46.36	38.18
176060	1000	18.0	63.24	53.75	44.27
176070	1000	20.0	75.92	64.54	53.15
176090	1000	25.0	96.25	81.82	67.38
176100	1000	30.0	113.95	96.88	79.77

## FOAM AND CELLULAR RUBBER SHEETS

### **Cellular rubber tapes**



No skin on either side, closed cells bulk density 120 - 170 kg/m<sup>3</sup>, good resistance to weather, ozone effects, alkalis and ageing, poor resistance to petrol and oil

Area of application:TapeType:Cellular rubberGrade (material):EPDM gradeLength:10 mColour:blackDesign:self-adhesive on one side/installation aidOperating temperature range:-40 to +70°C

	Width	Thickness				
Item No.	mm	mm	Unit			
212060	10	5.0	5 rolls	3.46	2.95	2.43
109950	12	5.0	5 rolls	3.87	3.29	2.71
109910	15	5.0	5 rolls	4.54	3.84	3.18
110010	20	5.0	3 rolls	6.05	5.15	4.23
110040	25	5.0	3 rolls	7.40	6.29	5.18
110030	30	5.0	3 rolls	8.74	7.42	6.10
110060	40	5.0	2 rolls	11.63	9.89	8.15
110070	50	5.0	2 rolls	14.50	12.33	10.16
110120	60	5.0	1 roll	17.10	14.55	11.98
110100	70	5.0	1 roll	19.69	16.74	13.79
110130	80	5.0	1 roll	21.48	18.26	15.03
110090	90	5.0	1 roll	27.62	23.46	19.32
110200	100	5.0	1 roll	27.56	23.41	19.28

## Alternative grades in various densities

Material	Colour	Thickness	Properties	Area of application
CR	black	2 - 10 mm	High level of non-flammability. Good resistance to effects	Conveyor belts,
Chloroprene			of ozone, weather and ageing. Good resistance to effects of	seals,
rubber			chemicals, petrol and oil. Conforms to UL94. Self-adhesive	roller coverings,
			on one side as an installation aid, up to 4 mm wide with	linings, etc.
			embedded threads for tensile strength.	
PE	white/	2 - 10 mm	Resistant to acids, alkalis and other chemicals. Does not	Glazing, interior fittings, air
Polyethylene,	anthracite		absorb water thanks to foam skin; good toughness and	conditioning, ventilation, roof
closed-cell			elongation at tear; good sliding behaviour; low wear;	and façade construction, ther-
			airtight. Self-adhesive on one side as an installation aid, up	mal and acoustic separation
			to 4 mm wide with embedded threads for tensile strength.	of components.
PUR	white/	2 - 10 mm	Soft material, high compressibility, good resistance to	Sealing to prevent dust,
Polyurethane,	grey		effects of weather and ageing, good resistance to effects of	draughts, noise
open-cell			petrol and oil. Self-adhesive on one side as an installation	and for vibration and sound
			aid, up to 4 mm wide with embedded threads for tensile	insulation.
			strength.	

### UL 94 – Global fire safety

A large number of our foamed plastics can be supplied as versions that are highly flame-retardant according to the UL 94 standard. UL 94 was originally used in the USA to test plastics for electrical appliances. Since then, however, it has been adopted all over the world for the purpose of classifying the flame-retardant and fire safety properties of plastics.

## Design and prototyping

We'll give you exactly what you want. You can send us your specifications in a drawing, outline your standard requirements over the phone or in writing, or talk to our technicians in person about what you have in mind. Our designers will create a solution and present it to you before production begins.

Even if you need a prototype for your purchasing or design department, or alternatively as a total solution for a customer, our prototyping service will meet your requirements down to the last detail.

We produce customised shapes to your specifications, using PE, PU and ZK foamed plastics.

### Advantages:

- Small batches available as no extra tools are required
- Can be applied to all types of foamed plastic
- Short delivery times

### Areas of application:

Prototyping, development departments, small batches

#### **Dimensions:**

Any two-dimensional shape available



## Contour-cut profiles made from foamed plastic

#### Contour-cut profiles: an alternative to extruded seals

Manufacturing an extruded profile is almost always associated with additional tool costs and the need to perform acceptance tests on large numbers of products. We can produce every two-dimensional contour out of foam at low programming costs. And because no extra tools are required, we can also create small production runs or custom-made items.

#### Dimensions:

Lengths up to 2.00 m available; shape based on customer specifications

### Areas of application:

Heat and sound insulation of aluminium profiles in window and conservatory construction, preventing condensation and thermal or cold bridges.

#### Advantages:

Small batches available, short delivery times, no tool costs



## **AF/ARMAFLEX®**

### **Technical data**

Brief description: Highly flexible, closed-cell insulation with high resistance to water vapour diffusion, low thermal conductivity and integrated antimicrobial protection in the form of Microban<sup>®</sup>. Material type: Elastomer foam based on synthetic rubber. Colour: black

**Special material information:** Self-adhesive coating: pressuresensitive adhesive coating based on modified acrylate with a grid structure and a polyethylene film covering. In self-adhesive products, the protective film for the adhesive layer may contain traces of silicone. **Applications:** Insulating and protecting pipes, air ducts and containers (incl. pipe bends, fittings and flanges) in refrigeration and air conditioning systems as well as process engineering systems, for preventing condensate and saving energy.

**Special features:** Increasing insulating layer thicknesses for hoses ensure that surface temperatures remain the same even where pipe diameters become larger.

Area of application	Value/assessment	Test cer- tificate*1	Monitor- ing <sup>*2</sup>	Special notes
Area of application	Maximum operating +110°C (+85°C in the case of full-surface adhesion of temperature sheet or tape to object)	D 4594	o/•	Testing in acc. with DIN EN 14706, DIN EN 14707 and
	Minimum operating temperature <sup>1</sup> -50°C (-200°C)			DIN EN 14304
Thermal conduction	vity	1	1	
	$\vartheta_r + l - 0$ $\vartheta_c$ $\lambda =$	-		
	Hoses (AF-1 to $λ ≤ 0.033$ W/(m · K) [33 + 0.1 · ϑ <sub>m</sub> + 0.0008 · ϑ <sub>m</sub> <sup>2</sup> ]/1000 AF-4	-		
Thermal	$ \begin{array}{ll} \text{Hoses} & & \\ (\text{AF-5 to} & \lambda & \leq 0.036 & \text{W/(m \cdot K)} & [36 + 0.1 \cdot \vartheta_{m} + 0.0008 \cdot \vartheta_{m}^{-2}]/1000 \\ \text{AF-6}) & & \\ \end{array} $	D 4455	o	Testing in acc. with DIN FN 12667
conductivity	Sheets, strips, tape $\lambda \leq 0.033$ W/(m $\cdot$ K) $[33 + 0.1 \cdot \vartheta_m + 0.0008 \cdot \vartheta_m^2]/1000$ (AF-10MM to -32MM)	D 4424		EN ISO 8497
	$ \begin{array}{lll} \text{Sheets} & & \\ \text{(AF-50MM)} & \lambda & \leq 0.036 & & \\ \text{W/(m \cdot K)} & & \\ \hline & & \\ \text{[36 + 0.1 \cdot \vartheta_m + 0.0008 \cdot \vartheta_m^2]/1000} \end{array} $			
Water vapour diffe	usion resistance	1	r	
Water vapour diffusion resistance	Sheets (AF-10MM to AF-32MM) and ≥ 10.000 hoses (AF-1 to <sup>µ</sup> AF-4)	D 4532 D 4426	0/●	Testing in acc. with EN 12086 and EN 13469
	Sheets (AF-           500M) and hoses         μ         ≥         7000           (AF-5 to AF-6)			
Fire behaviour				
Construction material class <sup>2</sup>	Low flammability:           Hoses         B∟-s3, d0 (Z-56.269.3530)           Sheets         B / B∟-s3-d0 (Z-56.269.768)           Self-adhesive tape         B-s3-d0 (Z-56.269.768)	D 3334 D 4505	0/●	Testing in acc. with DIN EN 13823, DIN EN ISO 11925-2
Other fire class	ULapproved FM-approved	UL: D 4266 FM: D 3763	o/•	UL:Tested in acc. with UL94, IEC 60695 and CAN/ CSA-C.22.2 No 017, UL 746C FM:Tested in acc. with UBC26-3, Class No. 4924
Practical fire behaviour	Self-extinguishing, non-drip, does not allow fire to spread			
Component fire resistance <sup>3</sup>	Wall duct         ≤ R90 (P-3849/5370 MPA BS)           Ceiling duct         ≤ R90 (P-3849/5370 MPA BS)	D 2300		Testing in acc. with DIN 4102, Part 11
Acoustic propertie	us and the second se	1		
Reduction in structure-borne sound speed	Insulating effect $\leq$ 28 dB (A)	D 3660		Testing in acc. with DIN 52219 and DIN EN ISO 3822-1
Rated degree of sound absorption	≤ 0.45	D 4763		Testing in acc. with EN ISO 354
Other technical pr	operties			
Dimensions and tolerances	Acc. to EN 14304, Table 1	D 4594		Tested in acc. with EN 822, EN 823, EN 13467
Storage and durability	Self-adhesive tapes, self-adhesive sheets, hoses, strips: 1 year			Storage in dry, clean areas with normal humidity levels (50% to 70%) and room temperatures (0°C - 35°C)
Antimicrobial behaviour	Features active antimicrobial product protection (Microban) for additional safeguarding against bacteria and mould	D 4640 D 4641		Testing in acc. with ASTM G21 and ASTM C 1338
AGI designation code <sup>4</sup>	Hoses         36.12.01.06.04/06           Sheets         36.07.01.02.04			

1. In the case of temperatures below -50°C, please ask our customer service for the appropriate technical information. 2. The construction material class applies to metallic or solid mineral surfaces. 3. Please ask our customer service for more information. 4. The AGI designation code will be replaced with the CE designation code as soon as EN 14304 becomes available. \*1 You can request other documents, such as test certificates, approvals and similar items, by specifying their registration number. \*2 • Official monitoring by independent institutes and/or testing authorities; • in-h<sup>o</sup>use production inspection

## **RUBBER MOULDED PARTS**

### **Rubber moulded parts**



### Areas of application and industries:

Mechanical engineering, packaging industry, chemical industry, electrical industry, vehicle construction, metal machining and processing industry, food and beverage industry, tool and mouldmaking, foundries.

Our delivery service can also accommodate small quantity requirements or prototype part manufacturing.

Rubber offers a number of benefits that lend themselves well to customised solutions: a malleable and lightweight material, it demonstrates good resistance to chemicals and has excellent electrical properties.

We create practical customer solutions that are tailor-made to your drawings or specifications for a whole range of different tasks and functions, like sealing, absorption, insulating, protecting, trimming, connecting and reinforcing.

### Types of solutions:

- Rubber moulded parts
- Rubber/metal composites
- Rubber/plastic composites
- Foam rubber moulded parts

### Production technologies:

- Conventional pressing methods using flatbed printing moulds, piston moulds and transfer moulds
- Injection methods using automated injection moulds
- Boiler vulcanisation

## Guide values table: Key elastomers used in rubber moulded part production

Abbreviation	Туре	Trade name	Cross-linking mechanism	Hardness range (Shore A)	Density in g/cm³	Short-term operating temperature °C	Continuous operating temperature °C
EPDM	Ethylene propylene diene rubber	Buna AP, Dural	Sulphur, peroxides	25 - 95	1.1 - 1.45	-50 – +150	-40 - +120
NBR	Nitrile rubber	Perbunan	Sulphur, peroxides	40 - 90	1.1 - 1.3	-50 – +150	-40 - +120
ACM	Polyacrylate rubber	Cyanacryl	Metal oxides	50 - 90	1.1 - 1.3	-25 – +175	-25 – +150
CR	Chloroprene rubber	Neoprene	Metal oxides	30 - 90	1.1 - 1.6	-40 – +130	-20 - +100
SBR	Styrene butadiene rubber	Buna EM	Sulphur	30 - 90	1.2 - 1.4	-50 – +120	-30 - +90
NR	Natural rubber	Neorub	Sulphur	30 - 90	1.05 - 1.4	-55 – +90	-40 - +80
MQ	Silicone (HTV)	Silopren	Peroxides, pla- tinum-catalysed	20 - 85	1.1 - 1.6	-90 – +250	-60 - +200
FPM	Fluorine rubber	Viton/Fluorel	Peroxides, dia- mines, phenols	50 - 95	1.6 - 2.4	-30 – +260	-20 - +240
MFQ	Fluorine silicone rubber	Silastic	Peroxides	40 - 80	1.3 - 1.6	-80 - +230	-60 - +180

Abbrevia- tion	Tearing strength [N/mm²]	Elongation at break [%]	Resistance to weather- ing	Resistance to ozone effects	Resistance to oil	Resistance to fuel	Resistance to acids	Resistance to water Up to 100°C	Physiolo- gical safety	Price ratio
EPDM	7 - 18	150 - 600	1	1	4	4	1 - 2	1 - 2	no	100
NBR	7 - 25	100 - 700	3	3	1	2	3	2	possible	250
ACM	5 - 13	100 - 350	1	1	1	2	3	4	no	600
CR	7 - 20	100 - 750	1 - 2	1 - 2	2	3	partial 2	2	possible	350
SBR	7 - 25	100 - 800	2	3	4	4	2 - 1	2	possible	120
NR	15 - 30	100 - 900	3	3	4	4	2	2	possible	150
MQ	4 - 10	100 - 600	1	1	3	4	4	1 - 2, 4 from 130°C saturated steam	possible	550
FPM	7 - 17	100 - 300	1	1	1	1	1 - 2	3 - 2	no	2000
MFQ	4 - 9	100 - 400	1	1	1	1 - 2	4	2, 4 from 130°C saturated steam	possible	5000

## **STANDARD RUBBER MOULDED PARTS**

## **Cable sleeves**





Material PVC (soft), approx. 60° Shore A, colour black

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Name:
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Cable sleeves

ltem No.	Diameter D mm	Diameter C mm	Bore A mm	Height E mm	Slit heigh B	nt	
823470	39	29	23	10	1.5	KD 223	47.79
823460	30	24	16	11	3	KD 216	38.69
842690	27	22	16	10	4	KD 107-050	39.90
823450	25	18	15	9	2	KD 215	16.83
823420	18	12	10	11	4	KD 704	16.16
823440	18	12	10	8	1.2	KD 711	16.16
823390	14	10	8	8	1.5	KD 716	12.79
823400	14	10	8	5.5	1.5	KD 209	12.79
823370	9.5	6.5	4.5	6	1.2	KD 701	12.79

## **Rubber plugs**



In acc. with DIN 128/1 Grade: natural rubber 35-40° Shore A, low-sulphur, non-toxic, colour grey, temperature-resistant between - 25°C and + 70°C in hot air, up to + 120°C in moist heat. Tolerance: in acc. with DIN 7715 Part 2 M3 Applications: laboratories, industry, container sealing technology

Item No.	Diameter 1 mm	Diameter 2 mm	Height mm	units	Designation		
62530	8	4	20	100	8D	16.47	13.71
378450	9	5	20	100	9D	18.72	15.60
62550	12	8	20	100	12D	24.41	20.33
378460	14.4	10.5	20	100	14D	25.69	21.41
62570	18	14	20	100	18D	27.72	23.10
378470	22	17	25	100	22D	47.95	39.94
62590	24	18	30	100	24D	54.38	45.30
378480	27	21	30	100	27D	74.61	62.14
62610	32	26	30	100	32D	114.78	95.61
378490	35	29	30	100	35D	137.72	114.74
62630	38	31	35	100	38D	180.37	150.24
378500	41	34	35	50	41D	211.54	176.21
62650	44	36	40	50	44D	236.12	196.69
378510	49	41	40	50	49D	288.58	240.40
62670	55	47	40	50	55D	390.81	325.54
378520	59.5	50.5	45	25	60D	487.00	405.68
62690	65	56	45	25	65D	631.30	525.87
62700	70	60	50	25	70D	737.87	614.65
378540	75.5	64.5	55	20	75D	839.00	698.90

## **STANDARD RUBBER MOULDED PARTS**

## **Rubber plugs**

Item No.	Diameter 1 mm	Diameter 2 mm	Height mm	units	Designation		
62720	83	71	60	20	83D	975.64	812.71
378560	92	79	65	10	92D	1.377.36	1.147.34
62740	100	87	65	10	100D	1.667.04	1.388.64
62750	107	94	65	5	107D	2.022.34	1.684.62

## Door stop bumps

High-quality elastomer grade



Item No.	Diame mm	ter Colour	Slit height Bore hole mm	Unit	Design	Height mm			
63020	40	black	6	25	RH 3366	46	114.40	96.80	88.00
62880	40	grey	6	25	RH 3368	46	109.20	92.40	84.00
63090	40	red	6	25	RH 3367	46	114.40	96.80	88.00
63010	40	black	6	50	RH 3362	31	132.60	112.20	102.00
62870	40	grey	6	50	RH 3364	31	145.60	123.20	112.00
63080	40	red	6	50	RH 3363	31	137.80	116.60	106.00
63000	40	black	6	50	RH 3358	25	114.40	96.80	88.00
469050	40	grey	6	50	RH 3360	25	122.20	103.40	94.00
469040	40	red	6	50	RH 3359	25	120.44	100.36	90.34
63030	30	black	6	50	RH 3371	32	72.80	61.60	56.00
469030	30	grey	6	50	RH 3373	32	78.00	72.60	66.00
62890	30	light	6	50	RH 3374	32	75.40	63.80	58.00
63100	30	red	6	50	RH 3372	32	72.80	61.60	56.00
63240	30	black	7	50	RK 577	21.5	69.79	on request	on request
62990	28	black	6	50	RH 3354	25	49.40	41.80	38.00
649880	28	grey	6	50	RH 3356	25	70.22	58.51	52.67
62860	28	light	6	50	RH 3357	25	54.60	46.20	42.00
63070	28	red	6	50	RH 3355	25	43.40	on request	on request
62980	26	black	5	50	RH 3350	29	49.40	41.80	38.00
469010	26	red	5	50	RH 3351	29	54.92	45.77	41.18
62940	25	black	4.5	100	RH 3309	10	26.00	22.00	20.00
62970	25	grey	4.5	100	RH 3311	10	26.00	22.00	20.00
469000	25	light	4.5	100	RH 3312	10	26.00	22.00	20.00
63060	25	red	4.5	100	RH 3310	10	26.00	22.00	20.00
1102670	22	black	5.5	100	RK 387	16	46.57	38.81	34.92
62930	20	black	5	100	RH 3305	10	18.20	15.40	14.00
62820	20	grey	5	100	RH 3307	10	18.20	15.40	14.00
439470	20	light	5	100	RH 3308	10	18.20	15.40	14.00
63050	20	red	5	100	RH 3306	10	18.20	15.40	14.00
63190	12	black	2	100	RK 178	6	17.79	14.82	13.35
63150	12	light	2	100	RK 178	6	19.41	16.17	14.55

## **STANDARD RUBBER MOULDED PARTS**

## Industrial rubber fenders



Black, highly wear-resistant grade. For attaching to loading platforms

Item No.	Length mm	Width mm	Wall thick mm	ness Design	Hole spacing mm	Height	
4075100	540	80	7	light	460	80	30.90
4075110	540	80	14	heavy	460	80	37.10

## CO Frenzelit

### novapress® UNIVERSAL, asbestos-free

#### Material profile:

Thanks to its well-balanced combination of raw materials (high-quality aramide fibres and special functional filling materials) plus NBR (nitrile butadiene rubber), novapress<sup>®</sup> UNIVERSAL's properties really make it stand out from the rest:

- High tensile strength
- High compressive stability
- Extremely low gas leakage
- Very good resistance to oil

### Areas of application:

novapress<sup>®</sup> UNIVERSAL is ideal for use in applications that impose more stringent requirements involving temperature and compressive stress as well as non-critical gaseous and liquid media.

- Pipeline construction
- Chemical industry
- Plant engineering, equipment construction, mechanical engineering
- Food and beverage industry

### Material data:

Setting behaviour 2.0 mm General information: Binding agent NBR Approvals DVGW, SVGW, HTB, KTW, WRAS, BAM (up to max. 60°C/130 bar), TA Luft Identification colour light green on both sides PTFE non-stick coating on both sides Size and thickness tolerances in acc. with DIN 28 091-1 Area of application: GORE gasket sheet Type: novapress®

UNIVERSAL
green

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Item No.	Thickness mm	Length mm	Width	
860530	0.5	1500	1000	26.56
860540	1.0	1500	1000	40.23
860550	1.5	1500	1000	60.25
860560	2.0	1500	1000	80.22
860570	3.0	1500	1000	120.41

## novapress® MULTI II, asbestos-free



#### Material profile:

Thanks to its patented combination of aramide fibres, high-quality graphite filling material and particularly oil-resistant NBR (nitrile butadiene rubber), novapress<sup>®</sup> MULTI II's properties really make it stand out from the rest:

- Gas seal-tightness conforming to standards
- Very high compressive stability
- Excellent safety margins, even under varying loads
- Highly adaptable
- Graphite structure gives the material a unique level of flexibility novapress<sup>®</sup> MULTI II is also available with stainless steel mesh reinforcement (material no. 25/018), under the name novapress<sup>®</sup> MULTI II EG.

### Areas of application:

 $novapress^{\odot}$  MULTI II is ideal for use with saturated steam up to 250°C and 40 bar – it provides vapour sealing.

Its good resistance to oil, petrol and lubricants, as well as gaseous media, also makes it suitable for other areas of application.

- Power plants (gas and water supply)
- General industry
- Plant engineering and equipment construction

### Chemical industry

Material data:

General information: Binding agent NBR

Approvals DVGW, BAM (up to max. 60°C/130 bar), GL

Identification colour blue on both sides

A 310 non-stick coating on both sides

Size and thickness tolerances in acc. with DIN 28 091-1

 Area of application:
 GORE gasket sheet

 Type:
 novapress®

 Design:
 MULTI II

 Colour:
 blue

Item No.	Thickness mm	Length mm	Width	
661920	0.5	1500	1000	37.37
661930	1.0	1500	1000	69.24
661940	1.5	1500	1000	103.95
630820	2.0	1500	1000	138.57
603950	3.0	1500	1000	207.81
792330	4.0	1500	1000	273.85

### Abil® N - cellulose fibre-based gasket paper with NBR binding agent

Abil<sup>®</sup> N is predominantly used for sealing against hot and cold oils, greases, fuels and cooling water with corrosion and frost protection additives. Typical applications include timing cases, gearboxes, valve covers, oil trays, hydraulic and pneumatic systems, chemical equipment, pumps and compressors.

Density 0.7 - 1.0 g/cm<sup>3</sup>

Temperature up to + 120°C during continuous operation (short-term up to + 150°C), Pressure max. 10 bar,

resistant to fuel, solvents, oils, greases and many chemicals

Area of application:	Gasket paper
Туре:	Abil <sup>®</sup> N
Colour:	dark grey



Item No.	Thickness mm	Length m	Width mm			
4114340	0.25	50	1100	6.61	5.29	3.97
4042990	0.50	50	1100	10.67	8.53	6.40
4114730	0.75	50	1100	15.75	12.59	9.44
4113940	1.00	50	1100	19.60	15.68	11.76

Item No.	Thickness mm	E Length m	Width mm			
4114740	1.50	25	1100	34.53	27.63	20.72

## Lowoflex gasket paper

Fibre structure combined with flexibilised chemical treatment, resulting in a material that is resistant to oil, petrol, air, water, alcohol, grease and most solvents.

Areas of application:

Automotive industry, gearbox casings, axles, pumps, lines and container seals. Very good resistance to fuel and oil.

Area of application:	Gasket paper
Гуре:	Lowoflex
Colour:	brown



ltem No.	Thickness mm	Length m	Width mm			
4108230	2.0 mm	2	1000 mm	45.50	36.41	27.30

### novapress® BASIC



#### Material profile

Thanks to its well-balanced combination of raw materials (high-quality aramide fibres and special functional filling materials) plus NBR (nitrile butadiene rubber), novapress® BASIC's properties really make it stand out from the rest:

- Good media resistance
- Low gas leakage
- Good compressive stabilityGreat value for money

Identification colour: orange

#### Areas of application

novapress® BASIC is ideal for use with average levels of compressive and temperature stress: Sanitation technology

Sanitation technology

- (gas and water supply)
- Pipeline construction
- Plant engineering
- Mechanical engineering

### Material data

General information:

- Binding agent: NBR
- Approvals: DVGW, SVGW, HTB, KTW, VP-401,WRC
- Identification colour: orange on both sides
- Non-stick coating: coating on one side as standard
- Size and thickness tolerances: in acc. with DIN 28 091-1

### novapress<sup>®</sup> FLEXIBLE/815



#### Material profile

Thanks to its high proportion of NBR (nitrile butadiene rubber), combined with aramide fibres, novapress® FLEXIBLE/815 has properties that really make it stand out from the rest:

- High resistance to oil
- Minimum swelling in oils and fuels
- Ideal adaptability
- Low gas leakage with low minimum surface pressure

Identification colour: green/natural

#### Areas of application

novapress<sup>®</sup> FLEXIBLE/815 is ideal for use in lightweight flange designs and in any application that requires particularly good resistance to oil. Additionally, novapress<sup>®</sup> FLEXIBLE/815 is the number-one choice where maximum seal tightness counts, even at low levels of surface pressure.

- Gas and water supply
- Plant engineering and equipment construction
- Pipeline construction

#### Material data

- General information:
- Binding agent: NBR
- Approvals: DVGW, SVGW, BAM (up to max. 75°C/100 bar), HTB
- Identification colour: green/natural
- Non-stick coating: none as standard Size and thickness tolerances:
- in acc. with DIN 28 091-1

## CO Frenzelit

### novaphit

Properties of novaphit<sup>®</sup> seals made from expanded graphite

- Suitable for temperatures between -200°C and 550°C
- Not sensitive to varying loads
- Maximum adaptability to flange unevenness
- Good resistance to faults found in unfavourable sealing surface conditions
- Virtually no hot setting
- Universal chemical resistance
- Maximum seal tightness in flange
- Can be used with internal pressure of up to 250 bar



General information		novaphit® SSTC/SSTC <sup>TRD401</sup>	novaphit <sup>®</sup> EXTRA	novaphit <sup>®</sup> VS
Binding agent		no	no	no
Approvals	DVGW	1	-	-
	Firesafe (DIN EN ISO 10497, API607, BS6755)	✓	-	-
	Bam (O2:200°C/130 bar, also for liquid $O_2$ )	✓	-	1
	Germanischer Lloyd (GL)	✓	1	-
	TRD 401 (oval steam boiler sealing)	only SSTC <sup>TRD401</sup>	-	-
	ROSENERGOATOM	✓	-	1
	RMS (Russian Maritime Register of Shipping)	-	1	-
	GOSPROMNADZOR	✓	1	1
	ROSTECHNADZOR	✓	1	1
Identification colour	graphite	•	•	•
Printing	black	•	•	•
Size and thickness tolerances	in acc. with DIN 28 091-1	•	•	•

### novatec SPECIAL

Operational reliability at high temperatures thanks to its superior long-term durability. of up to 360°C The material's high level of stability and

novatec<sup>®</sup> SPECIAL combines the sealing benefits of graphite and Kevlar<sup>®</sup>. The proportion of binding agent it contains is very low, ensuring reliability at even the highest operating temperatures. novatec<sup>®</sup> SPECIAL's exceptional reliability keeps replacement and maintenance costs to a minimum, making it a worthwhile investment for ensuring plant reliability.

### Superior adaptability

Thanks to its material structure, novatec® SPECIAL can adapt itself to flange irregularities with ease. This flexibility means that novatec® SPECIAL can be used with older flanges, which helps keep costs down.

#### **Excellent compressive stability**

novatec<sup>®</sup> SPECIAL offers constant reliability throughout the entire inspection cycle,

thanks to its superior long-term durability. The material's high level of stability and long life mean that fewer inspections need to be performed – yet another way of reducing your plant costs.

#### Good flexibility means reliable handling

Thanks to its patented combination of graphite and Kevlar®, novatec® SPECIAL is extremely bendable and break-proof. It makes installation problems a thing of the past.

### Material data

- General information:
- Binding agent: NBR
- Approvals: KTW
- Identification colour: golden yellowNon-stick coating:
- A310 on both sides as standard
- Size and thickness tolerance: in acc. with DIN 28 091-1



### novatec PREMIUM II



Media resistance at high temperatures novatec® PREMIUM II is the second generation of the successful sheet type novatec® PREMIUM. Its graphite/Kevlar® material combination guarantees a level of performance that surpasses all standard FA grades. Additionally, its high proportion of graphite plus low proportion of binding agent makes it resistant to around 80% of all standard types of media found in general industry and chemical industry applications.

### Outstanding compressive stability

novatec® PREMIUM II offers long-term stability and ensures constant reliability throughout the entire inspection cycle. Its level of compressive stability surpasses that of all conventional high pressure seals. And because its long service life means longer inspection intervals, it reliably helps to lower costs.

#### Optimum adaptability

The material structure of novatec<sup>®</sup> PREMIUM II allows it to compensate for unevenness and roughness in flanges, something which is particularly common in older systems.

#### Unique non-stick properties

The blue non-stick coating is applied using a special process that makes it significantly more effective compared with conventional FA seals, and it also actively helps to protect the environment thanks to its solvent-free composition.

### **General information**

- Binding agent: NBR
- Approvals: DVGW, KTW,WRC,W 270, VP 401, BAM (max. 120°C/130 bar), TA Luft, SVGW
- Identification colour: royal blue
- Non-stick coating: A 310 on both sides Size and thickness tolerances in acc. with DIN 28 091-1

novatec<sup>®</sup> PREMIUM II has been tested by MPA Stuttgart following temperature exposure at 250°C and has been classified as a high-quality seal in accordance with VDI Guideline 2440 for TA Luft. Its leakage rate of  $2.3 \cdot 10^{-5}$  mbar · I/(s · m) thus falls significantly below the permissible upper limit of  $10^{-4}$  mbar · I/(s · m); this is measured using a helium mass spectrometer at a surface pressure of 30 N/mm2 and 1 bar of pressure.

### isoGLAS<sup>®</sup>/isoTHERM fabric



### isoGLAS<sup>®</sup> fabric

Made from E glass, maximum operating temperature +450°C, short-term +550°C, colour white Width approx. 1000 mm, length 50 linear

metres

### isoTHERM 800 fabric

Made from refined E glass, maximum operating temperature +700°C, short-term +800°C, colour green Width approx. 1000 mm, length 50 linear metres

### isoTHERM 1000 fabric

Made from refined E glass, maximum operating temperature +850°C, short-term +1000°C, colour blue Width approx. 1000 mm, length 50 linear metres

#### isoTHERM S fabric

Made from silicate, maximum operating temperature +1050°C, short-term +1100°C, colour white Width approx. 910 mm, length 50 linear metres

### isoGLAS® needle fleece



Made from E glass, maximum operating temperature +450°C, short-term +550°C, colour white. Areas of application: Mechanical engineering, boilers, air conditioning equipment.

## CO Frenzelit

### novaflon® 100/novaflon® 200/novaflon® 300/novaflon® 500

### novaflon<sup>®</sup> 100

Flat seal filled with micro hollow glass spheres

Thanks to its excellent compressibility, novaflon® 100 is ideally suited to flanges that are sensitive to stress, such as glass, ceramic and plastic varieties. The flat seal, which is made from structured PTFE and is suitable for universal use, features exceptional non-stick properties that make it a truly impressive choice. This enables it to keep downtimes to a minimum whilst increasing plant reliability and availability. But its advantages don't end there: novaflon® 100's excellent adaptability also allows it to compensate for small areas of damage or unevenness on the flange surface. What is more, its outstanding resistance to media makes novaflon® 100 the perfect choice for chemical industry applications.

#### novaflon® 200

Flat seal filled with barium sulphate

novaflon<sup>®</sup> 200 offers maximum chemical resistance to strong alkalis. The appeal

of the flat seal, which is made from structured PTFE and is suitable for universal use, lies in its high levels of mechanical resistance and pressure resistance (vacuums of up to 83 bar), as well as its optimised creep characteristics. The high degree of purity boasted by the GORE gasket sheet, which is intrinsically both clean and physiologically safe, makes novaflon<sup>®</sup> 200 ideally suited to the food and pharmaceutical industries.

### novaflon® 300

Flat seal filled with silicate

novaflon® 300 offers an excellent balance between chemical resistance and reduced creep characteristics. The flat seal can even cope with concentrated acids (with the exception of hydrofluorides). Made from structured PTFE and suitable for universal use, it is therefore the ideal choice for process industry applications. Its good mechanical resistance to both high pressure levels (vacuums of up to 83 bar) and high temperatures means that novaflon® 300 is also perfectly suited to the chemical and petrochemical industries.

#### novaflon® 500

Flat seal made from pure, multidirectionally expanded PTFE

novaflon<sup>®</sup> 500 offers universal resistance to media (pH 0 - 14) and, thanks to its elongated fibre structure, demonstrates extremely low setting behaviour. The unique concept behind the material allows it to compensate for limited bolt forces and areas of unevenness on flanges, as well as making it exceptionally resistant to pressure (vacuums of up to 200 bar). These properties make novaflon<sup>®</sup> 500 the perfect choice for the pharmaceutical, food and beverage industries as well as fragile pipeline systems and reactors used in the process industry.

General information			novaflon <sup>®</sup> 100	novaflon <sup>®</sup> 200	novaflon <sup>®</sup> 300	novaflon® 500
Approvals			FDA,TA Luft,	FDA, TA Luft, DVGW, BAM,	FDA, TA Luft, DVGW, BAM,	FDA, TA Luft,
			GL (German. Lloyd), EG 1935/2004			
Identification colour			light blue	white	brown	white
Size and thickness tolerance			in acc. with DIN 28 091-1			
<b>Physical characteristics</b> Sample thickness 2.0 mm	Testing standard	Unit	Value*	Value*	Value*	Value*
Designation	DIN 28 091-3		TF - G - O	TF - M - O	TF - M- O	TF - 0 - 0
Density	DIN 28 090-2	[g/cm <sup>3</sup> ]	1.70	2.90	2.10	0.90
Tensile strength	DIN 52910	[N/mm <sup>2</sup> ]	16	18	17	26
Compressive stability σ <sub>dE/16</sub> 150°C, 30 N/mm², 16 h	DIN 52913	[N/mm <sup>2</sup> ]	12	14	16	18
Compression	ASTM F 36J	[%]	25	3	5	50
Resilience	ASTM F 36J	[%]	40	45	45	10
Cold upsetting value $\epsilon_{\text{ksw}}$	DIN 28 090-2	[%]	20	3	3	40
Cold resilience value $\epsilon_{_{\text{KRW}}}$	DIN 28 090-2	[%]	4	1	1	3
Hot setting value $\epsilon_{WSW/150}$	DIN 28 090-2	[%]	45	40	20	15
Heat resilience value $\epsilon_{_{WSW/150}}$	DIN 28 090-2	[%]	6	4	3	2
Leakage	DIN 3535-6	[mg/ (m·s)]	< 0.015	< 0.015	< 0.015	< 0.015
Specific coating types acc. to TA Luft Helium, 1 bar, 30 MPA	VDI 2440/TA Luft	[mbar·l/ (m·s)]	5.8·10 <sup>-6</sup>	1.7·10 <sup>-6</sup>	5.4·10 <sup>-7</sup>	1.2·10 <sup>-6</sup>

\* Mode (typical value)

# FLANGE GASKETS ACCORDING TO DIN EN 1514-1 PN 16/40

### novapress® UNIVERSAL



Aramide basis, for high demands

Area of application: Type: Design: Colour: Flat seal novapress<sup>®</sup> Universal green

Item No.	Thickness mm	Nominal width DN	Inner diameter mm	Outer diameter mm	Max. continuous tempera	ature
872250	2.0	10	18	46	150	40.30
872310	2.0	15	22	51	150	40.30
872320	2.0	20	27	61	150	52.05
872340	2.0	25	34	71	150	65.06
872350	2.0	32	43	82	150	80.55
872370	2.0	40	49	92	150	98.51
872390	2.0	50	61	107	150	140.68
872410	2.0	65	77	127	150	188.39
872430	2.0	80	89	142	150	215.03
872440	2.0	100	115	162	150	259.63
872450	2.0	125	141	192	150	358.14
872460	2.0	150	169	218	150	465.97
872470	2.0	200	220	273	150	674.76

## novapress® MULTI II, asbestos-free





Area of application: Type: Design: Colour: Flat seal novapress<sup>®</sup> Multi II blue

	Thickness	Nominal width	Inner diameter	Outer diameter	Max. continuous temperature	
Item No.	mm	DN	mm	mm	°C.	
669570	2.0	10	18	46	250	67.48
669580	2.0	15	22	51	250	72.84
669590	2.0	20	27	61	250	90.46
669610	2.0	25	34	71	250	114.00
669620	2.0	32	43	82	250	141.28
669630	2.0	40	49	92	250	172.90
669640	2.0	50	61	107	250	245.39
669650	2.0	65	77	127	250	343.45
669660	2.0	80	89	142	250	376.13
669670	2.0	100	115	162	250	454.19
669680	2.0	125	141	192	250	625.80
669690	2.0	150	169	218	250	814.81

## **SEALING RINGS**

## CO Frenzelit

## novapress® UNIVERSAL

Aramide basis, for high demands

Area of application:
Туре:
Design:
Colour:

Sealing ring novapress<sup>®</sup> Universal green



Item No.	Thickness mm	Inches	Inner diameter mm	Outer diameter mm	
863090	2.0	1/8 small	10	18	19.22
863100	2.0	1/8 large	13	20	19.22
863110	2.0	1/4	17	24	19.22
863120	2.0	3/8	19	27	24.17
863130	2.0	1/2 small	21	30	24.17
863140	2.0	1/2 large	24	34	24.17
863150	2.0	3/4	27	38	31.01
863160	2.0	1	32	44	31.01
863170	2.0	1 1/4	42	55	53.31
863180	2.0	1 1/2	46	62	55.15
863190	2.0	2	60	78	83.02
863200	2.0	2 1/2	75	97	116.33
863210	2.0	3	88	110	132.72

## FLAT INSULATORS

#### Material profile

isoplan® products are based on special biosoluble, mineral and ceramic high-performance fibres. Together with filling materials and binding agents that are compatible with the fibres, this gives the products excellent resilience in the face of sustained temperatures, resulting in low thermal conductivity and superior insulating properties.

The organic binding agent leakage that occurs in the 300°C to 400°C temperature range leads to a process of sintering (isoplan® 750/1000: approx. 600°C, isoplan® 1100: approx. 750°C) that guarantees the material's fatigue strength at high temperatures.

The material discolouration associated with this process disappears at higher temperatures. In the case of insulation applications in self-supporting or vibrating systems, we recommend placing the material in an enclosed structure.

#### Areas of application

Its extremely high maximum operating temperatures and low thermal conductivity values make isoplan® ideal for use as an insulating material and in surface seals.

The list below shows some typical examples from the wide variety of applications in which it can be used:

- Steel industry
- Melting and moulding facilities
- Industrial furnace and boiler construction
- Chimney dampers, fire doors
- Firing and drying systems
- Mechanical engineering and equipment construction
- Electrical appliances
- Glass industry

### isoplan® 750



Material data

General information Maximum operating temperature 750°C Identification colour white Thickness tolerances ± 10%

Area of application: Sheet Type:

isoplan® 750

Item No.	Thickness mm	Length mm	Width mm	unit m²		
195560	1.5	1000	1000	65	6.20	5.27
195570	2.0	1000	1000	50	7.67	6.52
195580	3.0	1000	1000	33	10.70	9.10
195590	4.0	1000	1000	25	14.48	12.31
195600	5.0	1000	1000	20	16.95	14.41
195610	6.0	1000	1000	17	21.38	18.17
195620	8.0	1000	1000	13	31.80	27.03
195630	10.0	1000	1000	10	44.68	37.98

## isoplan® 1000



Delivery information: Sizes in mm: 1000x1000 Special sizes available on request Thicknesses in mm: 1.5 / 2.0 / 3.0 / 4.0 / 5.0 / 6.0 / 8.0 / 10.0 Other material thicknesses available on request.

### General information

• Binding agent: organic

- Identification colour: white with green honeycomb print
- Operating temperature: 1000°C
- Thickness tolerance: ± 10%

## **FLAT INSULATORS**

## isoplan® 1100

Material data General information Maximum operating temperature 1100°C Identification colour white Thickness tolerances ± 10%

Area of application:	Sheet
Туре:	isoplan® 1100



Item No.	Thickness mm	Length mm	Width mm	unit m²		
472530	1.5	1000	1000	65	8.79	7.47
195640	2.0	1000	1000	50	11.32	9.62
195650	3.0	1000	1000	33	16.06	13.65
195660	4.0	1000	1000	25	21.11	17.94
195670	5.0	1000	1000	20	25.12	21.35
195680	6.0	1000	1000	17	31.72	26.96
195690	8.0	1000	1000	13	46.22	39.29
195700	10.0	1000	1000	10	59.16	50.29

## FIRE EXTINGUISHING BLANKETS

Area of application:

Type: Design:

## isoGLAS® fire extinguishing blankets



Mass per unit area 400 g/m2, in acc. with DIN 14155, with pocket grips attached

Extinguishing/high temperature protection cover isoGLAS® E glass filament yarn

Item No.	Width	Length	
409530	1600 mm	2000 mm	45.86

### Fire extinguishing blanket box made from sheet steel

Metal storage box for fire extinguishing blankets, rectangular, painted red, for wall-mounting

Item No.	Height	Width	Depth	
409490	315 mm	155 mm	305 mm	39.71

## **INSULATOR CORDS**

### isoGLAS® cords

Type: Design:

Maximum operating temperature: 550°C (short-term 650°C) Base material is E glass. Texturing provides a large storage volume and thus good insulating properties. isoGLAS® products are safe for use with textiles and are not hazardous to health. Typical areas of application: • Ceramic furnaces and boiler construction • Expansion joints • Cable winding Type of fibre: E glass Fibre fineness 9 - 15 ìm Maximum operating temperature 450°C Maximum short-term operating temperature 550°C Colour white isoGLAS® properties: • not hazardous to health high strength • good electrical insulating properties • good thermal insulating properties • non-flammable and does not rot • dimensionally stable • chemical resistance to pH 3 - 9 • no toxic ingredients • safe for skin Area of application: Cord

isoGLAS®



Item No.	Diameter mm	Unit linear metres	Weight g/linear metre	
472520	3	200	7	0.15
195720	5	200	20	0.21
195730	6	100	31	0.25
195740	8	100	41	0.50
195750	10	100	63	0.62
195760	12	50	100	0.93
195780	20	50	280	2.02
409550	25	25	440	3.09

Round, twisted to the right/left, elastic and tear-resistant

## **INSULATOR CORDS**

### isoTHERM® 800 cord



#### Maximum operating temperature: 700°C (short-term 800°C)

These products, which feature a light green surface and are based on textured special glass, are characterised by their exceptionally textile-like behaviour even at high temperatures.

 $isoTHERM^{\circledast}$  800 is completely harmless to health and offers high temperature resistance as well as excellent chemical resistance.

- Typical areas of application:
- Furnace doors
- Expansion joints
- Chimney pipes
- Type of fibre: refined glass
- Fibre fineness 9 15  $\mu$ m

Maximum operating temperature 700°C

Maximum short-term operating temperature 800°C

Colour green

### isoTHERM 800<sup>®</sup> properties:

- not hazardous to health
- high strength
- good electrical insulating properties
- good thermal insulating properties
- non-flammable and does not rot
- dimensionally stable
- chemical resistance to pH 3 9
- no toxic ingredients
- safe for skin

Design:

no fibres that can penetrate the lungs according to TRGS [Technical Rules for Hazardous Substances]

Area of application: Type:

1

Cord

isoTHERM® 800 Round, twisted to the right/left, elastic and tear-resistant

Item No.	Diameter mm	Unit linear metres	Weight g/linear metre	
10032441	3	200	12	0.16
10032442	5	200	25	0.36
10032443	6	100	35	0.47
10007212	8	100	48	1.12
10032444	10	100	75	1.44
10032445	12	50	100	1.90
10032446	15	50	180	2.61
10032447	20	50	285	4.01

## **INSULATOR CORDS**

## isoGLAS® gaskets

Type: Design:

Maximum operating temperature: 550°C (short-term 650°C) Base material is E glass. Texturing provides a large storage volume and thus good insulating properties.  $isoGLAS^{\scriptscriptstyle (\! 8\!)}$  products are safe for use with textiles and are not hazardous to health. Typical areas of application: • Ceramic furnaces and boiler construction Industrial furnaces • Plant and mechanical engineering Type of fibre: E glass Fibre fineness 9 - 15 µm Maximum operating temperature 450°C Maximum short-term operating temperature 550°C Colour white isoGLAS® properties: • not hazardous to health high strength • good electrical insulating properties • good thermal insulating properties • non-flammable and does not rot • dimensionally stable • chemical resistance to pH 3 - 9 • no toxic ingredients safe for skin Area of application: Gasket

isoGLAS®

2-way diagonally braided, square



Item No.	Dimension mm	Unit linear metres	Weight g/linear metre	
10032514	6 x 6	200	40	0.65
10032516	8 x 8	100	70	1.10
10032519	10 x 10	100	100	1.70
10032520	12 x 12	50	135	2.05
10032522	15 x 15	50	220	2.35
10032525	20 x 20	50	400	4.79
10032526	25 x 25	25	580	6.84
10032527	30 x 30	25	830	7.91
10032530	40 x 40	20	1450	12.62

## **INSULATION STRIPS**

## isoGLAS<sup>®</sup> strips



Maximum operating temperature: 550°C (short-term 650°C) Base material is E glass. Texturing provides a large storage volume and thus good insulating properties. isoGLAS® products are safe for use with textiles and are not hazardous to health. Typical areas of application: Cable and pipe insulation Chimney construction • Fire doors Type of fibre: E glass Fibre fineness 9 - 15  $\mu m$ Maximum operating temperature 450°C Maximum short-term operating temperature 550°C Colour white Linen binding isoGLAS® properties: not hazardous to health high strength • good electrical insulating properties good thermal insulating properties non-flammable and does not rot • dimensionally stable • chemical resistance to pH 3 - 9 • no toxic ingredients safe for skin Strip

### Area of application: Type:

Design:

isoGLAS® Fabric, with two strong web edges, stable shape, tearresistant

Item No.	Thickness mm	Width mm	Unit linear metres	Weight g/linear metre	
195790	2.0	20	150	20	0.34
195800	2.0	30	50	28	0.41
195810	2.0	40	50	37	0.55
195820	2.0	50	50	48	0.65
195850	2.0	100	50	90	1.19

## **INSULATION STRIPS**

### isoTHERM® 800 strips

Maximum operating temperature: 700°C (short-term 800°C)

These products, which feature a light green surface and are based on textured special glass, are characterised by their exceptionally textile-like behaviour even at high temperatures. isoTHERM® 800 is completely harmless to health and offers high temperature resistance as well as excellent chemical resistance.

### Typical areas of application:

- Cable and pipe insulation
- Chimney construction
- Fire doors

Type of fibre: refined glass

- Fibre fineness 9 15 µm
- Maximum operating temperature 700°C
- Maximum short-term operating temperature 800°C

Strip

Colour green

Linen binding

### isoTHERM 800<sup>®</sup> properties:

- not hazardous to health
- high strength
- good electrical insulating properties
- good thermal insulating properties
- non-flammable and does not rot
- dimensionally stable
- chemical resistance to pH 3 9
- no toxic ingredients
- safe for skin

no fibres that can penetrate the lungs according to TRGS [Technical Rules for Hazardous Substances]

### Area of application:

Type: Design: isoTHERM® 800 Fabric, with two strong web edges, stable shape, tearresistant

Item No.	Thickness mm	Width mm	Unit linear metres	Weight g/linear metre	
10032450	2.0	20	150	20	0.67
10032451	2.0	30	50	28	0.78
10032452	2.0	40	50	37	1.20
10032453	2.0	50	50	48	1.56
10032454	2.0	100	50	90	3.17



## **FABRIC INSULATION**

### isoGLAS® fabric



Maximum operating temperature: 550°C (short-term 650°C) Base material is E glass. Texturing provides a large storage volume and thus good insulating properties. isoGLAS® products are safe for use with textiles and are not hazardous to health. Typical areas of application: • Ceramic furnaces and boiler construction Industrial furnaces • Plant and mechanical engineering Type of fibre: refined glass Fibre fineness 9 - 15  $\mu$ m Maximum operating temperature 450°C Maximum short-term operating temperature 550°C Colour white isoGLAS<sup>®</sup> properties: not hazardous to health • high strength • good electrical insulating properties • good thermal insulating properties non-flammable and does not rot • dimensionally stable • chemical resistance to pH 3 - 9 • no toxic ingredients safe for skin

Area of application: Type:

Item No.	Thickness mm	Width mm	Unit linear metres	Weight g/linear metre	
472510	0.65	1000	50	660	9.15
195710	1.5/-2	1000	50	1000	11.27

Fabric isoGLAS®

## **FABRIC INSULATION**

### isoTHERM® 800 fabric

### Maximum operating temperature: 700°C (short-term 800°C)

These products, which feature a light green surface and are based on textured special glass, are characterised by their exceptionally textile-like behaviour even at high temperatures. isoTHERM® 800 is completely harmless to health and offers high temperature resistance as well as excellent chemical resistance.

### Typical areas of application:

- Furnace doors
- Expansion joints
- Chimney pipes

Type of fibre: refined glass

Fibre fineness 9 - 15  $\mu m$ 

Maximum operating temperature 700°C

Maximum short-term operating temperature 800°C

#### Colour green isoTHERM 800<sup>®</sup> properties:

- ISO I HERINI 800° properties
- not hazardous to health
- high strength
- good electrical insulating properties
- good thermal insulating properties
- non-flammable and does not rot
- dimensionally stable
- chemical resistance to pH 3 9
- no toxic ingredients
- safe for skin

• no fibres that can penetrate the lungs according to TRGS [Technical Rules for Hazardous Substances]

### Area of application: Fabric

Туре:	isoTHERM® 80	J

Item No.	Thickness mm	Width mm	Unit linear metres	Weight g/linear metre	
483680	1.8	1000	50	1000	19.15



## **FABRIC INSULATION**

### isoTHERM<sup>®</sup> 1000 fabric



### Maximum operating temperature: 850°C (short-term 1000°C)

The base material is created using a chemical refining process. This involves extracting the components with low melting points from E glass fibres and thus increasing the temperature resistance. These products feature a light blue colour. isoTHERM® 1000 is characterised by its exceptionally textile-like behaviour and kindness to skin, and has been classified as completely harmless to health.

- isoTHERM <sup>®</sup> 1000 properties:not hazardous to health
- high strength
- good electrical insulating properties
- good thermal insulating properties
- non-flammable and does not rot
- dimensionally stable
- chemical resistance to pH 3 9
- no toxic ingredients
- safe for skin

• no fibres that can penetrate the lungs according to TRGS [Technical Rules for Hazardous Substances]

### Area of application: Fabric

Type: isoTHERM® 1000

Item No.	Thickness mm	Width mm	Unit linear metres	Weight g/linear metre	
661960	2.0	1000	50	1200	41.52

## **INSULATORS**

### isoTHERM® 800 and isoTHERM® 1000 high temperature protection covers

Made from refined glass, dimensions 1000 x 1000 mm to 2000 x 3000 mm, edged all around, individually shrink-wrapped.

#### Application examples:

Heat safety curtains, backing strips, protective covers



### novaSEAL® HP

#### Areas of application

novaSEAL® HP – the classic fabric/rubber seal for hand-hole, head-hole and manhole closures in boilers and containers.

- Can be used without any restrictions (test category D)
- Sealing surface designed for maximum safety
- Adapts perfectly to closures, regardless of what type of closure system has been used
- Guarantees leakproof boiler operation, limited cold water tightness, easy installation and removal
- Retightened after installation when the boiler is restarted and reaches its proper operating condition when installation is complete

#### Material profile

The new novaSEAL® HP is produced using a temperature, corrosion and chemicalresistant high-performance fabric with an elastomer coating, and has been specially developed to satisfy the requirements of test category D.

Our proven production method uses this coated material to create endless, dimensionally stable and true-to-size rings with unique properties.

### Sealing characteristics

- Operating limits 40 bar 250°C
- Surface pressure min. 5 N/mm<sup>2</sup> max. 35 N/mm<sup>2</sup>
- Recommended heating gradient max. 2°C/min.
- Boiler water/media resistance
   TRD 611

• Component identification TÜV.D.10-013.D Given the range of different installation and operating conditions as well as application and process engineering methods that this material may be subjected to, the information in this brochure can only serve as a guide.

### Product range

novaSEAL® HP seals are produced in an oval shape designed for sealing hand-holes, head-holes and manholes in boilers and containers.

They are available in the following standard dimensions (internal oval x edge width x thickness)

80 x 120 x 15 x 8 mm 220 x 320 x 25 x 10 mm 100 x 150 x 15 x 8 mm 300 x 400 x 25 x 10 mm 115 x 165 x 15 x 8 mm 320 x 420 x 25 x 10 mm 150 x 200 x 15 x 8 mm 350 x 450 x 25 x 10 mm (other dimensions available on request)

novaSEAL<sup>®</sup> HP seals are packed individually as standard and are supplied with detailed installation instructions.



## **INNOVATIVE SEALING SOLUTIONS**

### GORE



GORE seals have proved a success in a whole range of different applications over many years. They are able to create seals even with low bolt forces, can adapt to areas of unevenness on flanges, are dimensionally stable, and feature minimum surface pressure loss, which in turn guarantees protection against blowout.

GORE seals are designed to meet the large number of requirements that are necessary to ensure pipeline systems are securely sealed. They significantly reduce overall costs because they can be used anywhere – in other words, just one type of sealing material is suitable for steel, enamel and plastic systems alike.

GORE gaskets are the best-performing and most versatile products available on today's market. They boast an exceptionally long life, provide protection against unexpected failures, and help to reduce plant downtimes. Seals made from expanded polytetrafluoroethylene (ePTFE)

High level of chemical resistance (pH 0-14)

Adaptable and therefore robust



GORE<sup>®</sup> sealing technology products are ideal for all kinds of applications:

- Containers
- Columns
- Pumps
- Reactors
- Pipeline flanges
- Stirrers
- Turbines
- Valves
- Heat exchangers
- Intake and exhaust air ducts





## FOAMS + FELTS

### Foams

Foam is the perfect material for padding, filtering, insulating, sealing, storage and packing.



PUR foams, standard types	Density kg/m³	Areas of application
1. Polyether	17 - 25	Soft packaging, linings, protective profiles, bubble wrap
2. Polyether	30 - 35	Cushions and mattresses, for living and sleeping areas
3. Polyether	55 - 80	Firmer cushions for more demanding environments (catering, physiotherapy),
composite (recycled)	80 - 200	technical areas, packaging for heavy packaged goods
4. Polyester	20 - 60	Firmer packaging, ideal for stamped parts and case linings
Special types		
5. Anti-static foams	21, 24, 30, 32, 38	Special packaging for preventing static electricity (including stamped parts and profile foam), e.g. for printed circuit boards, only available in pink
6. Electrically conductive foams	25	Applications as above, only available in black
7. Filter foam	30	Audio technology (loudspeaker fronts), technical areas for filtering air and liquids, ponds and aquariums; fine to coarse pores
8. Coloured foam	30	Deep colour, fine pores, available in red, blue, yellow and green, for displays and case linings
9. Flame-retardant foams	25 - 60	Technical areas such as sound insulation, meet fire safety regulations in acc. with FMVSS 302 and UL 94
10. Cold foam	40 + 50	High-quality elastic cushions for living and sleeping areas
11. Viscoelastic foams	60	SAF = shock-absorbing foam, heat and moisture-related viscous behaviour, extremely adaptable, for orthopaedic and medical applications, for example.

## Needle felts and fleeces

Textile materials are found in a range of different applications and have many useful properties.

We offer more than 10.000 different items, custom-made to your specifications and designed for use in an extensive variety of areas.

Self-adhesive felts produced (outsourced) in a wide range of shapes, colours and dimensions.

Areas of application: Automotive industry, furniture industry, footwear industry, consumer electronics, etc.

Parts cut and stamped from needle felt, in line with drawings or specifications, for a range of different applications.



## **FABRIC INSULATION**

### **Wool felt**



Wool felt is a material that has a long tradition stretching back through the history of civilisation. And while its manufacturing methods might have become more sophisticated over the centuries, the principle behind them and the basic raw materials have never changed. The process uses sheep's wool or wool fibres that are felted and reinforced using moisture, heat and friction-based techniques until a homogeneous textile fabric - wool felt - is produced.

Area of application:	Wool felt
Туре:	Medium strength
Grade (material):	MD
Colour:	white
Design:	Density 0.36

Item No.	Width mm	Thickness mm	
598660	1600	1	28.10
170010	1600	2	28.10
170020	1600	3	28.10
170040	1600	5	28.10
10009452	1600	6	28.10
170060	1600	8	28.10
169920	1600	10	28.10
169930	1600	12	28.10
568390	1600	15	28.10
568410	1600	20	28.10

### **Filter mat**



- For coarse dust filtering in all types of ventilation equipment,
- Air conditioning and ventilation units
- Prefiltering in air conditioning systems exposed to large amounts of dust
- Prefiltering intake air in coating and drying systems
- -Tested in acc. with DIN EN 779
- Break-proof synthetic fibres
- Fire protection in acc. with DIN 53438 (F1)
- Resistant to humidity up to 100% r.h.
- Resistant to temperature up to 80°C
- Silicone-free with no substances that could damage coatings - Weight: 350 gr/m<sup>2</sup>

Area of application:	Filter mat
Туре:	V 15/400
Colour:	white
Design:	Filter class G4 (EU2)

Item No.	Width mm	Length m	Length m			
170890	2000	20	20	22.23	17.82	14.23

## **NOISE PROTECTION** A BRIEF ABC OF ACOUSTIC/SOUND INSULATION

To help you get to grips with some of the technical terms that are commonly used in the field of noise protection, we have compiled a brief list of the most important ones below.

### Absorption =

### airborne sound absorption

With all types of vibration, some of the kinetic energy is converted into heat (by means of friction in open-cell polyurethane foams, for example).

#### Inverse-square law

States that the sound level in the far field of an acoustic radiator decreases 6 dB each time the distance from the source doubles (without taking into account atmospheric absorption in the case of spherical waves).

#### Acoustics

The study of sound.

#### Equivalent absorption area

A covered surface in a room that has a sound absorption coefficient of 1, and demonstrates the same absorption as the entire surface of a room and the objects in it.

#### **Rating sound level**

Corrected equivalent continuous sound pressure level, relating to certain periods of time. The rating sound level is normally used for comparisons with immission quide values.

### Decibel

0.1 bel. Unit without dimension for logarithmic physical values or numerical ratios.

### Insertion loss

Specifies, in dB, the sound level reduction caused by sound insulation equipment (enclosures or sound absorbers).

#### Frequency

Number of sound vibrations per second. Measured in hertz (Hz).

#### Threshold of audibility

Minimum sound pressure level that is perceptible by the human ear.

The pressure level p at the threshold of hearing at 1000 Hz is the reference value for the sound level:

 $p_0 = 2 \times 10^{-4} \mu \text{ bar} = 0 \text{ dB}$ 

#### Immission guide values

Defined in various regulations; highest level specified as rating sound level for neighbourhoods and places of work. These regulations include TA Lärm, VDI 2058 Sheet 1, Arbeitslärmschutzrichtlinie (Work Noise Directive), UVV Lärm, etc.

### Structure-borne sound

Sound that travels in a solid material or on its surface.

### Structure-borne sound insulation

Measures preventing structure-borne sound from spreading by using reflection at an elastic layer.

Structure-borne sound can be insulated by mounting machines on rubber/metal elements, for example, or using other elastic means of separating components.

#### Structure-borne sound absorption

Absorption of structure-borne sound energy whilst sound is travelling in solid materials.

Losses occur due to thermal, magnetic or molecular rearrangement of molecules.

Sandwich materials and sound-deadening materials, for example, have good structure-borne sound absorption properties.

#### Airborne sound

Sound that travels through the air in the form of sound waves.

### Airborne sound insulation

A construction element (such as a wall) insulates airborne sound between two rooms.

Pinta Waffel Dämm improves the sound insulation level of a construction element, enabling a "loud" room to be insulated to the outside (making it quieter) and the sound level to be absorbed in the room.

### Airborne sound absorption

The sound in a room is absorbed when sound energy in open-pored soft foam, for example, is converted into heat and thus absorbed.

#### **Reverberation time**

Time in seconds taken for the sound intensity to decrease by 60 dB after the sound event has stopped.

#### Sound absorption level

The relationship between the absorbed amount of sound and the intensity of the sound that has occurred.

The sound absorption level  $\alpha$ s describes how much of the sound energy that occurs is absorbed.

### Sound level

The logarithmic excess sound pressure relating to the sound pressure  $p_0$  of the human ear at 1000 Hz. Expressed in dB.

#### Impact sound

Impact sound refers to the sound which occurs as a result of humans moving on a floor or as a result of operating machines, and which is perceived in other adjacent rooms/rooms above or below because of structure-borne sound transmission.

## **STRUCTURE-BORNE SOUND INSULATION**

### Terodem 2001/2002





Bitumen-impregnated wool felt boards whose upper face features a special, additional absorption layer with diamondshaped embossing, designed to enhance structure-borne sound absorption properties. The opposite side is adhesive and has a cover over the adhesive layer. **Area of application:** 

- Machine coverings for copying systems
   IT systems
- Machine tools
- Spinning machines
- Conveyor systems
- Suitable for overhead work, even without bonding agents. Can be used on planar and slightly curved surfaces.

**Operating temperature range:** -30°C to +80°C

Item No.	Туре	Length mm	Width mm	Thickness mm	Unit			
186760	2001	1000	500	1.4	25	6.67	6.02	5.04
410540	2002	1000	500	2.4	20	7.82	7.09	5.88

## Terodem 5000





Bitumen films: self-adhesive on one side, flexible, polymer-modified. Upper side coated with a PE anti-blocking layer. Suitable for absorption of structure-borne sound radiation (sound deadening) in the case of metal/sheet metal structures made from aluminium, steel, copper or even hard plastics, and for airborne sound insulation in the case of lightweight construction elements made from woodbased materials, plasterboard or sheet metal.

### Area of application:

- Ventilation pipes
- Air ducts
- Vehicle bodywork
- Dishwashers
- Casings for machine tools

### Operating temperature range:

-30°C to +80°C

ltem No.	Туре	Length mm	Width mm	Thickness mm	Unit			
410610	5001	1000	500	2.0	60	5.40	4.86	4.05
186680	5500	1000	500	2.5	30	6.88	6.18	5.83
456790	5037	1000	500	4.4	40	6.88	6.18	5.83
456690	5038	1000	500	3.0	25	6.88	6.18	5.83

## **STRUCTURE-BORNE SOUND INSULATION**

### Terodem SP 100 Alu

Bitumen film, self-adhesive on one side, with fleece lining (aluminium/silver colour) on surface, for effective structure-borne sound absorption (sound deadening) on thin sheet metal (up to approx. 1.3 mm thick). Terodem SP 100 Alu is somewhat flexible and can be attached to planar as well as slightly curved surfaces. The fleece lining prevents the sheets from breaking, even at low temperatures. **Area of application:** 

- Vehicle parts

- Domestic appliances
- Sinks

- Garage doors

Operating temperature range:

-30°C to +80°C





ltem No.	Length mm	Width mm	Thickness mm	Carton			
456700	550	250	2.1	1 (= 6 sheets)	29.93	26.94	22.47

## **STRUCTURE-BORNE SOUND INSULATION**

### Terophon 112 DB



Spray-on sound-deadening material based on aqueous synthetic resin dispersion and flame-retardant additives. An environmentally friendly product thanks to its use of low-pollutant raw materials (free from halogen, heavy metals and asbestos). Terophon 112 DB is flame-retardant in accordance with DIN 4102 Part 1, Class B 1, up to a 4.5 mm dry film thickness. As well as having a significant effect on acoustics, the product also demonstrates thermal insulation properties.

### Area of application:

- For sound deadening/structure-borne sound absorption in thin-walled sheet metal structures used in vehicle, railway, maritime, plant and equipment construction.

Colour:beigeOperating temperature range:-50°C to +120°C

ltem No.	Container type	Container size kg	Unit		
632780	Hobbock	40	1	218.35	174.40

## Synthetic heavy foil





Heavy-duty yet flexible synthetic heavy foil based on amorphous polyolefins, without reinforcement, with very good insulating properties, lined with PP spunbonded fabric on one side, acrylate-based adhesive on underside (self-adhesive). Area of application: - Vehicle bodywork and construction - Domestic appliances - Maritime construction - Mechanical engineering - Partitions - Air ducts - Sound-insulating doors grey/brown Colour: **Operating temperature range:** -40°C to +160°C

Item No.	Туре	Length mm	Width mm	Thicknes mm	ss Unit			
456800	AK 8560/Sonit KM 2S	1000	500	2	25	7.45	6.70	6.00
456810	AK 8561/Sonit KM 3S	1000	500	3	30	8.90	7.99	6.65

## Pinta Waffel B1

A highly effective product for sound absorption with an attractive design. The structure increases the surface area and good sound absorption values are achieved in the mid to high-frequency range.

### Product advantages:

- Environmentally friendly since it is free of synthetic and natural mineral fibres, halogens and CFCs
- Cost savings during transport and handling due to its low weight
- Extraordinarily good sound absorption
- Range of sheet shapes and element thicknesses available
- High ageing resistance

Colour:	grey
Material:	Melamine resin, not self-adhesive
Fire protection class:	B1 low flammability, self-extinguishing



ltem No.	Length mm	Width mm	Thickness mm	Unit			
10004841	1250	625	35/35 (mini Waffel)	24	20.28	18.98	17.78
4006450	1250	625	35/125	24	37.76	33.99	28.32
10011790	1250	625	45/125	20	37.76	33.99	28.32
726290	1250	625	65/125	16	37.76	33.99	28.32

## Pinta Waffel B3

PU-based fibre-free foam that meets the criteria of construction material class B3 in accordance with DIN 4102. The waffle structure increases the surface area and good sound absorption values are achieved in the mid to high-frequency range.

### Product advantages:

- Environmentally friendly since it is free of synthetic and natural mineral fibres, halogens and CFCs
- Cost savings during transport and handling due to its low weight
- Extraordinarily good sound absorption thanks to profiling
- Range of sheet shapes and element thicknesses available
- Consistent appearance over the surface on which it is laid

Colour:	anthracite
Material:	PU foam, not self-adhesive
Fire protection class:	B3 easily flammable

$\langle \langle \rangle$	SA	VD
THE	L.	X
	Y	/

ltem No.	Length mm	Width mm	Thickness mm	Unit			
454370	1000	1000	20	42	16.74	15.07	12.55
454410	1000	1000	35	24	55.85	50.26	41.88
410420	1000	1000	45	20	55.85	50.26	41.88
186710	1000	1000	65	14	55.85	50.26	41.88

### Pinta Waffel Dämm B2



This two-in-one WAFFEL DÄMM product offers you the best of both worlds, particularly in low-frequency areas. In compressor rooms and pump stations, for example, the system is able to achieve optimum sound insulation thanks to an embedded heavy-duty layer. WAFFEL DÄMM is primarily intended to be attached to the wall, but it can also be attached to the ceiling under certain conditions.

### Product advantages:

- Combination product for sound insulation and sound absorption
- Environmentally friendly since it is free of synthetic and natural mineral fibres, halogens and CFCs
- Extraordinarily good sound absorption thanks to profiling

Colour: Material:	white Melamine resin + embedded heavy-duty layer (2 kg/m²), not
	self-adhesive
Fire protection class:	B2 according to DIN 4102 (overall element)

ltem No.	Length mm	Width mm	Thickness mm	Unit			
454550	1200	400	65	16	42.63	38.37	31.97

## Pinta Waffel Dämm B3



This two-in-one WAFFEL DÄMM product offers you the best of both worlds, particularly in low-frequency areas. In compressor rooms and pump stations, for example, the system is able to achieve optimum sound insulation thanks to an embedded heavy-duty layer. WAFFEL DÄMM is primarily intended to be attached to the wall, but it can also be attached to the ceiling under certain conditions.

### Product advantages:

- Combination product for sound insulation and sound absorption
- Environmentally friendly since it is free of synthetic and natural mineral fibres, halogens and CFCs
- Extraordinarily good sound absorption thanks to profiling

Colour:	anthracite
Material:	PU foam + embedded heavy-duty layer,
	not self-adhesive
Fire protection class:	B3 easily flammable

ltem No.	Length mm	Width mm	Thickness mm	Unit			
186700	1200	500	65	24	22.57	20.31	16.92

## Pinta Pyramide B1

A highly effective product for sound absorption with an attractive design. The structure increases the surface area and good sound absorption values are achieved in the mid to high-frequency range.

#### Product advantages:

- Environmentally friendly since it is free of synthetic and natural mineral fibres, halogens and CFCs
- Cost savings during transport and handling due to its low weight
- Extraordinarily good sound absorption
- Range of sheet shapes and element thicknesses available
- High ageing resistance

Colour:	grey
Material:	Melamine resin, not self-adhesive
Fire protection class:	B1 low flammability, self-extinguishing



Item No.	Length mm	Width mm	Thickness mm	Unit			
664550	1200	600	50	18	16.55	15.70	14.85
859270	1200	600	70	12	24.50	23.87	22.60

## Pinta Pyramide B3

A highly effective product for sound absorption with an attractive design. The structure increases the surface area and good sound absorption values are achieved in the mid to high-frequency range.

### Product advantages:

- Environmentally friendly since it is free of synthetic and natural mineral fibres, halogens and CFCs
- Cost savings during transport and handling due to its low weight
- Extraordinarily good sound absorption
- Range of sheet shapes and element thicknesses available

- High ageing resistance	
Colour:	anthracite
Material:	PU foam, not self-a

Material:	PU foam, not self-adhesive
Fire protection class:	B3 easily flammable

Item No.	Length mm	Width mm	Thickness mm	Unit			
377910	1000	1000	70	14	32.76	31.10	29.48



### Pinta Plano B1



Consists of a melamine resin-based open-cell foam that meets the criteria of construction material class B1 in accordance with DIN 4102.

### Product advantages:

- Environmentally friendly since it is free of synthetic and natural mineral fibres, halogens and CFCs
- Cost savings during transport and handling due to its low weight
- Extraordinarily good sound absorption
- Range of sheet shapes and element thicknesses available
- High ageing resistance

Colour:grey, also available in white (price on request)Operating temperature range:-60°C to +150°CMaterial:Melamine resin, not self-adhesive

Material:Melamine resin, not self-adhesiveFire protection class:B1 low flammability, self-extinguishing

Item No.	Length mm	Width mm	Thickness mm	Unit		
1189900	625	625	20	34	3.98	3.55
1189910	625	625	30	20	21.53	20.45
1189920	625	625	40	17	21.53	20.45
1189930	625	625	50	14	21.53	20.45

# COMBINATION SYSTEMS FOR AIRBORNE AND STRUCTURE-BORNE SOUND INSULATION

## Acoustic foam B3

Profiled polyurethane-based foam (acoustic foam), self-adhesive and featuring a high-quality adhesive system, with or without polyurethane skin coating.

### Colour: anthracite

Area of application:

Mechanical engineering, plant engineering, sound insulation booths, vehicle cabs, sound absorbers, compressors **Type:** Self-adhesive on one side **Fire protection class:** B3 easily flammable





Item No.	Material	Length mm	Width mm	Thickness mm	Unit			
186790	PU foam without skin	985	985	2/20	50	22.52	20.32	18.06
186800	PU foam with skin	985	985	2/20	50	36.33	32.70	29.08
213610	PU foam without skin	985	985	2/30	20	45.15	40.64	36.12
415930	PU foam with skin	985	985	2/30	50	45.15	40.64	36.12
627840	PU foam without skin	985	985	2/50	25	45.15	40.64	36.12
839050	PU foam with skin	985	985	2/50	25	45.15	40.64	36.12

## Terosorb B2 (substitute)

Combination matting made from bitumen sound-deadening film and heavy-duty absorption foam, self-adhesive. Consists of 4 layers: peel-off film, polyether foam, bitumen film, self-adhesive layer.

Colour: anthracite

**Area of application:** Automotive industry, vehicle construction, construction machines, etc.

Operating temperature range:

-30°C to +80°C



ltem No.	Туре	Length mm	Width mm	Thickness mm	Weight kg/m²	Unit			
456740	4720	1000	500	20	3,8	20	22.68	20.42	18.16
731370	4710	1000	500	10	3,4	40	13.10	11.80	9.70

# COMBINATION SYSTEMS FOR AIRBORNE AND STRUCTURE-BORNE SOUND INSULATION

### Terodem 4000



Combination matting made from bitumen-impregnated wool felt board, featuring openpored PUR absorption foam, self-adhesive.

Colour:greyArea of application:Engine compareOperating temperature range:-30°C to +90°CFire protection class:B2 according to

grey Engine compartments, housing covers -30°C to +90°C B2 according to DIN 4102

Item No.	Туре	Length mm	Width mm	Thickness mm	Unit			
410590	4611 H	1000	500	11	10	19.80	17.80	15.85
744930	T 4410	1000	500	10	20	21.84	19.69	17.48
410570	T 4420	1000	500	20	20	21.84	19.69	17.48
790290	T 4421 H	1000	500	21	20	21.84	19.69	17.48

## Fibreglass floor matting





Lined with aluminium coarse-grained film, self-adhesive on one side.

Area of application: Engine encapsulation in hot areas Operating temperature range: -30°C to +150°C

ltem No.	Туре	Length mm	Width mm	Thickness mm	Unit			
415990	K52/7	1000	1000	7.0	40	27.40	24.66	20.55

## **REIFF CAN DO MORE**

With a product range of more than 140,000 standard products, it is impossible to know every product. Antifriction bearings, V-belts, hydraulic hoses or sealing rings – the products are as diverse as the intended applications and application areas themselves.

Explore our diverse product areas and discover the possibilities this catalogue provides.

From the standard product to the special design – we are true product specialists in the areas of:

## DRIVE TECHNOLOGY

FLAT SEALS, RUBBER COMPONENTS AND INSULATORS RUBBER AND PLASTIC PROFILES

### LINEAR TECHNOLOGY VIBRATION DAMPING ELEMENTS

SEALING ELEMENTS ANTIFRICTION BEARINGS

SEALING TECHNOLOGY ADHESIVES, SEALANTS AND LUBRICANTS HYDRAULIC HOSES AND FITTINGS

## **HOSE TECHNOLOGY**

INDUSTRIAL HOSES AND FITTINGS V-BELTS, FLAT BELTS, CONVEYOR BELTS

**PROFILE TECHNOLOGY** 

HYDRAULIC / PNEUMATIC SEALS TIMING BELTS AND PULLEYS

> If required, we are also pleased to assemble different product elements into individual assemblies.