



WE
MAKE
FUTURE

CBG Composite GmbH

innovative and modern
environmentally friendly
composite construction materials

“made in Germany”

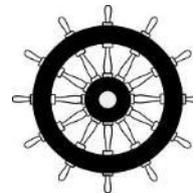
Certifications and patents

Patented solutions in a certified quality environment



- Foundation of CBG Composites GmbH in 2014
- Broad product portfolio of composite materials for use in structural and civil engineering, dry construction, shipbuilding, mechanical engineering, etc.
- Worldwide export experience

- Quality management system DIN EN ISO 9001:2015
- Marine equipment 2014/90/EC Type examination: Module B, production quality assurance: Module D
- Registered trademarks: SeaPan[®], FirePan[®], FireCore[®] etc.



Wide-range product portfolio

with the main focus on ultra-light non-flammable heat and sound insulating sandwich panels, special adhesives and technical laminates



Basalt Rocks



Basalt Roving



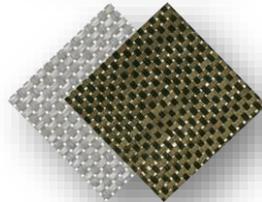
Basalt fiber



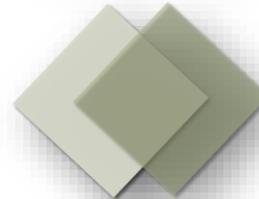
1K non-combustible
Adhesives **Ceramatrix**



Sandwich panels
SeaPan®, **FirePan®**



Glass- and basalt fiber
ceramic laminates



Glass fiber epoxy
laminates



Glass fleece
adhesives



Sealing tape
CBG fako® 3714



Special polishing paste
CBG fakopol®



Acryl glass cleaner
CBG Plexiklar®



Sustainability

from raw material up to recycling and circularity

1. Raw materials used by CBG products are almost 100% of natural origin: basalt roving, basalt ceramic laminates, basalt wool, water-based adhesives.

5. Almost 100% possible recyclability of multiple products. Reusability and circularity of selected key products.



No technological processes which would be **2.** harmful to human health or the environment

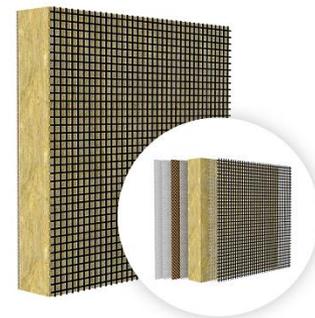
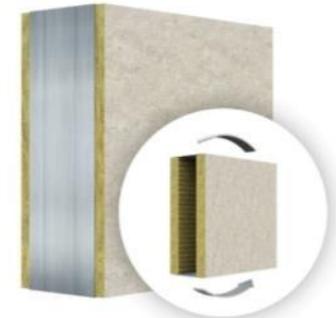
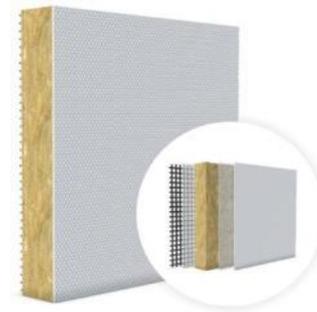
No finished products that would be classified as **3.** harmful to health or the environment. The company continuously maintains and updates relevant safety data sheets

4. No emergence of substances that are harmful to health or the environment during the use of the products. Positive CO2 balance due to their thermal insulation properties

Sandwich-Panels

Innovative and universal

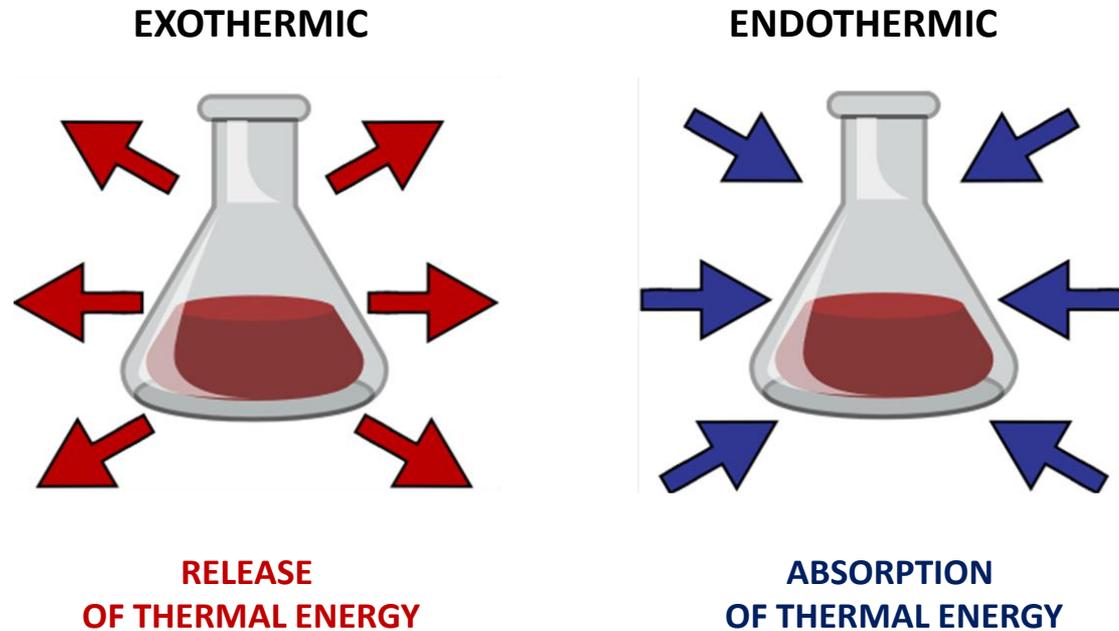
- 100% natural, non-toxic, easy recyclable
- Non-combustible and non-flammable
- Highly thermally resilient over 1.300 °C
- No smoke developing in case of fire
- Sound insulating up to 52 dB (depending on structure)
- Resistant to acids and alkalis
- Vibration absorbing
- Ultra-light and ultra-thin: 40-70% weight and thickness reduction compared to products with the same requirements
- Mechanically resilient thanks to sandwich construction
- Easy and time-saving installation due to bridge-free tongue-and-groove technology
- Processable with standard tool



Product properties

ultra-light, dimensionally stable, universal

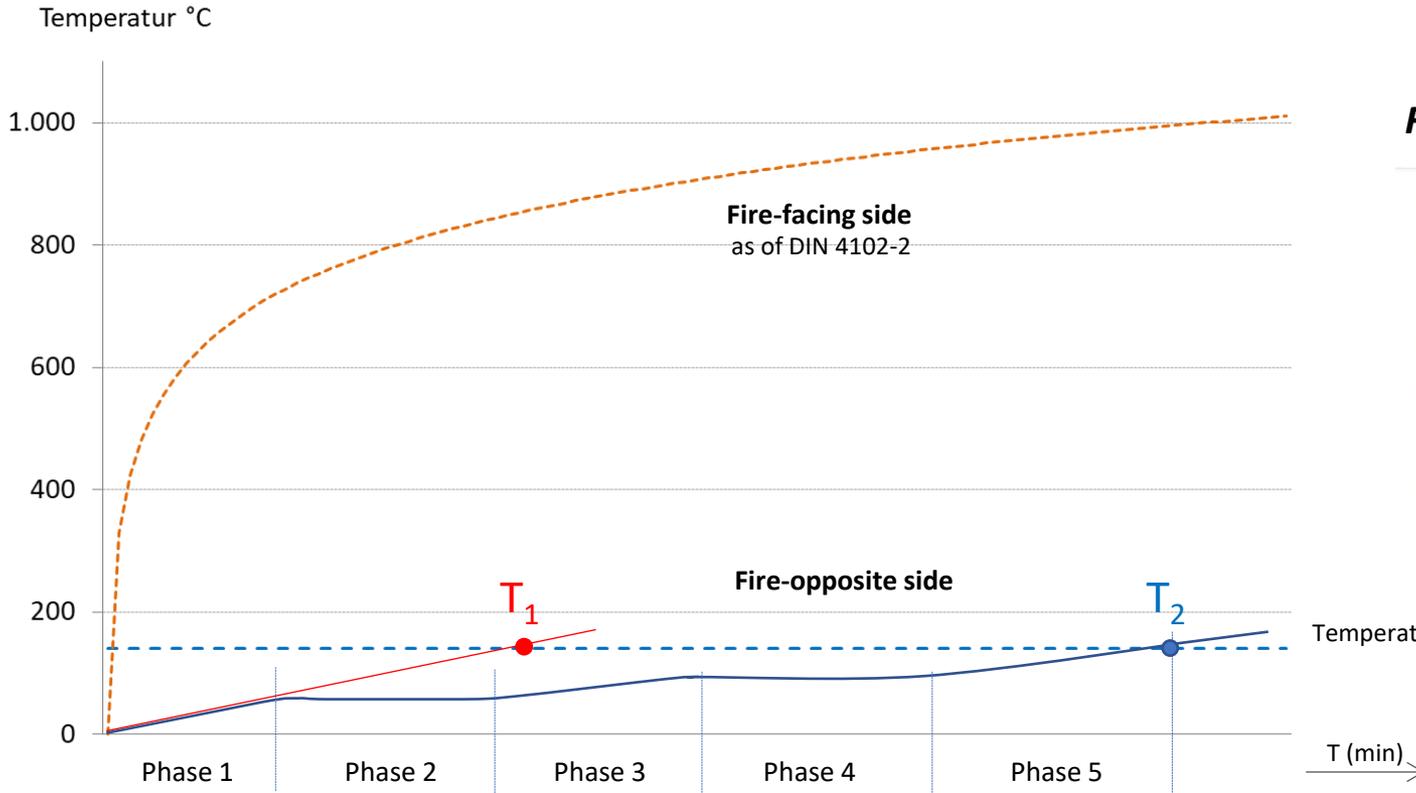
Products of CBG-Composites GmbH are based on the use of endothermic technologies, protected by patented processes and constructive solutions



Product properties

ultra-light, dimensionally stable, universal

Endothermic: function and result



FirePan® 40/90.3



$$T_2 > T_1$$



ultra-light, thin and fireresistant products!!!
40-50% lighter and thinner than common products



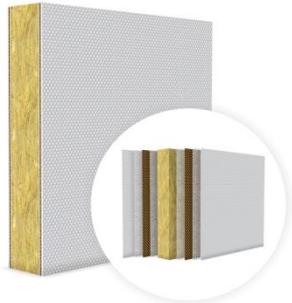
Product properties overview

Unique composite solutions for ship building

BRILLIANT PROPERTIES OF BRILLIANT PRODUCTS



Wall partition panel



- SeaPan WP 25/15**
- 25 mm
 - A-30
 - **7,8 kg/m² only!**

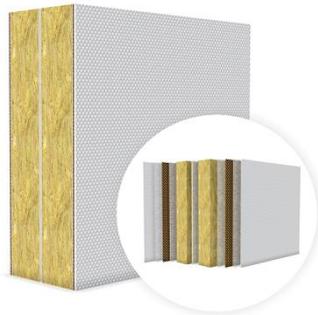
- ✓ 100% natural
- ✓ non-combustible
- ✓ not glimmering
- ✓ not smoke developing
- ✓ heat insulating
- ✓ sound insulating
- ✓ ultra light
- ✓ mechanically resilient
- ✓ moisture-resistant
- ✓ vibration-absorbing
- ✓ corrosion-resistant
- ✓ chemically neutral
- ✓ easy workable
- ✓ recyclable

Furniture and thin wall partition panels



- SeaPan WP 25/G**
- 25 mm
 - B-15
 - **7,3 kg/m² only!**

Wall partition panel



- SeaPan WP 50/60**
- 50 mm
 - A-60
 - **14,0 kg/m² only!**



Floating floor panels SeaPan FF 30/60

- 30 mm
- A-60
- **14,0 kg/m² only!**



Floating floor panels SeaPan FF 30/60

- 30 mm
- A-60
- **26,5 kg/m² only!**



Product properties overview

SeaPan Family (extract)

Characteristics	MED SeaPan WP 25/15	SeaPan WP 25 G	MED SeaPan WP 50/60	MED SeaPan FF 30/60	FireCore 35/30	FireCore 50/60	FireCore 60/90
	Type of application	Wall partition	Wall partition	Wall partition	Floating floor	Fire-door inlay	Fire-door inlay
Surface weight, [kg/m ²] at max. moisture content of 4%,	7,8 ± 0,5	7,3 ± 0,5	14,0 ± 1,0	14,0 ± 0,5	5,3 ± 0,5	11 ± 1,0	12,2 ± 1,0
Total thickness, [mm]	25 ± 0,5	25 ± 0,5	50 ± 0,5	30 ± 0,5	35	50	60
Sound insulation according to DIN EN ISO 10140-2 (Rw), [db]		48 (Cabin to Cabin)			43 (Cabin to Cabin)		
Density, [kg / m ³]	156 ± 10%	146 ± 10%	280 ± 10%	466 ± 10%	135 ± 10%	220 ± 10%	203 ± 10%
Temperature resistance, [°C]	> 1.300	> 1.300	> 1.300	> 1.300	> 1.300	> 1.300	> 1.300
Non-combustibility rating acc. IMO FTPC-3, EN 13501-1	non-combustible	fire resistant	non-combustible	non-combustible	non-combustible	non-combustible	non-combustible
Fire resistance classification	A-30 IMO FTPC-3	B-15 IMO FTPC-3	A-60 IMO FTPC-3	A-60 IMO FTPC-3	for A-30 doors	for A-60 doors	for A-90 doors
Inorganic Fraction [%]	ca. 99	ca. 99	ca. 99	ca. 99	ca. 99	ca. 99	ca. 99
Width, trimmed, max., [mm]	1.200 ± 1	1.200 ± 1	1.200 ± 1	1.200 ± 1	1.200 ± 1	1.200 ± 1	1.200 ± 1
Length, trimmed, max., [mm]	2.980 ± 2	2.980 ± 2	2.980 ± 2	2.980 ± 2	2.980 ± 2	2.980 ± 2	2.980 ± 2

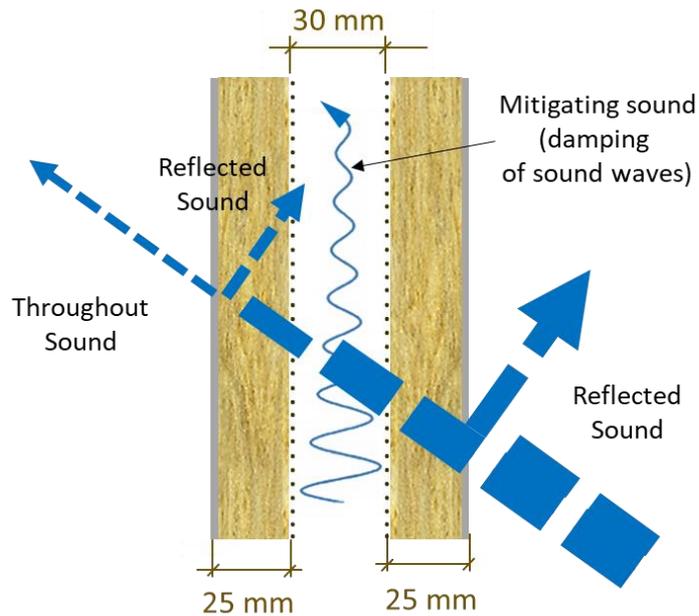
* - Listed data can be modified

Saving of weight up to 1,5 – 2 times in comparison with conventional materials!

Product properties

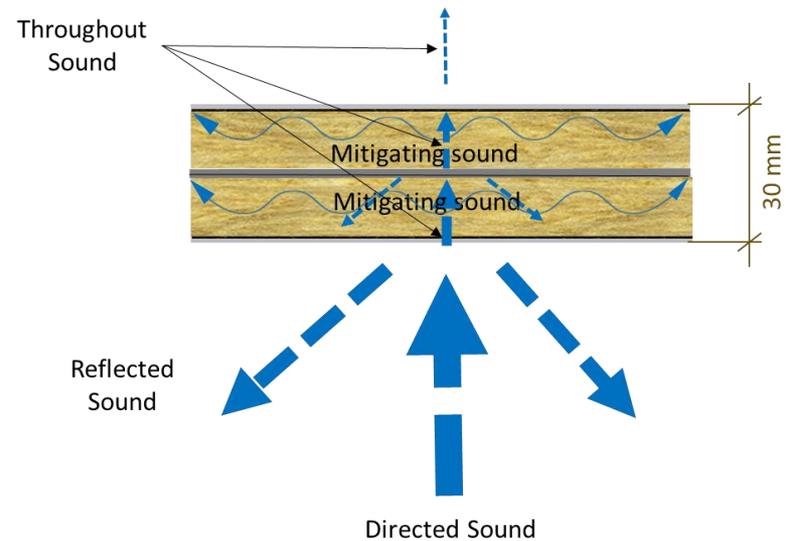
Sound insulation: How does it work

„cabin-to-cabin“



$R_w =$
> 51!
dB

„floating floor“



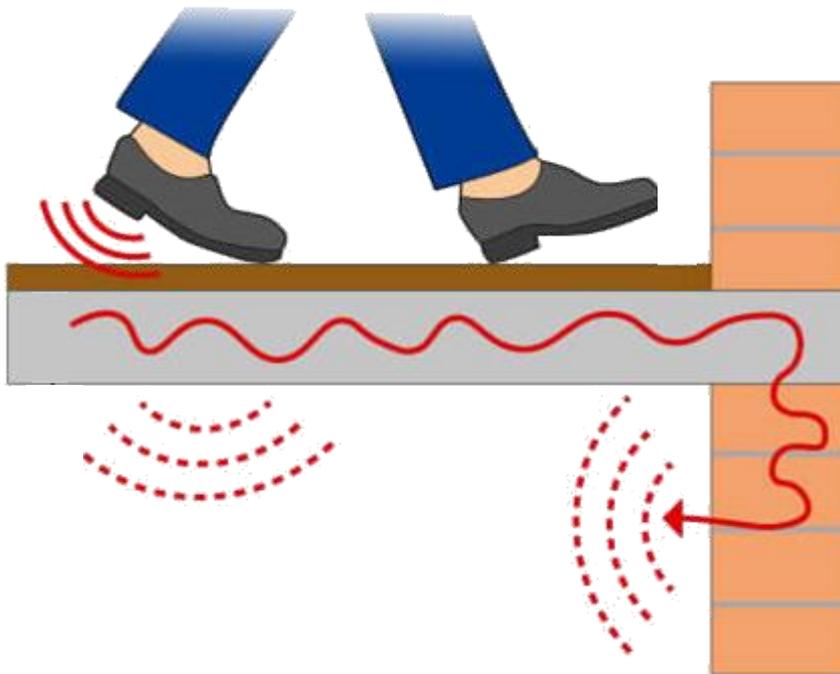
Similar working principle as cabin-to-cabin construction:

- soft and airy stone wall
- hard surfaced basalt ceramic laminate layers

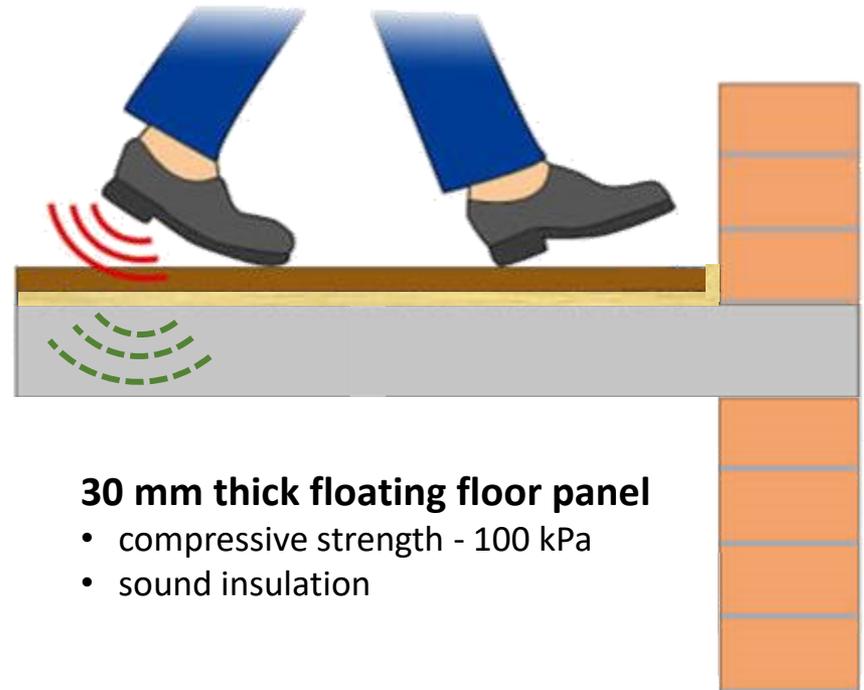
SeaPan FF 30/60

Impact sound insulation approach

Uninsulated



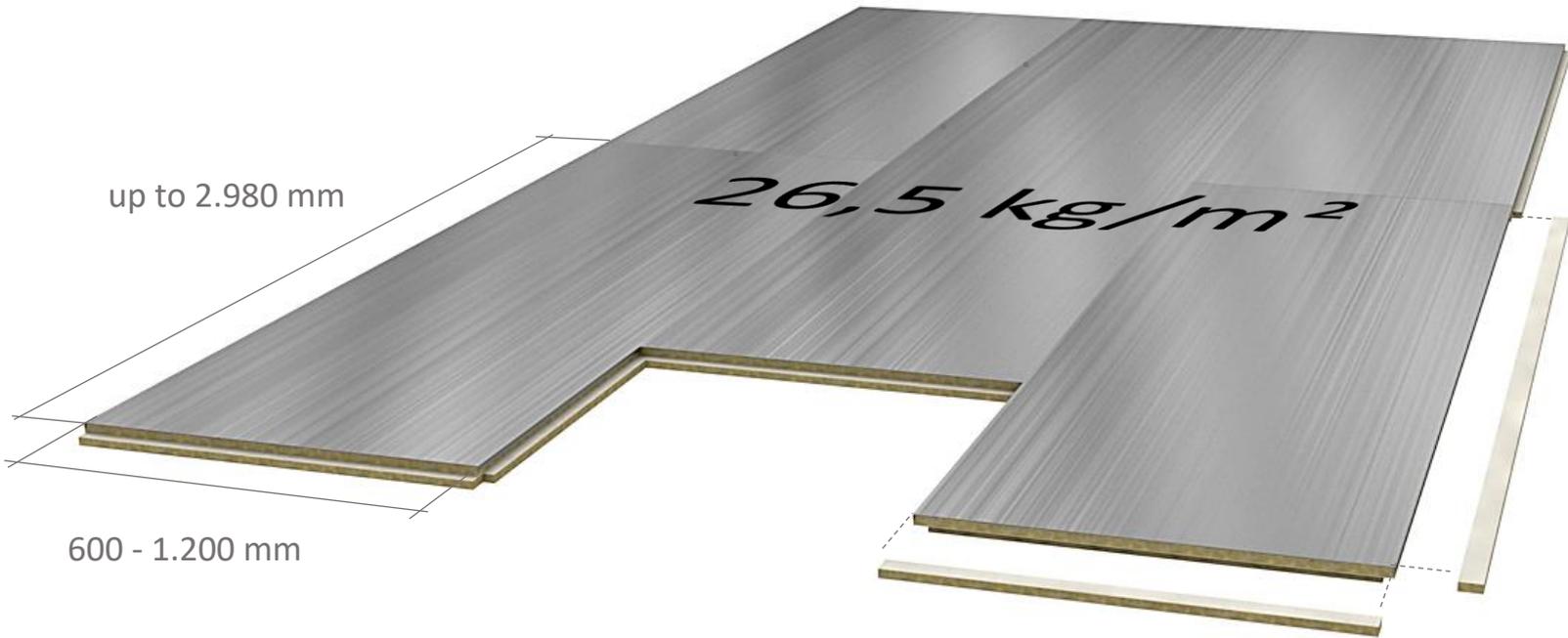
Insulated



SeaPan FF 30/60

Light and save

Floating floor panels coated with 1,5 mm sheet steel are placed on a leveling screed layer in combination with underlay strips and glued to each other using the adhesive CBG Ceramatrix 1-50 (non-combustible one-component adhesive with endothermic effect). If necessary, the individual plates are fixed to one another with welding points at suitable intervals.



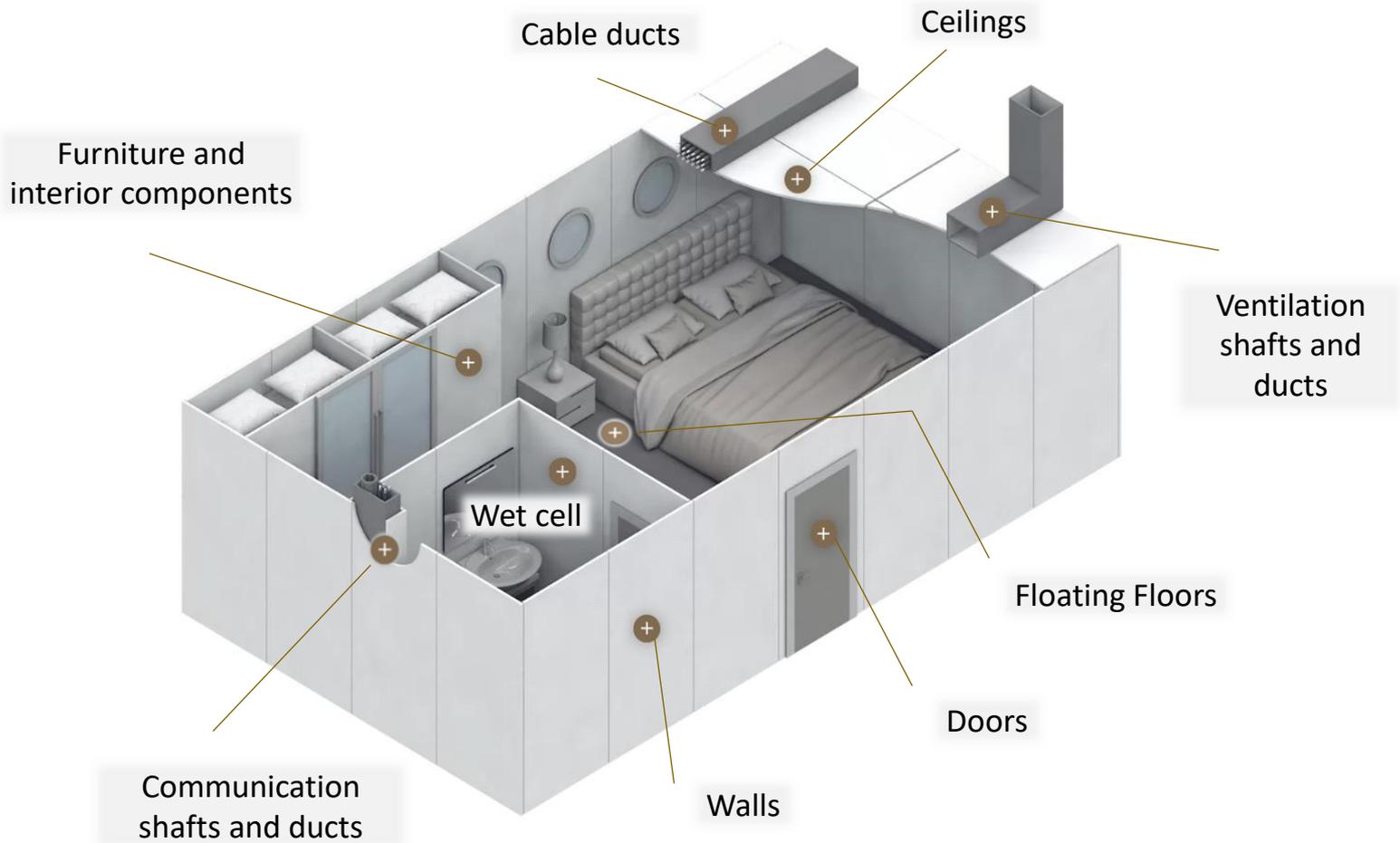
steel sheet thickness (mm)	deflection (mm)
1,0	1,6
1,5	1,5
2,0	1,3



Deflection of 900 mm wide panels with a central point load of 100 kg (980 N):
("Shoe contact surface" with a diameter of 60 mm)

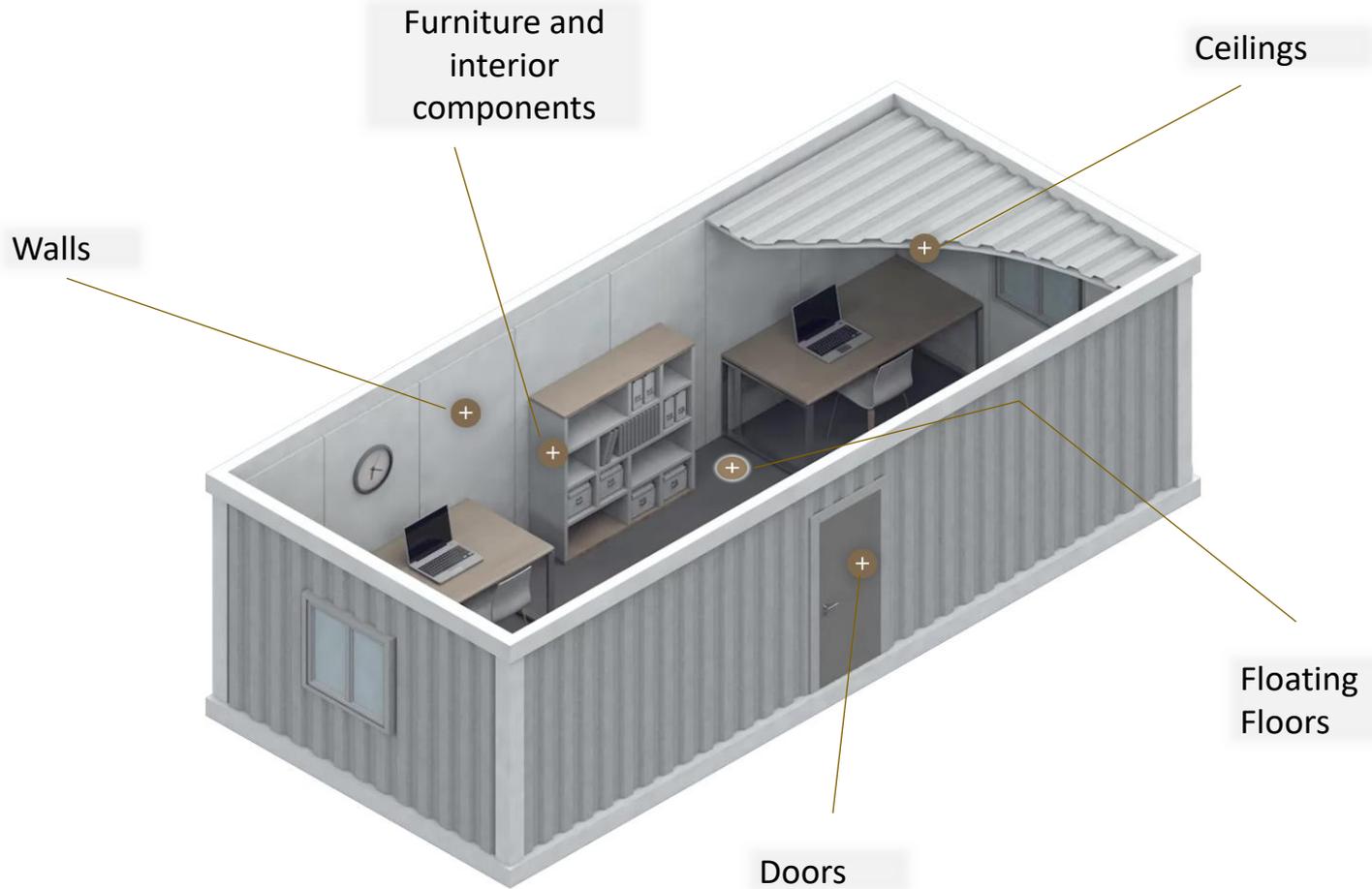
Possible Applications

Ship building



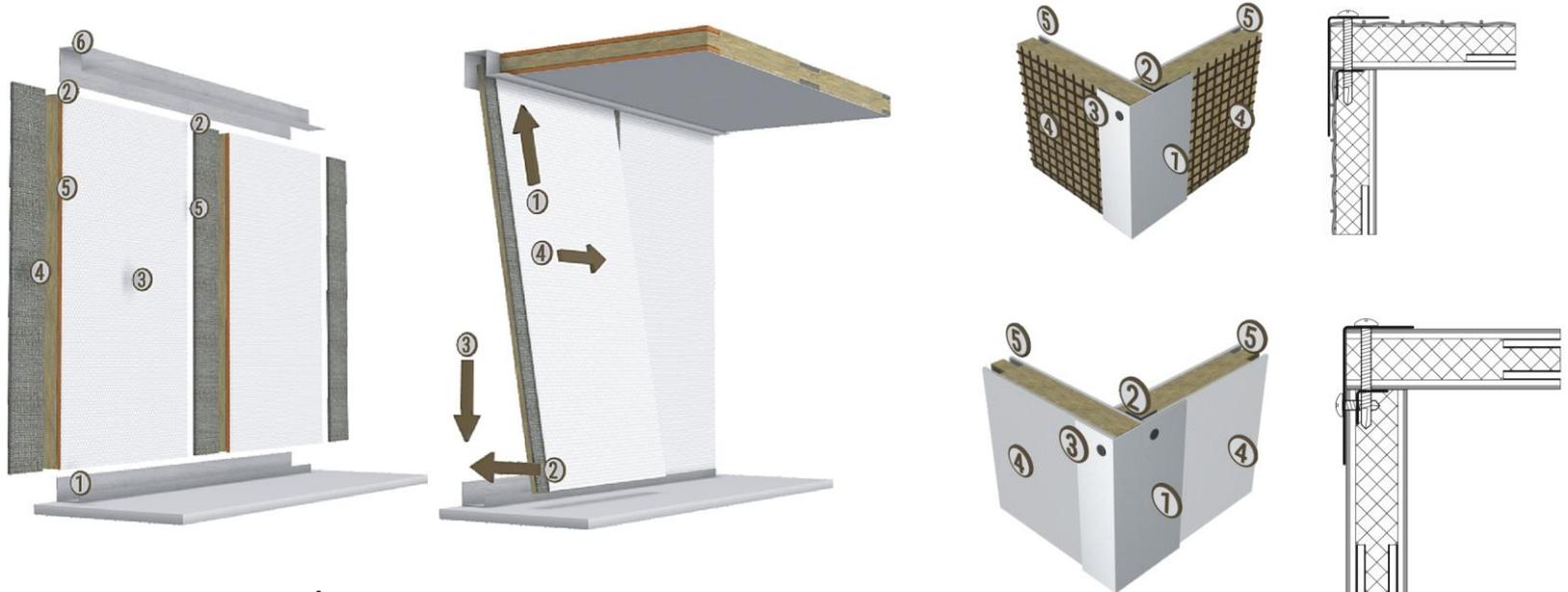
Possible Applications

Container Construction

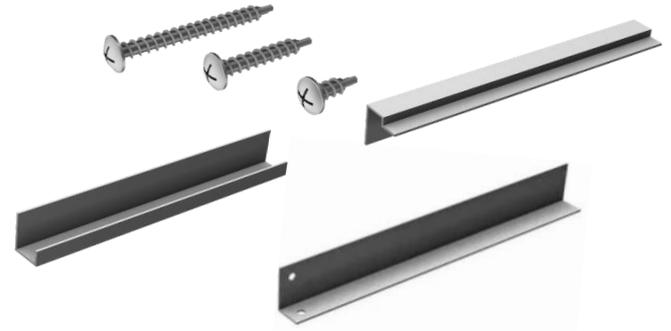
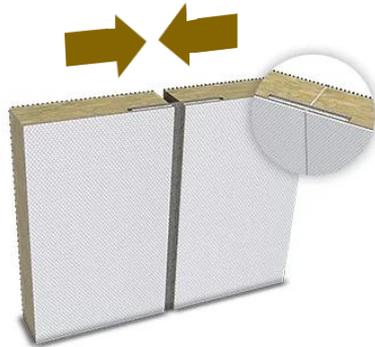


Product features

How to connect



tongue-and-groove connection



Facing

Wide range of possible materials

- galvanised steel
- fire retardant foil coated steel
- fire retardant HPL



... in any imaginable design

Fire doors

Nonflammable sandwich inlays for manufacturing of door leaves



CBG FireCore 60/90

- 60 mm
- A-90
- **11,8 kg/m² only!**



CBG FireCore 35/30

- 35 mm
- A-30
- **4,8 kg/m² only!**

- Ultra-light, non-flammable
- Heat and sound insulating
- For different doors constructions with fire rating from T-30 up to T-120
- Substantial, up to 40%-60% reduction of weight and thickness of door leaves
- Significant decrease of load on door hinges and on parts of closing mechanisms
- Easier assembly and execution of service works
- Easier and safer operating of safety doors in case of fire



Universal products with traditions

Bonding and sealing



CBG fako[®] Transparent Glass Fleece adhesive 9119 TG - Flame-retardant, thixotropic, solvent-free, plastic dispersion one-component adhesive, which is characterized by high elasticity and initial adhesion as well as a short drying time. The adhesive dries transparent.

CBG fako[®] Transparent Glass Fleece adhesive 9119 S - Flame-retardant, thixotropic, solvent-free, plastic dispersion one-component adhesive with high elasticity and initial adhesion as well as increased cohesion and short drying time. The adhesive **dries white**.



Both adhesives are suitable for bonding glass fabric to mineral wool in pipe and surface areas, bonding to sheet metal, as well as for producing a glass fabric covering on rubber products (e.g. Armaflex) and can be used on all load-bearing substrates, such as plaster, plasterboard and concrete or on metals.

CBG Ceramatrix[®] 1-50 - Low-viscosity, non-flammable, 1-component water-based adhesive with endothermic effect, consisting of natural components such as mountain rock and basalt microfiber, for bonding various fiber materials (basalt, carbon, glass) as well as mineral wool and metals in a wide range of applications.



CBG fako[®] 3714 - One-sided adhesive, flexible butyl sealing tape, made of highly elastic rubber with a soft rubber-like texture, adheres without heating. The butyl sealing tape is pushed apart by the contact pressure, penetrates into the smallest gaps and uneven areas due to its elasticity and plastic behavior and thus seals optimally. It can be pulled out by hand to form wafer-thin films. Even high contact pressure is not able to destroy this film. (10 - 100 mm wide, 1 to 3 mm thick)

Product line fako®

Acrylic glass system care

Unique formulas combine cleaning, polishing and protection in one application



CBG fakopol® 9303 - cleans, polishes, maintains and preserves in one step, removes *light scratches* and scrapes, high-gloss finish for plastic surfaces, for finishing CNC milling



CBG fako® Polierpaste 9311 - removes deeper scratches and scuffs

CBG fako® cleaning- and polish agent 9322 for the aftercare of 9311 and for regular care, gives plastics optimum protection and keeps dust away. Removes marks, dirt and light scratches, preserves the natural brilliance. Matt glasses become sparkling clear again.



CBG fako® Plexiklar 1415 - Gentle antistatic cleaner without alcohol. Seals the surface and provides long-lasting antistatic, dirt-repellent protection for all areas where IPA cannot be used.

Research and product development

Innovation and sustainability



- Together with a wide range of international partners from industry and research, CBG Composites GmbH works on constant optimization and development of its products
 - 9 utility models (patents), 10 brand names, 9 MED Module D certificates form the basis of our individuality and technological leadership
- ... if you want to be leader, keep running!**



Developed in Germany





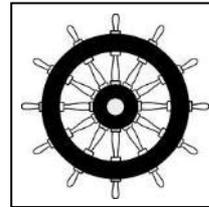
NEW GENERATION

Fire-resistant, innovative heat- and sound-insulating basalt based products for use in building construction, shipbuilding and engineering



Fire protection classes
 B-15, A-30, A-60 (IMO 2010 FTPC3)
 F30, F60, F90 (DIN EN 13501, DIN 4102)

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... Fire protection - safe and light...

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