

# Technical Data Sheet

## StoVentec Carrier Board

Render carrier board made of expanded glass granulate



### Characteristics

#### Area of application

- all-purpose use for all substrates and dry building constructions
- boarding on round constructions
- EXTERIOR:
  - carrier board for all StoTherm external wall insulation systems (12 mm thickness)
  - carrier board for facade and ceiling cladding in StoVentec ventilated rainscreen cladding systems (12 mm thickness)
  - impact protection through insulation renders or insulation systems (8 mm thickness)
  - for covering non-load bearing substrates, openings, or roller shutter boxes (12 or 20 mm thickness, depending on detail solutions)
- INTERIORS:
  - cladding of stud walls and sanitary front wall elements
  - on walls, ceilings, slopes, under roofs, cellars
  - tile substrates and filler and levelling coat in wall areas
  - for water impact W2-1 or W3-1 in wet rooms and rooms exposed to moisture: professional waterproofing in accordance with DIN 18534 is required

#### Properties

- reaction to fire (class) in accordance with EN 13501-1: A2-s1, d0
- frost-resistant
- resistant to mechanical stress
- low weight
- easy processing
- cut to size with a utility knife
- moisture-resistant, but not suitable for permanent contact with fluid water
- dark appearance
- visible mesh reinforcement on both sides

#### Format

- Width x height x thickness, dimensions in mm:
  - 1200 x 800 x 8 / 2400 x 1200 x 8
  - 1200 x 800 x 10 / 2400 x 1200 x 10
  - 1200 x 800 x 12 / 2400 x 1200 x 12 / 2600 x 1250 x 12 / 2615 x 1250 x 12 / 3200 x 1200 x 12
  - 1200 x 800 x 20 / 2400 x 1200 x 20 / 2600 x 337 x 20 / 2600 x 387 x 20 / 2600 x 1250 x 20

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### Technical data

Criterion	Standard / test specification	Value/ Unit	Notes
Water vapour diffusion-equivalent air layer thickness $\mu$	EN ISO 7783	15	approx.
Thermal conductivity	DIN 52612	0.12 W/(m*K)	
Mass per unit area		6 kg/m <sup>2</sup>	approx.
Bulk density		500 kg/m <sup>3</sup>	approx.
Modulus of elasticity	EN ISO 178	1,800 - 2,000 N/mm <sup>2</sup>	
Linear thermal expansion coefficient	TIAP-650	11E-06 1/K	approx.

The characteristic values stated are average values or approximate values. Due to the natural raw materials in our products, the stated values can vary slightly in the same delivery batch; this does not affect the suitability of the product for its intended use.

### Substrate

#### Requirements

Statically proven sub-construction for RSC systems: wall brackets made of stainless steel or galvanised steel and aluminium carrier profiles from Sto, or thin-walled metal profiles or timber sub-constructions already available on-site.

### Application

#### Consumption

Type	Approx. consumption	
1200 x 800 mm	1.04	pcs./m <sup>2</sup>
2400 x 1200 mm	0.35	pcs./m <sup>2</sup>
2600 x 1250 mm	0.31	pcs./m <sup>2</sup>
2615 x 1250 mm	0.31	pcs./m <sup>2</sup>
3200 x 1200 mm	0.26	pcs./m <sup>2</sup>

The stated consumption values are only to be used as a guide. If required, determine precise consumption values on the basis of the specific project.

#### Application

##### FIELDS OF APPLICATION

- A. Facade and ceiling cladding in the RSC system
- B. Mechanical reinforcement in an area subject to a risk of impacts
- C. Interior wall construction

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## StoVentec Carrier Board

FIELD OF APPLICATION A – Facade and ceiling cladding in the RSC system

General information:

- carrier boards in the RSC system
- approved board thickness: 12 mm

Tools and equipment required:

- cut the carrier board to size: utility knife or saw
- fixing the carrier board: screwdriver or staple gun

Substrate:

- Structurally proven sub-construction from Sto with carrier profiles made of aluminium, thin-walled metal profiles in accordance with DIN 18182-1, or of timber retaining battens on a load-bearing anchorage substrate.

Information on fixing:

Sub-construction with carrier profiles made of aluminium for facades in the StoVentec R/S/M/C systems and ceilings in the StoVentec R and C systems: Sto-Facade Screws 5.5 x 24 mm, 4.8 x 35 mm.

- Rated value of the building element resistance  $R_d$  up to 1.65 kN/m<sup>2</sup>: at least 13 screws per m<sup>2</sup>, axis spacing of the load-bearing construction  $\leq$  600/625 mm
- Rated value of the building element resistance  $R_d$  up to 2.40 kN/m<sup>2</sup>: at least 21 screws per m<sup>2</sup>, axis spacing of the load-bearing construction  $\leq$  600/625 mm
- Rated value of the building element resistance  $R_d$  up to 3.90 kN/m<sup>2</sup>: at least 29 screws per m<sup>2</sup>, axis spacing of the load-bearing construction  $\leq$  400/417 mm

sub-construction for ceilings in the StoVentec R system and carrier profiles made of thin-walled metal profiles in accordance with DIN 18182-1: Sto-Facade Screws 6.0 x 28 mm

- Rated value of the building element resistance  $R_d$  up to 1.65 kN/m<sup>2</sup>: at least 13 screws per m<sup>2</sup>, axis spacing of the load-bearing construction  $\leq$  600/625 mm
- Rated value of the building element resistance  $R_d$  up to 2.40 kN/m<sup>2</sup>: at least 21 screws per m<sup>2</sup>, axis spacing of the load-bearing construction  $\leq$  600/625 mm
- Rated value of the building element resistance  $R_d$  up to 3.90 kN/m<sup>2</sup>: at least 29 screws per m<sup>2</sup>, axis spacing of the load-bearing construction  $\leq$  400/417 mm

sub-construction with retaining battens made of timber: Sto-Facade Screws 5.0 x 42 mm

- rated value of the building element resistance  $R_d$  up to 1.155 kN/m<sup>2</sup>: at least 13 screws per m<sup>2</sup> axis spacing of the load-bearing construction  $\leq$  600/625 mm
- rated value of the building element resistance  $R_d$  up to 3.30 kN/m<sup>2</sup>: at least 21 screws per m<sup>2</sup> axis spacing of the load-bearing construction  $\leq$  300/312.5 mm

Sub-construction for facades with render coating and retaining battens made of timber:

- clamps made of stainless steel in accordance with the approval specifications (clamps are not included in the scope of delivery and must be ordered on site),
- rated value of the building element resistance  $R_d$  up to 2.13 kN/m<sup>2</sup>

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# StoVentec Carrier Board

Cut the carrier board to size:

- 1) Score the carrier board on one side with a utility knife.
- 2) Break and cut the carrier board.
- 3) If necessary, grind the cut edges.

Fixing the carrier board:

- 1) Lay and butt-joint the carrier board as tightly as possible in a bond on the sub-construction (vertical board joints offset  $\geq 300$  mm).
- 2) Back vertical board joints with a vertical carrier profile / vertical retaining battens.
- 3) Fix each carrier board onto at least 2 carrier profiles / retaining battens with Sto-Facade Screws / clamps.
- 4) Observe the number of Sto-Facade Screws / clamps required. Fix the screw heads / clamp backs flush to the surface of the carrier boards.
- 5) When fixing, observe the spacing for the Sto-Facade Screws or Staples in accordance with the national approval.
- 6) Prime the boards with Sto-Primer if subsequently coated with a mineral base coat.

Fixing the carrier board to curved constructions:

- 1) Observe the following information for a board thickness of 12 mm:
- 2) Radius  $\geq 8.0$  m: The carrier boards are curved over the carrier profiles/retaining battens. The axis spacing of the carrier profiles are a maximum of 300/312.5 mm or 400/417 mm  $R_d$  for radii  $\leq$  of 12 m and a maximum of 600/625 mm for radii  $> 12$  m, taking into account the type of load-bearing construction and wind loads / building element resistance. The use of large carrier boards in horizontal format is recommended.
- 3) Radius  $< 8.0$  m: As a rule, the carrier boards must be slotted at the factory before board installation depending on the radius and the wind loads (slot spacing  $\geq 50$  mm) and always screwed to the sub-construction made of curved aluminium carrier profiles or aluminium strips with the slots on the visible side. Each board strip must be fixed to each curved carrier profile / aluminum strip with a screw. The number of screws depends on the radius and wind load. In the case of aluminium strips or horizontal carrier profiles, StoVentec Flashing Tape must also be installed between the carrier board and the carrier profile.
- 4) Screw the carrier board to the sub-construction as indicated above.

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FIELD OF APPLICATION B – Mechanical reinforcement in an area subject to a risk of impacts

Tools and equipment required:

- utility knife
- notched trowel, 6 x 6 mm

Notes:

- recommended board thickness: 8 mm (StoVentec Carrier Board)

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- Moisture barrier: apply reinforcement and finish in accordance with the intended StoTherm external wall insulation system. Do not install carrier boards in direct contact with horizontal sheet metal covers, waterproofing against water, or other moisture barriers situated below.
- Install the corresponding edge protection profiles according to the instructions.
- Observe the construction detail, particularly for connections to structural members and to coverings for roller shutter boxes.

#### Substrate:

- firm, dry, clean, load-bearing
- free from sinter layers, efflorescence, release agents
- Damp and not fully cured substrates lead to damage.
- Do not fix the carrier board to a damp or soiled substrate.

#### Cut the carrier board to size:

- 1) Score the carrier board on one side with a utility knife.
- 2) Break and cut the carrier board.

#### Fixing the carrier board:

- 1) Reduce the insulation board thickness by the layer thickness of the board and the adhesive.
- 2) Using a notched trowel, apply StoColl KM grout over the entire board surface and comb with the notched trowel.
- 3) Install the carrier board in a bond, smooth and tight-butted.
- 4) Prime the boards with Sto-Primer if subsequently coated with a mineral base coat.

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#### FIELD OF APPLICATION C – Interior wall construction General

#### Tools and equipment required:

- utility knife
- Sto-Notched Trowel-Vibra-L, Sto-Notched Trowel-Vibra-S

#### Notes:

- Fix the carrier board tension-free.
- Never force-transmitting against adjacent building elements.
- Do not use as a static element in timber frame construction.

#### Substrate:

- commercially-available, non-load-bearing pre-wall or drywall constructions made of timber or metal
- adhesive suitable solid walls
- firm, dry, clean, load-bearing
- free from sinter layers, efflorescence, release agents
- Damp and not fully cured substrates lead to damage.

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# StoVentec Carrier Board

- Do not fix the carrier board to a damp or soiled substrate.
- For mould formation: professionally pre-treat the substrate.

Fixing the carrier board to studs:

1) Please observe the following information:

- Metal sub-construction: use Sto-Drywall Screws 3.5 x 35 mm.
- Timber sub-construction: use Sto-Drywall Screws 3.5 x 35 mm.
- The drywall screws must not penetrate the upper mesh layer.
- In damp and wet rooms:

Water exposure classes W0-I and W1-I: the metal sub-construction and fixing comply with at least corrosiveness category C1 (in accordance with DIN EN 18182-1 dry construction profiles with standard zinc coating).

Water exposure class W2-I: the metal sub-construction and fixing comply with corrosiveness category C3.

Water exposure class W3-I: the metal sub-construction and fixing comply with corrosiveness category C5-M. See the IGG data sheet 10 for more information.

- The axis spacings of the sub-construction depend on the board thickness.

Board thickness 8 - 10 mm: axis spacing  $\leq$  400 mm

Board thickness 12 - 20 mm: axis spacing  $\leq$  600 mm

2) Screw the carrier board without pre-drilling on to the metal or timber sub-construction: lay in a successive bond approx. 200 mm offset for less waste.

Fixing the carrier board to masonry:

1) Using a notched trowel, apply StoColl CX bonding mortar over the entire board surface and comb with the notched trowel. The notching depends on the evenness of the substrate.

2) Float the carrier board evenly into place.

Fixing the carrier board to curved constructions:

1) Observe the following information for a board thickness of 12 mm:

2) Radius  $\geq$  8.0 m: The carrier boards are curved over the carrier profiles/retaining battens. The axis spacing of the carrier profiles are a maximum of 300/312.5 mm or 400/417 mm  $R_d$  for radii  $\leq$  of 12 m and a maximum of 600/625 mm for radii  $>$  12 m, taking into account the type of load-bearing construction and wind loads / building element resistance. The use of large carrier boards in horizontal format is recommended.

3) Radius  $<$  8.0 m: As a rule, the carrier boards must be slotted at the factory before board installation depending on the radius and the wind loads (slot spacing  $\geq$  50 mm) and always screwed to the sub-construction made of curved aluminium carrier profiles or aluminium strips with the slots on the visible side. Each board strip must be fixed to each curved carrier profile / aluminium strip with a screw. The number of screws depends on the radius and wind load. In the case of aluminium strips or horizontal carrier profiles, StoVentec Flashing Tape must also be installed between the carrier board and the carrier profile.

4) Screw the carrier board to the sub-construction as indicated above.

FIELD OF APPLICATION C – Interior wall construction

Board joints

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I: Butt the joints

II: Fill the adhesive joint for additional resistance to cracking

I: Butt the joints:

Area without visual requirements, e.g. tiles or in the lower board layer for multi-layer boarding.

1) Clamp or screw carrier board without a joint to the sub-construction straight-edged next to each other.

II: Fill the adhesive joint for additional resistance to cracking:

1) Please observe the following information:

- Use the joint and adhesive sealant "Soudal Fix All Flexi".
- only use on dust-free, square edges (preferably cut ex works)
- joint width max. 1 mm, do not compress to zero.

2) Screw the first carrier board on to the sub-construction.

3) Apply Soudal Fix All Flexi to the installed carrier board, centrally on the board edge.

4) Then press the second carrier board densely against the first carrier board. Soudal Fix All Flexi must completely fill the joint when compressing the board edge.

5) Leave the material to dry completely. Knock off the excess material with a spatula.

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FIELD OF APPLICATION C – Interior wall construction  
Filler and levelling coat/joint preparation

Q1: Basic filling and levelling

For surfaces without any visual requirements: e.g. tiles

Q2: Standard filling and levelling

For surfaces with minimal visual requirements, e.g. wood-chip wallpaper, plasters > 1 mm

Q3: Special filling and levelling

For surfaces with high visual requirements, e.g. wood-chip wallpaper, plasters ≤ 1 mm

Q4: Full filling and levelling

For surfaces with maximum visual requirements

Recommended filler:

StoLevell In Sil, StoLevell In Fill

Q1: Basic filling and levelling

Area of application: tiles

1) Knock off the protruding joint adhesive after curing.

2) Coat the fixing with the filler.

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### Q2: Standard filling and levelling

area of application: moderate- and coarse-textured wall coverings

- 1) See the "Board joints" section on filling the butt joints.
- 2) Coat the fixing with the filler.
- 3) Skim the board joints for seamless transition.

### Q3: Special filling and levelling

Area of application: moderate- and coarse-textured wall coverings, e.g. wood-chip wallpaper, plaster  $\leq 1$  mm

- 1) See the "Board joints" section on filling the butt joints.
- 2) Coat the fixing with the filler.
- 3) Skim the board joints for seamless transition.
- 4) Fill over the joint edges with the filler.
- 5) Close the pores: apply pressure when trowelling off any excess filler from the joints.

### Q4: Full filling and levelling

area of application: smooth, non-textured wall coverings with gloss, effect coatings, and high-quality smoothing techniques

- 1) See the "Board joints" section on filling the butt joints.
- 2) Coat the fixing with the filler.
- 3) Skim the board joints for seamless transition.
- 4) Fill over the joint edges with the filler.
- 5) Close the pores: apply pressure when trowelling off any excess filler from the joints.
- 6) Coat, smooth, or plaster the board surface full-faced with the filler. Layer thickness: up to 3 mm.

Optionally, use a glass-fibre nonwoven. This step increases protection against crack formation.

- 1) Fill and smooth the joints to quality level Q3, see the "Filling and Smoothing" section.
- 2) Sand the surface, dust off thoroughly, and prime with StoPrim Plex.
- 3) Hang StoColl Tapand StoTap Pro 100 P in a way that the sheets abut, then apply another coat depending on the finish.

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### FIELD OF APPLICATION C – Interior wall construction finish

#### 1) Please observe the following information:

- Depending on the requirement, all Sto interior coatings can be selected depending on the respective quality level.
- Please observe the respective Technical Data Sheets.

- 2) Sand the surface, dust off thoroughly, and prime with StoPrim Sil Color.
- 3) The surface can be subsequently coated with StoLevell Calce FS without any prime coating beforehand.

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## StoVentec Carrier Board

4) Apply the finish.

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FIELD OF APPLICATION C – Interior wall construction  
 Tiles and ceramic tiles

1) Please observe the following information:

- carrier boards: StoVentec Carrier Board 12 mm, StoVentec Carrier Board 20 mm
- All ceramic or plastic tiles can be bonded to the above-mentioned carrier boards with commercially available adhesives using the thin bed method up to 50 kg/m<sup>2</sup> (including adhesive).
- If required, pre-treat the carrier boards with StoPrep In as a bonding agent.
- Check the compatibility of the adhesive with the required seals and perform bond strength tests.

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FIELD OF APPLICATION C – Interior wall construction  
 Application in wet areas

1) Please observe the following information:

- The carrier boards can be used as a substrate for waterproofing in water exposure classes W0-I to W3-I in accordance with DIN 18534.
- The carrier board is moisture resistant, but should not be exposed to any fluid water. The selected, commercially-available waterproofing system must have a proof of use (general building inspection test certificate or ETA) and the construction, including the carrier board, must permanently provide protection against any water exposure in accordance with the applicable exposure class.
- Further information and notes can be found in DIN 18534 and the relevant trade associations' data sheets.
- The fixing must be corrosion-resistant.
- Note: The products for the intermediate coating and finish from Sto's interior range are approved for water exposure class W0-I.

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**Notes, recommendations,  
 special information,  
 miscellaneous**

The boards must never be exposed to permanent moisture penetration or waterlogging.

As exterior ventilated cladding, six months drying time in an uncoated condition under normal weather conditions for the carrier boards can be regarded as unproblematic.

Please ensure that system ventilation is also observed during this time. Likewise, the system connections must already be made resistant to driving rain.

While guaranteeing back ventilation, cover any system ends or joints still open to protect small animals and ensure that no water or damp can get behind the facade.

At the time of coating, the carrier board must be dry, dust-free, and have no

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damage.

Replace any damaged boards before coating.

### Delivery

**Packaging** pallet

### Storage

**Storage conditions** Store in dry conditions.

### Identification

#### Safety

The product is a manufactured item. The creation of a safety data sheet in accordance with the REACH Regulation (EU) No. 1907/2006, Annex II, is not required. Detailed information can be found at [www.sto.de](http://www.sto.de) under the category Service & Tools / REACH regulation.

### Special notes

The information in this Technical Data Sheet serves to ensure the product's intended use, or its suitability for use, and is based on our findings and experience. Users are nevertheless responsible for establishing the product's suitability and use. Applications not specifically mentioned in this Technical Data Sheet are permissible only after prior consultation. Where no approval is given, such applications are at the user's own risk. This applies in particular when the product is used in combination with other products.

When a new Technical Data Sheet is published, all previous Technical Data Sheets are no longer valid. The latest version is available on the Internet.

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