

# Technical data sheet

## StoSilent Board 105

Acoustic panel made of expanded glass granulate for suspended ceiling structures



### Characteristics

- Areas of application**
- interior
  - for suspended ceiling and wall structures
  - fixed with screws, bonded board joints

### Properties

- non-combustible
- Reaction to fire (class) in accordance with EN 13501-1: A2-s1, d0 (panel with coating)
- up to 200 m<sup>2</sup> possible without expansion joint (max. side length: 20 m)
- reduction of the reverberation time and noise level
- improvement of the ability to concentrate
- improvement in speech intelligibility
- rated sound absorption factor  $\alpha_w$  of up to 0.80 depending on the suspension height

### Format

- board edge: sharp-edged
- length x width x thickness
- 1200 x 625 x 25 mm

### Appearance

- coating: StoSilent Top Basic and StoSilent Top Finish

### Information/notes

- use in brine or saltwater swimming pools only on request
- not suitable for radii < 10 m and areas exposed to mechanical stress
- not suitable in splash water zones
- shadow joint > 2 cm mandatory
- observe installation instructions

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### Technical data

Criterion	Standard / test regulation	Value/ Unit	Notes
Diffusion-equivalent air layer thickness	EN ISO 7783-2	0.13 m	with coating
Reaction to fire (class)	EN 13501-1	A2-s1, d0	with coating
Rated value of thermal conductivity $\lambda$	TIAP-655 based on EN 12667	0.08 W/(m*K)	with coating
Area weight		6.7 kg/m <sup>2</sup>	
Apparent density		340 kg/m <sup>3</sup>	
Sound absorption degree $\alpha_w$		0.80	With coating; can vary depending on the suspension height and damping

The characteristic values stated are average values or approx. values. We use natural raw materials in our products, which means that 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

The substrate must be firm, dry, clean, and load-bearing.

### Application

#### Application temperature

Lowest application and substrate temperature: +12 °C at max. 70 % relative air humidity; installation after adjusting the equilibrium humidity in the room. Rapid shock-type heating or cooling during installation and drying can induce crack formation.

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Consumption	Execution	Approx. consumption
		1.00 m <sup>2</sup> /m <sup>2</sup>

The stated consumption values are only to be used as a guide. If required, precise consumption values plus cuttings should be determined on the project.

Coating procedure	Execution
	<p>metal sub-construction in accordance with EN 13964 with vernier hangers</p> <p>StoSilent Board 105</p> <p>System adhesive: StoSilent Fix (approx. 0.5 kg/m<sup>2</sup>)</p> <p>Intermediate coat: StoSilent Top Basic (approx. 1.5 - 2.5 kg/m<sup>2</sup>)</p> <p>finish StoSilent Top Finish (approx. 3.0 kg/m<sup>2</sup>)</p>

### Application

The boards should be fixed to the carrier profiles in transverse direction. Align longitudinal joints toward the incidence of light. Install the boards with transverse joints that are offset by at least 400 mm.

Fix the boards with phosphate-treated, quick-assembly screws with a needle point (TN form in accordance with DIN 18182) starting from the middle of the board or a corner in order to avoid compressions. When fixing the screws, press the board firmly onto the sub-construction. Insert the screws approx. 15 mm from the board edge and sink the screw heads to a depth of approx. 1 mm. Ensure a distance of 200 mm between the screws.

The bonding edges must be free from dust. Mix the system adhesive (StoSilent Fix) in accordance with the application guidelines.

After fixing the board, apply the system adhesive to the edges (e.g. with a Japanese spatula or cartridge).

Press the following board onto the fine grid of the sub-construction, then push it against the already installed boards and fix it with screws.

Use an electrical keyhole saw, handsaw or surform to cut, grind or plane the material.

System connections:  
to enable pressure equalisation between the ceiling cavity and the used space, ensure rear ventilation either through an open, all-around joint or openings in the

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ceiling. The proportion of the ceiling opening should account for at least 0.8 % of the ceiling surface area. In most cases, this is achieved by an open all-around joint of 2 cm.

The ceilings are not 100 % free from the effects of glancing light.

**Cleaning the tools** Remove dust after use.

**Indications, recommendations, special information, miscellaneous**

Please observe the general Sto application guidelines for Sto acoustic panel systems. They are available from Sto SE & Co. KGaA.

Installation/coating must only be carried out after prior instruction.

If the fine grid (e.g. when retrofitting ceiling installations) is cut through, create additional transition points. Seal the cavities in adjacent walls to prevent low-pressure ceilings.

Structural expansion joints must be incorporated.

### Delivery

**Colour shade** Visible side: white (approx. RAL 9002), Rear side: grey (approx. RAL 7047)

**Packaging** pallet

### Storage

**Storage conditions** Store in dry and frost-free conditions. Product is sensitive to shocks, do not subject it to loads or stress.

### Certificates/approvals

Declaration of conformity No. 2014-04	Acoustic products formulation identity/name change Certificate of conformity
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M 35 120/73 S.1	StoSilent Top A-Tec Panel, 30 mm cavity without MW Determining the sound absorption factor
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M 35 120/73 S.2	StoSilent Top A-Tec Panel, 30 mm cavity with mineral wool Determining the sound absorption factor
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M 35 120/73 S.3	StoSilent Top A-Tec Panel, 100 mm cavity without MW
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Determining the sound absorption factor

M 35 120/73 S.4

StoSilent Top A-Tec Panel, 245 mm cavity without MW  
Determining the sound absorption factor

### Identification

**Product group** Acoustic panel

**Safety** Please observe safety data sheet

### Special notes

The information or data 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. Nevertheless, users are responsible for establishing the suitability of the product for its intended use.

Applications other than those explicitly mentioned in this technical data sheet are only permissible after prior consultation. Where no approval is given, such applications are at the risk of the user. This applies particularly to combinations 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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