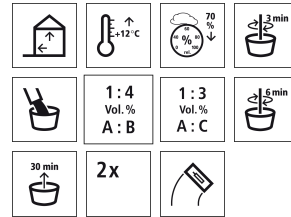


Technical data sheet

StoSilent Sil AP

Multi-layer silicate acoustic plaster



Characteristics

- Areas of application**
- interior
 - for ceilings and upper wall areas

Properties

- sound-permeable decorative coating
- limited combustibility
- reaction to fire (class) in accordance with EN 13501-1: C-s1, d0
- system consisting of 3 components: StoSilent Sil AP Comp. A (binding agent), StoSilent Sil AP Comp. B (extender - medium graining), StoSilent Sil AP Comp. C (extender - fine graining)

Appearance

- finely textured surface
- broad scope for colour design

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Criterion	Standard / test regulation	Value/ Unit	Notes
Density	EN ISO 2811	1.11 g/cm ³	
Diffusion-equivalent air layer thickness	EN ISO 7783-2	0.05 - 0.06 m	V1 high
Water vapour diffusion resistance factor μ	EN ISO 7783-2		V1 high

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Reaction to fire (class)	EN 13501-1	C-s1, d0	limited combustibility
Rated value of thermal conductivity λ	TIAP-655 based on EN 12667	0.05 W/(m*K)	
Sound absorption degree α_w		0.45	with coating
Sound absorption degree α_w		0.45	with coating
PH value		11.2	
Light reflectance value		85	
Degree of whiteness		65 %	
Tensile strength on concrete	EN 1542	≥ 0.3 N/mm ²	

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, and also free from sinter layers, efflorescence and release agents. Damp or not fully cured substrates can lead to defects in following layers, such as bubble formation or cracks. Therefore do not apply onto damp or soiled substrates.

Preparations

New substrates:
remove soiling, then clean the surfaces. Remove any sinter skin.

Old substrates:
Remove non load-bearing paint remnants as well as non load-bearing old (paint)

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coats and then clean the substrate (mechanically or using a suitable paint remover).

Plasters of mortar groups PG II + III:
do not pre-treat solid, normally absorbent substrates before coating them. Apply a substrate coating of StoSilent Prim onto coarse, porous, crumbling, highly absorbent plasters.

Gypsum plasters and pre-mixed plasters of mortar groups PG IV + V:
sand, dust off, and prime any sinter skin with StoPrim Plex.

Gypsum construction boards:
in case of absorbent boards prime with StoSilent Prim.

Gypsum plasterboards:
maximum approved carrier rail spacing: 30 cm
sand off spatula burrs. Prepare the gypsum plasterboard surface including the honed filler and levelling coat for the subsequent coating with StoSilent Prim.

In case of visible yellowing, apply an additional blocking coat of StoPrim Isol (see BFS data sheet 12).

Concrete:
Remove contaminants due to formwork oil, grease, and wax using a jet wash.
Correct small gaps and blow-holes with StoLevell In Z. Prime with StoPrim Plex.

Porous concrete:
prime with StoSilent Prim and smooth with StoLevell In Fill.

Fair-faced brick masonry:
clean, remove dust and prime with StoSilent Prim.

Load-bearing coats:
rework matt, weakly absorbent coatings directly. Roughen glossy surfaces and lacquer coatings. In case of highly absorbent old dispersion paint coats prime with StoSilent Prim.

Old lime and mineral paint coats and coatings:
mechanically remove and dust off the surfaces as much as possible and prime with StoSilent Prim.

Distemper paint coats:
Wash off thoroughly and treat the substrate accordingly.

Non-adherent wallpapers:
Remove all traces of the wallpaper. Wash off any remains of wallpaper paste and lining paper. Seal gaps with StoLevell In Fill and then treat them accordingly.

Mould-infested surfaces:

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Remove mould layers through wet cleaning (e.g. brushing or scraping off). After-treatment with StoPrim Fungal. Priming depends on the type and composition of the substrate.

Level coarse uneven surfaces with a suitable filler and allow to dry.

Prime highly absorbent substrates with StoSilent Prim. However, no glossy film may form (create test surfaces in case of doubt).

The coating layer build-ups and recommendations listed do not release the applicator from his or her own responsibility for substrate testing and assessment.

Application

Application conditions Not more than 70 % relative humidity. A suitable measuring device is required for measuring the above-mentioned values.

Application temperature Lowest substrate and air temperature for application: +12 °C

Mixing ratio thick coat: StoSilent Sil AP Comp. A : StoSilent Sil AP Comp. B = 1 : 4 room parts
fine coat: StoSilent Sil AP Comp. A : StoSilent Sil AP Comp. C = 1 : 3 room parts

Material preparation Using a stirrer, stir StoSilent Sil AP Comp. A in a pail for at least 3 min. until foamy. Only then put the material into the compulsory mixer! (e.g. UEZ-Jetmix). Only use a slow-running compulsory mixer, other stirrers crush the material, making it useless. Stir the material in the compulsory mixer for 6 minutes.

Layer 1 and 2:

First add 1 room part StoSilent Sil AP Comp. A, then add 4 room parts StoSilent Sil AP Comp. B.

Mixing time is 6 minutes (must be assured).

Apply the material within 30 minutes. Do not stir any unused material with water later! This makes the material acoustically ineffective!

Layer 3:

Decant 1 room part of StoSilent Sil AP Comp. A, then add 3 room parts StoSilent Sil AP Comp. C.

Mixing time is 6 minutes (must be assured).

Apply the material within 30 minutes. Do not stir any unused material with water later! This makes the material acoustically ineffective!

Consumption	Type of application	Approx. consumption
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component A for layer 1 and 2	9.00	kg/m ²
component A for layer 3	1.50	kg/m ²
component B for layer 1 and 2	34.00	l/m ²
component C for layer 3	5.00	l/m ²

Material consumption depends on the application, substrate, and consistency, among other factors. 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.

Coating procedure

StoSilent Profile PL

Substrate coating:
StoSilent Prep Quarz

Intermediate coat:
StoSilent Sil AP in 3 - 4 layers

Finish:
StoSilent Decor M or StoSilent Decor MF (depending on colour shade)

Application

manually, manual application in three layers, thickness: 23 mm

plaster screeds

StoSilent Profile PL made of PVC should be fixed to the ceiling or wall at a parallel spacing of 70 - 90 cm.

Prime coating

Spray prepared substrates with StoSilent Prep Quarz to promote adhesion and leave to dry for a sufficient amount of time (approx. 48 hours).

First plaster layer:

Apply the material with a trowel in an approx. 3-mm-thick layer applying some light pressure and leave to dry for approx. 12 - 24 h.

Apply another layer with a trowel in an approx. 5 - 8-mm-thick layer. Allow the material to rest after application and levelling (do not keep smoothing). Drying time approx. 24 - 48 h. Material is sufficiently dry when it crackles under thumb-applied pressure.

Second plaster layer:

Application same as first plaster layer. The surface is then trowelled off and levelled with a trapezoidal batten (in one direction only). The surface must be

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absolutely smooth. If necessary, the surface can be coated once again with the same material after complete curing (approx. 1 - 2 days).

Third plaster layer:

Apply the fine coat in one or two layers in a thickness of approx. 3 - 5 mm using a square trowel. When applying two layer make sure to let the first fine coat layer dry for min. 24 hours before applying the second layer. Sufficient manpower must be available to ensure seamless working. If the fine coat is smoothed and dry, it must not be smoothed any more (staining).

Trouble-free handling of the plaster is only guaranteed if the temperature and relative air humidity of the substrate and room air correspond to the above-mentioned specifications throughout the entire application period.

Decorative layer:

After 1-2 days spray the material onto the above-mentioned plaster surface using a fine spraying set. Work in 2 offset application cycles with increasing amounts of material using the hopper gun or rotor and stator pump (application cycle 1 approx. 700 g/m²). Between the spray applications, observe min. 5 hours of drying time (at less than 70 % air humidity and a temperature of +18 °C).

Colour design:

For a colour design, apply StoSilent Decor M or StoSilent Decor MF in the selected StoColor colour shade. After 1-2 days spray the material onto the above-mentioned plaster surface using a fine spraying set. Work in 2 offset application cycles with increasing amounts of material using the hopper gun or rotor and stator pump (application cycle 1 approx. 700 g/m²).

Renovation:

Spray-apply StoSilent Decor M or StoSilent Decor MF (criss-cross pattern).

Drying, curing, ready for next coat	Leave the first two layer to dry min. 3 days at +20 °C and 70 % relative air humidity.
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High humidity and/or low temperatures prolong drying.

Cleaning the tools

Clean tools with water immediately after use.

Indications, recommendations, special information, miscellaneous

The acoustic values of the Sto acoustic products stated in the Technical Data Sheets are only guaranteed if the products are installed by experts. These values are the basis for the calculations of the normal reverberation time - mostly carried out by acousticians. By using Sto acoustic products, the ideal acoustics planned for the respective application are achieved. Acoustic ceilings are functional ceilings which are subject to natural ageing and require optical reworking at certain intervals (see, for example, renovation cycles from tenancy law). To retain the acoustic effectiveness of the system even after renovation, reworking should only be carried out in accordance with Sto SE & Co.

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KGaA specifications.

Delivery

Colour shade natural white

Packaging

sack

Storage

Storage conditions Store in dry conditions.

Storage life

The quality of the product in its original container is guaranteed until the maximum storage life has expired. The storage life date can be deduced from the batch number of the container.

Batch number explanation:

Number 1 = the last number of year, numbers 2 + 3 = a calendar week

e.g.: 5450013223 – storage life until week 45 of the year 2015

Certificates/approvals

Declaration of conformity No. 2014-04	Acoustic products formulation identity/name change Certificate of conformity
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M 35 120/107 Page 1	StoSilent Compact - StoSilent Sil AP - StoSilent Decor MF - Build-up Typ B Determination of the sound absorption factor in accordance with EN ISO 354
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M 35 120/107 Page 2	StoSilent Compact - StoSilent Sil AP - StoSilent Decor MF - Build-up E-285 Determination of the sound absorption factor in accordance with EN ISO 354
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Identification

Composition In accordance with the VdL directive (German Paint and Printing Ink Association) on coating materials for buildings, potassium silicate, polymer dispersion, silicate filler materials, water, alcohols, additives

Safety Please observe the 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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