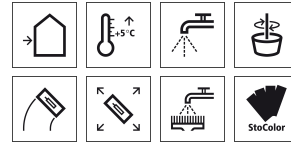


Technical Data Sheet

Stolit Milano

Organic finishing render, ultra fine-grained



Characteristics

Application

- exterior
- on to organic and mineral substrates
- as a multi-layer system
- not suitable for horizontal or sloping surfaces subject to weathering

Properties

- ultra fine-grained free-style textured render (grading curve under 0.1 mm)
- as an intermediate filler well float-finishable
- good sanding properties
- water-repellent
- highly water vapour permeable
- weather-resistant

Appearance

- fine to coarse spot-smoothed trowelled finish, optional additional coating, e.g. glazing
- in fair-faced concrete appearance as trowelling and sanding technique on Stolit K 1.0 and Stolit K 1.5 in accordance with special application guidelines

Information/notes

- with film conservation to ward off algae and/or fungal attack

Technical data

Criterion	Standard / test regulation	Value/ Unit	Notes
Density	EN ISO 2811	1.7 - 1.9 g/cm ³	
Diffusion-equivalent air layer thickness	EN ISO 7783-2	0.39 - 0.44 m	V2 medium
Water permeability rate w	EN 1062 -3	< 0.05 kg/(m ² *h ^{0.5})	W3 low
Water vapour diffusion resistance factor μ	EN ISO 7783-2	400 - 500	V2 medium
Reaction to fire (class)	EN 13501-1	B-s1, d0	Flame retardant
Thermal conductivity	DIN 4108	0.7 W/(m*K)	

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 purpose.

Substrate

Requirements

The substrate must be firm, dry, clean, and load-bearing, as well as free from sinter layers, efflorescence and release agents. Damp or not fully cured substrates can lead to defects in subsequent coats, such as blistering or cracks.

For coatings in EWI systems, a layer thickness of the reinforced base coat of

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approx. 3.5 mm must be assured. This is normally achieved through an additional levelling filler coat onto the reinforced base coat or an additional render layer in K 1.5 - stippled render texture 1.5 mm.

Preparations To improve the application properties, such as the open time on mineral substrates or for adhesion optimisation, a priming coat of Sto-Primer must be applied. In case of intense Stolit Milano colour shades, it is generally recommended to match the substrate colour shade to the Stolit Milano top coat by using correspondingly tinted Sto products in the system structure.

Application

Application conditions Do not apply the material in direct sunlight or onto heated substrates.

Application temperature Lowest temperature of substrate/air: +5°C
Highest temperature of substrate/air: +28°C

Material preparation Use as little water as possible to achieve application consistency. Stir well before application. For machine application the amount of water added depends on the requirement of the respective machine/pump. As a rule, strong colour shades need less water to achieve the optimum application consistency. Too much thinning of the material will make application more difficult and will result in poorer characteristics (e.g. hiding power, colour shade).

Consumption	Type of application	Approx. consumption	
	1 to 2 filler base coats	1.50	kg/m ²
intermediate filler	0.50	kg/m ²	
spot-smoothed finish (per application cycle)	0.20 - 0.30	kg/m ²	
overall structure of Stolit Milano	2.20 - 2.50	kg/m ²	

The consumption of the material depends on the application method, substrate and consistency, amongst other factors. The stated consumption rate is only to be used as a guide. Where required, precise consumption values should be established on the respective project.

Coating procedure Priming coat:
Depends on the type and condition of the substrate.

Intermediate coating:
Sto-Primer onto mineral substrates

Top coat:
Filler base coat covering the entire surface (several times if necessary): Stolit Milano Trowelling technique, e.g. as spot-smoothed finish (several times if necessary): Stolit Milano

Application Manually, manual application only

Filler base coat:
The filler base coat is applied manually and non-directionally (i.e. criss-cross) to the entire surface with a max. layer thickness of approx. 1.0 mm per application

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cycle. It is used for levelling the substrate. Depending on the substrate and the requirements of the surface, this must be applied twice.

Larger substrate unevenness (e.g. holes) must be levelled with a better filling, substrate-matched material: organic substrates with e.g. StoLevell Classic; mineral substrates with e.g. StoLevell Reno or StoLevell Uni.

Any filler ridges are sandable. These sanding spots remain noticeable if they are not reworked. After a short drying time, the uneven areas/transitions are alternatively float-finished with a moist (not wet) plasterer's float with a velour latex sponge.

Scaffolding fixings must be levelled and sealed with Stolit Milano. Sealing of the scaffold anchor holes must be performed carefully, taking the increased surface requirements into consideration.

It is advisable to pre-coat external corners with corner rails in the respective Stolit Milano colour shade even before the first application cycle. This prevents the corner protection rails from shining through.

Trowelled finish as well as spot-smoothed finish: After the filler base coat has dried, Stolit Milano is applied as the actual surface technique with its versatile scope for design: As an elegant and subtle trowelling technique, Stolit Milano is applied with the square trowel in a spot pattern and non-directionally. The individual filler spots should be somewhat contiguous and not spread too far apart. After a short drying time, the surfaces are float-finished with a velour latex sponge so that a relatively smooth (but not an even) surface is created. This application cycle is carried out once or twice depending on the desired appearance.

If Stolit Milano is used as a decorative spot-smoothed finish, the material is also applied with a square trowel here in approx. one to two application cycles. In this case, however, Stolit Milano is applied from a slight distance in a spot pattern and non-directionally. The transitions of the individual spot-smoothed finishes can remain as they are or be float-finished with a velour latex sponge.

The more densely the fillers/spot-smoothed finishes are applied, the calmer the effect of the surface. If Stolit Milano is applied onto a surface as a top coat by several people, their different application styles, and hence possible different surface effects, must be taken into account.

Further surface effects are possible in certain cases. When using Stolit Milano in several colour shades, start with the darkest colour shade.

We generally recommend creating a test surface on the project.

Apply reinforcing compound full-surface across the edge area, extending across the width of the mesh. Insert mesh angle beads vertically and flush as well as free from bubbles and creases. Trowel off any surplus reinforcing compound with a stainless steel smoothing trowel (to prevent doubling of the reinforcing coat in the corner area). Reveals/edgings: Stolit Milano is also suitable in the reveal and/or edging area.

After drying, rendering and coating reworking of Stolit Milano with Sto products

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(Lotus-Effect, silicone resin or organic) is possible. Further products might be possible on request.

Drying, curing, reworking time Drying occurs physically through water evaporation.

During unfavourable weather conditions it is imperative that suitable protective measures (e.g. protection against rain) be applied to the work in progress and freshly completed facades.

At +20°C air and substrate temperature and 65% relative humidity: as filler base coat over-coatable after approx. 8 hours, as spot-smoothed finish over-coatable after approx. 1 - 3 hours. Sandable after approx. 24 hours. Final hardness is reached after approx. 28 days. The product is then more difficult to sand.

Cleaning the tools Clean tools with water immediately after use.

Delivery

Colour shade

White, tintable in accordance with the StoColor System

Where the coating is applied onto the StoTherm Vario EWI system, the lightness value of the colour shade should generally not be less than 20%. StoTherm Classic has a minimum lightness value of 15%. Lower colour shade lightness values in the respective system must be assessed separately and on a project-related basis by the system manufacturer.

Float-finishing with the moist latex disk can lead to lightening of certain colour shades. This gives the surface a subtle liveliness.

Colour stability:

Due to general weathering, particularly the intensity of UV irradiation in connection with humidity effects change the surface of coatings over the course of time. Visible colour changes can be the result.

At the same time, it is a process which is influenced by material and project conditions. Hence, it is state-of-the-art technology to improve the colour stability for intense and/or very dark colour shades through an additional paint system.

Filler break:

When coated surfaces are exposed to mechanical stress it is possible that, due to the natural calibration grains used for darker, more intense colour shades, the areas of impact change to a lighter colour. This does not affect the quality and functionality of the product.

Colour accuracy:

It is not possible to give any warranty for uniform colour accuracy and freedom from stains due to chemical and/or physical curing processes and fluctuations in the weather and different substrate conditions, especially in the case of:

- a) uneven absorption behaviour of the substrate
- b) different substrate moistures over the entire the surface
- c) partially very different alkalinity/substances from the substrate
- d) direct solar radiation with sharply delineated shadowing on the freshly applied coating.

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Emulsifier washouts:

Due to conditions which delay drying, surface effects (streaking) can occur on coatings which are not yet fully-dried during initial stages of weathering caused by dew, mist, water spray or rain because of water-soluble additives. Depending on the colour intensity, this effect can occur to varying degrees. This does not constitute an impairment of product quality. These effects are normally removed automatically on further weathering.

Tintable	Can be tinted by the user with max. 1% StoTint Aqua.
Special options possible	The product is equipped at the factory with adapted film conservation against algae and fungal attack, it is not possible to add agents. A preventive and delaying effect is achieved. However, it is not possible to guarantee that there will be no algae and/or fungal attack in the long term.
Packaging	Pail
Storage	
Storage conditions	Store tightly sealed in frost-free conditions. Protect against heat and direct sunlight.
Storage life	The quality of the original package is guaranteed until stock by date. The stock by date can be deduced from the batch number of the package. Batch number explanation: Number 1 = the last number of year, numbers 2 + 3 = a week I.e.: 1450013223 – stock date until the 45th week of the year 2011
Certificates / approvals	
ETA-07/0156	StoTherm Classic 1 (MW/MW-L and StoArmat Classic) European technical approval
ETA-07/0088	StoTherm Classic 2 (MW/MW-L and StoLevell Classic) European technical approval
ETA-06/0004	StoTherm Classic 3 (EPS and Sto reinforced cement) European technical approval
ETA-09/0058	StoTherm Classic 5 (EPS and StoArmat Classic plus) European technical approval
ETA-11/0504	StoTherm Classic 6 (EPS und Sto-Armierungsputz) European technical approval
ETA-09/0288	StoTherm Classic 5 MW/MW-L (StoArmat Classic plus) European technical approval
ETA-06/0003	StoTherm Classic QS 1 (EPS and StoArmat Classic QS) European technical approval
ETA-05/0130	StoTherm Vario 1 (EPS and StoLevell Uni) European technical approval
ETA-06/0045	StoTherm Vario 3 (EPS and StoLevell Novo) European technical approval
ETA-06/0107	StoTherm Vario 4 (EPS and StoLevell Duo) European technical approval
ETA-09/0231	StoTherm Mineral 1 (MW/MW-L and StoLevell Uni) European technical approval
ETA-07/0027	StoTherm Mineral 3 (MW/MW-L and StoLevell Novo) European technical approval

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ETA-04/0075	StoTherm Vario S35 European technical approval
Z-33.41-116	StoTherm Classic / Vario, bonded on solid substrates National technical approval
Z-33.42-129	StoTherm Classic / Vario / Mineral, rail fixing National technical approval
Z-33.43-61	StoTherm Classic / Vario / Mineral, bonded and dowelled National technical approval
Z-33.44-134	StoTherm Mineral L / Classic L National technical approval
Z-33.47-659	StoTherm Wood in timber frame construction National technical approval
Z-33.47-811	StoTherm Classic / Miscellaneous / Classic L / Mineral L, glued for wooden structures National technical approval
Z-33.49-742	Double-walling solution for pre-existing thermal insulation National technical approval
Z-33.2-394	StoVentec systems for external facade render National technical approval

Identification

Product group Facade render

Composition

In accordance with VdL (German Paint and Printing Ink Association) guideline: Construction coating materials for buildings, Polymer dispersion, Titanium dioxide, Calcium carbonate, Aluminium hydroxide, Kieselguhr, Silicate fillers, Water, Aliphatics, Glycol ether, Additive, Preservative

Special information

The information or data serves to ensure the product's intended purpose 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 with Sto AG. Where no approval is given, such applications are at the risk of the user. 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 at www.sto.com.

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CE		
Sto AG, Ehrenbachstr. 1, D-79780 Stühlingen 10		
EN 15824		
Stolit Milano		
Exterior render		
Reaction to fire	B-s1, d0	Flame retardant
Water absorption		W3 low
Thermal conductivity		NPD
Tensile strength on concrete	≥ 0,3 N/mm ²	
Durability		NPD
Water vapour permeability		V2 medium

Rev. no.1

CE Stolit Milano

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