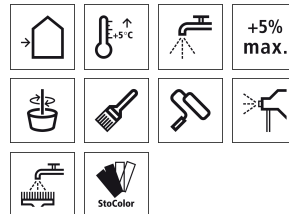


# Technical Data Sheet

## StoColor Lotusan

Facade paint with Lotus-Effect®



### Characteristics

#### Application

- Exterior
- for coatings with reduced adhesion of dirt particles on mineral and organic, non-elastic substrates
- not suitable for horizontal (e.g. including joint areas in masonry) or sloping surfaces subject to weathering

#### Properties

- texture-retaining
- very high CO<sub>2</sub> and water vapour permeability
- reduced wetting with water
- Lotus-Effect®: reduced adhesion of dirt particles and self-cleaning when exposed to rain
- dirt runs off with the rain
- natural protection against algae and/or fungal attack
- without film conservation against algae and fungal attack
- low-stress

#### Appearance

- matt

### Technical data

Criterion	Standard / test regulation	Value/ Unit	Notes
Density	EN ISO 2811	1.4 - 1.6 g/cm <sup>3</sup>	
Diffusion-equivalent air layer thickness	EN 1062 -3	0.01 m	V1 high
Water permeability rate w	EN 1062 -3	0.05 kg/(m <sup>2</sup> *h <sup>0.5</sup> )	W3 low
Water vapour diffusion resistance factor μ	EN ISO 7783-2	50	average value
Gloss	EN 1062-1	matt	G3
Dry layer thickness	EN 1062-1	220 μm	E4 > 200; ≤ 400
Grain size	EN 1062-1	< 100 μm	S1 fine

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.

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**Preparations** Check existing coatings for their load-bearing capacity. Remove any non load-bearing or structurally weak coatings.

#### Application

**Application temperature** Lowest temperature of substrate/air: +5°C  
Highest temperature of substrate/air: +30°C

#### Material preparation

Intermediate coating diluted with max. 5% water.  
Top coat diluted with max. 5% water.

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	
per paint coat	0.17 - 0.20	l/m <sup>2</sup>
for 2 coats	0.34 - 0.40	l/m <sup>2</sup>

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

Substrate coating:  
Depends on the type and condition of the substrate.  
A substrate coating with Sto-Hydrogrund is generally recommended.

Intermediate coating:  
StoColor Lotusan

Top coat:  
StoColor Lotusan

Optimum formation of the water-repellent effect always requires a double coat.

#### Application

Painting, Rollers, By airless spray-gun

#### Drying, curing, reworking time

When there is high humidity and/or low temperatures, the drying process will be delayed accordingly.

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.

Successive coats may be applied after 8 hours when the air and foundation/base temperature is of about +20°C and the humidity level is of 65%.

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### Cleaning the tools

Clean tools with water immediately after use.

### Indications, recommendations, special information, miscellaneous

Depending on the weather, the full formation of the water-repellent effect is reached after approx. 28 days.

Depending on the weather, the water-repellent effect can start later in case of intense colour shades.

Due to reduced wettability with water, oily/greasy soiling accretion is only covered by the water-repellant effect to a limited degree.

### Delivery

#### Colour shade

White, Limited tintability in accordance with the StoColor System

#### Colour stability:

The effects of the weather, humidity, UV irradiation and deposits can lead to changes in the coating surface over time. This can result in colour changes. This is a dynamic process which varies according to climate conditions and the degree of exposure. The respective current national regulations, data sheets, etc. apply.

#### 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.

#### 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

With max. 3% StoTint Aqua.

### Special options possible

The product is free of film conservation. It is not possible to add agents against algae and mould growth. If the project to be coated is subject to a higher risk of algae and mould attack, we recommend the use of a facade paint with adjusted film conversation which provide increased protection against algae and fungal attack. However, it is not possible to guarantee that there will be no algae and/or fungal attack in the long term.

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**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

Z-33.43-925	StoTherm Wood for solid construction substrates National technical approval
Z-33.47-659	StoTherm Wood in timber frame construction National technical approval
Prüfbericht P 1977-1	Lotus-Effect for facade paints Soiling behaviour
Prüfbericht P 2371-1	Facade paints test Soiling behaviour
Prüfbericht P 3193	Soiling - long-term test Soiling behaviour
Prüfbericht P 5086-4	Lotusan Testing carbon dioxide permeability
Mikrobiologische Prüfung von Fassadenfarben	Test report Microbiological test
Prüfbericht 139/2000	Lotusan as impregnation
Prüfbericht AT 008/00	Physical characteristics - comparison of facade paints
IBP-Bericht FEB-5/1999	Comparison of surface wetting and drying Determining surface wetting and drying behaviour
Bericht - Lotus-Effekt	Self-cleaning microstructured surfaces Professional journal

### Identification

**Product group** Facade paint

**Composition** In accordance with VdL (German Paint and Printing Ink Association) guideline: Construction coating materials for buildings, Polymer dispersion, polysiloxane emulsion, Titanium dioxide, silicon dioxide, Water, Additive

**Security** Please observe safety data sheet

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### 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](http://www.sto.com).

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