

## Document type

## Technical Data Sheet

<b>Name</b>	<b>STARS</b>
<b>Description</b>	Natural, lime-based material for decorative finishes on interior and exterior wall surfaces. Naturally anti-mould and breathable. The finish alternates textured and smooth areas and is speckled with silver micas.
<b>Composition</b>	Aged, slaked lime and selected marble powders, silver mica
<b>Grain size</b>	1 mm
<b>Appearance</b>	Paste
<b>Colour</b>	White with silver flakes, it can be tinted in any colour with lime-compatible colourants
<b>Packaging</b>	24 kg net polyethylene containers
<b>Application</b>	By hand, with a steel trowel
<b>Type of Surface</b>	<p>Interior and exterior walls</p> <p><u>New Wall Surface</u></p> <p>Plaster: no priming necessary</p> <p>Gypsum / Plasterboard / Medium Density: one coat of QUARTZ PRIMER</p> <p><u>Old Wall Surface</u></p> <p>Plaster: one coat of QUARTZ PRIMER</p> <p>Fast drying / Limewash: brush down and apply one coat of QUARTZ PRIMER</p> <p>Polished Lime: Abrade, brush down and apply one coat of QUARTZ PRIMER</p> <p>Washable Paint: one coat of QUARTZ PRIMER</p>
<b>Dilution</b>	Ready to use
<b>Consumption</b>	3,7 kg after two coats
<b>Drying</b>	<p>4 hours at 20°C / 68°F to the touch</p> <p>48 hours at 20°C / 68°F below the surface</p> <p>180 days stable</p>
<b>Application temperatures</b>	min 5 max 30°C – R.U. < 85% ca
<b>Coat Thickness</b>	1.8 – 2.3 mm for a total of 2 coats
<b>VOC Classification</b>	EU Directive 2004/42/CE: EU limit value for this product (cat A/I – water-based decorative effect coating): 200 g/l (2010). This product contains less than 1 g/l of VOC.
<b>Specific Weight</b>	1.4 ± 0.2 (kg/l)
<b>pH after 30 days</b>	12.5 ± 0.50
<b>Vapour Permeability</b>	SD ~ 0,04 m (DIN 52 615)
<b>Flammability</b>	European Class of Reaction to Fire A1: non-combustible, no contribution to fire
<b>Mould Resistance</b>	<p>ASTM D 3274 – “Standard Test Method to evaluate the degree of surface disfigurement of paint by microbial, fungal and algae growth.</p> <p>Result: Front Panel 10/10/10 Back Panel 10/10/10 = no growth</p>
<b>Scrub Test Resistance</b>	ASTM D 2486-06 method A = was used: scrubbing fine sand + metallic brush for 10,000 cycles

<b>Impact Test</b>	UNI EN ISO 6272-2-2006. 1 kg doming punch was dropped from different heights and only at the height of 8 cm., it left a 5.5 mm. dent in the surface and a tiny crack appeared around its circumference.
<b>Pencil Hardness</b>	ASTM D3363- Pencil hardness 5H
<b>Shore Hardness</b>	Norm ASTM 2240 average
<b>Adhesion</b>	Norm UNI EN 13892-8 2004 average value = 2,0
<b>Shelf life</b>	36 months when stored according to the recommended guidelines
<b>Storage</b>	In original sealed packaging between 5° - 35°C in a dry, dark environment
<b>Safety Norms</b>	Irritating. / Risk of serious damage to eyes. / Irritating to the skin. / Keep out of children. / Avoid contact with eyes. / In case of contact with eyes, clean immediately with water without rubbing them, and consult a doctor. / Wear suitable gloves and eyes / face protection. / In case of ingestion of the products, consult immediately a doctor showing him the can or the label of the product. Danger labelling under directives 67/548/EEC and 1999/45/EC and following amendments and adjustments. The product must be transported, used and stored according to current standards of hygiene and safety.
<b>Disposal</b>	Product must be disposed of according to norms and regulations in force. Containers must be sent for recycling. Follow directions on the packaging
<b>Application Instructions</b>	<p><b>WARNINGS</b></p> <p>Water on the surface of the material in the bucket is normal and should be removed before use or addition of colourants. All lime-based products lose their viscosity when mixed and need a period of 6/12 hours after mixing to regain their density. This product is dense, and ready for use; thus it may be necessary to use an appropriate drill attachment to stir for a few minutes to reduce viscosity. Choose the colour and add the toner additive to the container and continue mixing until a homogeneous shade is obtained. Let the product rest for about 5 hours before you begin to use it.</p> <p>We recommend using materials from the same production batch for the same project. If you must use different batches, we suggest mixing their material together to avoid any slight variations in shading.</p> <p>To ensure proper usage, dilution, and application of the products mentioned in these pages, please consult the corresponding technical data sheets.</p> <p>When preparing the surface and applying the materials, we advise using appropriate tools and personal protective equipment (PPE).</p> <p>During application and for the following 72 hours, protect the surfaces from sudden temperature change, direct sun light and water. Don't apply in temperatures below 8°C or above 35°. During application make sure that the work area isn't too damp to avoid problems with application times.</p> <p>Remember to have a strong light parallel to the wall and situated on only one of the two sides of the wall you are working on (usually on the same side as other sources of light such as windows). In this way the shadow of the trowel allows you to see the actual state of the finish. Every so often, during the second and third coat, the light should be moved so that the wall doesn't dry out too much in one spot from the heat of the lamp.</p>

## APPLICATION

Protection of the work area: Masking tape and protective material over the baseboards and around windows and doors.

STARS, can be applied on rough and smooth plasters, new and old. Existing paints need good brushing to remove surface dust and the inconsistent parts. Where necessary, apply a layer of QUARTZ PRIMER or UNIVERSAL PRIMER laid with a brush or roller, diluted with water according to the instructions. The possible presence of water on the surface of the tub is to be considered normal. Remove it completely before use or coloring. Mix the material with a mixer. All lime-based products lose their viscosity when agitated and require a rest period of about 6 hours after mixing, to return to their density. The product is very dense and ready to use, therefore for colouring will be necessary to mix the material for about a minute, to decrease its viscosity. Choose the colour. Introduce all the toner additive into the tub and continue the mixing until the colorant is completely homogenized. Before applying, let the product rest for about 6 hours to regain its original density. The application must be carried out with a steel trowel in two coats. The application of the first coat is carried out with a metal trowel with a consumption of about 1800-1900 g/sqm. The next day, or at least when the first coat is completely dry, apply the second one with the same method and consumption. When the surface begins to dry, level it up with SPONGE FLOAT COARSE. Let it dry about a 30-40% and then press the surface with the blade of the metal trowel. If you do this smoothing too soon, you risk smoothing out all the surface, almost like a Marmorino. If you do it too late, you fail to create smooth areas that, in a properly applied finish, must alternate with the rough ones. This pressing can be continued until the smooth area becomes almost shiny. The blade has to be moved in different directions to avoid the creation of ridges ("chatters"). After 24 hours from the application of the final coat, the surface can be lightly sanded using a sanding machine to eliminate excessive roughness and achieve a refined finish that is both visually appealing and pleasant to the touch.

**EXTERIORS:** For exterior applications there are some rules to respect and some precautions to take. We remind you that carbonation, i.e. the process that takes place through the absorption of atmospheric CO<sub>2</sub>, is completed in a few hours on the surface but takes several days to take place in depth. It is therefore important that the application takes place in the certainty of the absence of heavy rains in the three following days. It is also not recommended to apply it on walls that do not have at least a small roof overhang. Penetrating rain could ruin the finish even after weeks as deep carbonation is completed after more than a month. Avoid windy days, especially at high temperatures, as well as the risk of frost in the 48 hours following application. In external applications in hot climate conditions, it is also recommended to protect the wall from the sun with shade cloths applied to the scaffolding. Lime-based products must dry slowly to better fulfil their characteristics.

The application should be continuous and without linear brakes in the wall.

### Finish Protection

**Interiors:** A protective treatment is optional in most circumstances. It is however necessary in bathroom, kitchen, and splashback walls. In these areas, HYDROCALCE or VELATURA can be used as protective treatments.

**Exteriors:** This finish, as all lime-based plasters, absorbs water during rainy weather, which results in a temporary "wet effect" on the surface. However, this plaster releases the absorbed water within a few hours, allowing the surface to dry without any damage nor alteration to the finish. While a final treatment is therefore optional, it is highly recommended in areas with high pollution levels or if you wish to avoid the temporary wet effect that can occur after rainfall.

**INTERIORS / EXTERIORS:** after about 72 hours at least 20°C., proceed with the application of the colourless protective impregnation HYDROCALCE, especially designed for the protection of external lime-based coatings. Its Installation is done by brush in two coats, with a consumption of about 100-130 g/sqm.

**Maintenance**

Little maintenance is needed, brush off dust occasionally.

**Tools**

SI TROWEL, SPONGE FLOAT COARSE, SCRAPERS  
Clean with water immediately after use

We have drawn up the material presented above to the best of our technical and experiential knowledge. Nevertheless, our suggestions and recommendations are not guaranteed. All responsibility for the obtained results lies solely with the method and conditions adopted for the application of the product. Such indications constitute valid support for verifying the product's suitability for the specific case. We reserve the right to make modifications to the present information without previous warning.