

Document type

Technical Data Sheet

Name	TADELAKT
Description	Natural, lime-based material for decorative finishes on interior and exterior wall surfaces. Naturally anti-mould and breathable. This lime-based plaster originates in Morocco, where it is traditionally used in steam baths. It is appreciated for its durability and satin, authentic appearance.
Composition	Aged, slaked lime and selected marble powders.
Grain size	700 microns
Appearance	Powder
Colour	White, it can be tinted in any colour with lime-compatible colourants
Packaging	16 kg net polyethylene containers
Application	By hand, with a steel trowel
Type of Surface	<u>New Wall Surface</u> Plaster: no priming necessary Gypsum / Plasterboard / Medium Density: one coat of QUARTZ PRIMER <u>Old Wall Surface</u> Plaster: one coat of QUARTZ PRIMER Fast drying / Limewash: brush down and apply one coat of QUARTZ PRIMER Polished Lime: Abrade, brush down and apply one coat of QUARTZ PRIMER Washable Paint: one coat of QUARTZ PRIMER
Dilution	Each kg of TADELAKT powder should be diluted with 360 ml of water. Therefore, in a 16 kg TADELAKT tub, add 5.75 L of water.
Consumption	2 kg / sqm after three coats
Drying	3 hours at 20°C / 68°F to the touch 48 hours at 20°C / 68°F below the surface 180 days stable
Application temperatures	min 5 max 30°C – R.U. < 85% ca
Coat Thickness	1.9 - 2 mm after three coats
VOC Classification	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
Specific Weight	1.4 ± 0.2 (kg/l)
pH after 30 days	12.5 ± 0.50
Vapour Permeability	SD ~ 0,04 m (DIN 52 615)
Flammability	European Class of Reaction to Fire A1: non-combustible – no contribution to fire
Mould Resistance	ASTM D 3274 – “Standard Test Method to evaluate the degree of surface disfigurement of paint by microbial, fungal and algae growth. Result: Front Panel 10/10/10 Back Panel 10/10/10 = no growth
Scrub Test Resistance	ASTM D 2486-06 method A = was used: scrubbing fine sand + metallic brush for 10,000 cycles

Impact Test	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.
Pencil Hardness	ASTM D3363- Pencil hardness 5H
Shore Hardness	Norm ASTM 2240 average
Adhesion	Norm UNI EN 13892-8 2004 average value = 2,0
Shelf life	24 months in sealed containers
Pot life	3 months on average, if stored correctly
Storage	In original sealed packaging between 5° - 35°C in a dry, dark environment
Safety Norms	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.
Disposal	Product must be disposed of according to norms and regulations in force. Containers must be sent for recycling. Follow directions on the packaging
Application Instructions	WARNINGS 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. To ensure proper usage, dilution, and application of the products mentioned in these pages, please consult the corresponding technical data sheets. When preparing the surface and applying the materials, we advise using appropriate tools and personal protective equipment (PPE). 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. 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. APPLICATION Protection of the work area: Masking tape and protective material over the baseboards and around windows and doors. TADELAKT should be applied to plaster (rough or smooth, new or old). The perfect

one is a rough plaster made with lime and sand. Already painted surfaces require a thorough brushing down to remove dust and uneven parts.

Where necessary, use a brush or roller to apply a coat of QUARTZ PRIMER diluted with water up to about 10% in volume to be used, ca. gr/m² 120 ÷ 150, or UNIVERSAL PRIMER diluted 1 to 8 with water. Mix the powder material with water as described above. Tint it in the selected colour (you can use our Colouring System), mixing the pigment very well until a homogeneous shade is obtained. Let the product rest for half an hour before using it. You must apply at least two coats with a steel trowel.

1) FIRST COAT: use ca. 850-900 gr/m². This coat is applied directly to the plaster (background), taking care to apply it evenly to smooth out any imperfections in the ground.

2) SECOND COAT: apply when the first coat is dry. Use ca. 1050-1300 g/sqm, taking care that the surface is as smooth and groove-free as possible. Note that to get the Moroccan effect you have to use till 1300 g per sqm, but most of the applicators use about 1000-1150 grams per sqm. Note that the application of a third very thin coat could help if the wall absorbs too much.

3) Now it begins a work of pressing and smoothing with spatula and trowel. It has to be done along with the drying process. If you press too much when the material is too wet some bubbles will appear. For this part of the work you can also use a plastic spatula with a well-prepared round edge. With the plastic spatula you have to press the surface, until some of the water comes out, carrying some lime and the finer powders. You need this "cream" to come out and fill the micro pores, which are produced by the drying process. The same work you can get using a metallic trowel and a water spray bottle. Be careful not to leave drops of water along the wall or they will create light marks. Filling the micro-pores has the double purpose of creating more shine and to make the surface waterproof. With a metallic and plastic trowel you can complete your work. At the end it is suggested to use a plastic trowel and a cloth to make the surface shinier.

A variation is the traditional Moroccan use of the STONE FOR TADELAKT.

This is a rounded stone which has been cut in two equal parts. The flat part we get from the cutting is made very smooth and shiny and the edge rounded and smoothed. It is used with circular movements with the flat smooth surface against the surface of the TADELAKT at the end of the work but when the material is still wet enough to produce the cream of lime and fine powder that we described above. You can understand that it is the proper time to use the stone because during the special "burnishing" with the stone a typical sound is produced during the rubbing. With this stone you can get a surface very waterproof since the micro porous can be fixed very well. In addition, you get the surface with the special wavy effect a little like a brocade fabric typical of the Moroccan bath.

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 CO₂, 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.

Finish Protection (optional)

INTERIOR: BEESWAX / MINERAL WAX / HYDROCALCE / MARSEILLE SOAP / MOROCCAN OLIVE OIL SOAP

EXTERIOR: HYDROCALCE

WET AREAS: PRESEALER + PU1C / PU2C

A protective treatment is optional in most circumstances. It is however necessary in bathroom walls, kitchen and splashback walls, and a must inside shower/sauna walls. On exteriors, protective treatments are obligatory only in highly polluted cities.

INTERIORS:

- With MOROCCAN OLIVE OIL SOAP: The day after a treatment is done applying MOROCCAN OLIVE OIL SOAP for TADELAKT (diluted 1 soap : 5 water in weight) with a brush or sponge all over the surface and removing the excess of it with a clean cloth after four to six hours. This soap is a special, olive oil based creamy soap, traditionally used to protect Tadelakt finishes in Morocco. It is rich in greasy components which give a permanent waterproofing to the lime. The MOROCCAN OLIVE OIL SOAP comes in a dark and a light version. The dark one is used on dark finishes and the light one with the light-coloured finishes. The light soap can also be coloured (though only very little) to match the color of the TADELAKT finish. This helps avoiding that some white soap residual remains visible in the little holes or scratches, if the Tadelakt surface is not polished perfectly. For the same reason we suggest you to use the white version for light colours and the dark one for darker colours.
- With HYDROCALCE + SOAP/WAX: If you need a very strong waterproofing, we suggest to first apply HYDROCALCE , after 72 hours from the application of TADELAKT. This waterproofer should be applied in two or three coats, wet on wet. Then, after 48 hours, apply the MOROCCAN OLIVE OIL SOAP as described above. Extra protection can be given applying our MINERAL WAX as the very last treatment after the HYDROCALCE and the SOAP. Please note that the MINERAL WAX increases the shine. MINERAL WAX can be reapplied from time to time.
- In saunas and shower areas the best protection is a 1-coat application of PRESEALER, followed by 2 coats of PU1C, applied at least 48 hours after the application of TADELAKT.

EXTERIORS:

Apply HYDROCALCE 72 hours after the application of TADELAKT, in 2 or 3 coats wet on wet, with a brush.

Maintenance

Little maintenance is needed, brushing off dust occasionally

Tools

SI TROWEL, CORNER TROWEL, STONE FOR TADELAKT (optional), NON-WOVEN FABRIC

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.