

Note on English translation / Hinweise zur englischen Fassung

This is a translation of the product data sheet valid in Germany.

All stated details and properties are in compliance with the regulations of the German standards and building regulations. They are only applicable for the specified products, system components, application rules, and construction details in connection with the specifications of the respective certificates and approvals.

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Plaster and Façade Systems

P733.de

Product Data Sheet

2021-03



Stens Hell

Restoration plaster on a surfactant basis - WTA certified

Product description

Restoration plaster according to WTA Code of Practice 2 – 9, edition 03/2020/D. The water absorbed by the masonry or the salt solution evaporates within the plaster cross-section of Stens Hell. The salts which crystallize build up in the pore structures of Stens Hell. The high share of pores ensure that the render surface remains dry and free of efflorescence.

Composition

Hydrated lime, Portland cement, graded quartz grains, air entraining admixture and water-retaining additives.

Storage

Can be stored for 12 months in a dry environment, protected from moisture.

Quality

In compliance with EN 998-1, the product is subject to initial type testing and continuous factory production control. Furthermore, the product is subject to external monitoring and is compliant with all demands of the WTA and can thus bear the WTA certificate.

Properties and added value

- Factory-mixed dry mortar R acc. to EN 998-1
- Compressive strength category CS II acc. to EN 998-1
- High water-vapour transmission rate (permeability) with reduced capillary conductivity
- Resistant to salts that can damage the building
- Air pore share of the fresh mortar > 25 by volume % due to surfactants
- Porosity > 40 % by volume
- Colour shade bright beige
- Water-repellent
- For interior and exterior application
- For machine or hand application

Field of application

For use on damp and/or masonry subject to high levels of salt in interiors and exteriors. Also suitable as a basecoat on Satt Feuchtwand-Sanierplatten restoration boards and as a basecoat for mineral finish coats.

Stens Hell together with Stens Haft and Stens Grund is a WTA certified restoration plaster system.

- As a single-layer restoration plaster with low salt levels and/or masonry with high levels of moisture
- As a multi-layer restoration plaster with medium to high salt levels and/or masonry with high levels of moisture
- As a last restoration plaster layer on Stens Grund undercoat plaster base
- As a top coat where there are no special demands made on the surface texture or colour shade.

Application

Substrate	Pretreatment
Old render	Completely remove the old render up to 80 cm above the recognizable moisture penetration zone. Immediately remove any building rubble that is produced
Crumbling masonry joints	Scrape out up to a depth of 2 cm
Remove remnants of render and coatings on the masonry	Remove completely and clean mechanically
Weak and non-absorbent substrate	Net pattern maximum 50 % of the area with Stens Haft
Normally absorbent substrate (brick)	None
Critical, non-substantial masonry	Corrosion-resistant plaster base
Stens Haft	Allow to fully dry and harden
Stens Grund	Roughen horizontally, drying time one day per mm plaster thickness
Efflorescence on cleaned masonry	Brush off when dry
Surface moisture	Allow to dry
Large irregularities in the masonry	Apply 20 to 30 mm thick layers of Stens Grund. Roughen the surface

Preparation

Components that may become easily soiled should be covered or taped off before work commences so they are water-tight. Protect weather-exposed surfaces from precipitation and direct sunlight by suitable measures. Use plaster profiles made of stainless steel and apply with Stens Hell.

All substrates must be stable, surface dry, even and free of grease and dust as well as free of any residual substances that may reduce the adhesion.

Machines / equipment

PFT mixing pump G 4

- Stator D6-3
 - Rotor D6-3
 - Mortar hoses Ø 25 mm
 - Wet mortar pumping distance up to 30 m
- Rotoquirl agitator is required.

Mixing

Mixing by hand

Mix the contents of the bag with approx. 7.5 litres of water for a maximum of 2 to 3 minutes to a lump-free mix. Decisive for the effectiveness of restoration plaster is the level of pores achieved in the fresh mortar. When mixing, use clean water and do not add other additives.

Mixing by machine

When starting up, set water to approx. 330 litres then set a lean mortar consistence. When mixing, use clean water and do not add other additives.

Application

Low level of salt in the masonry – single-layer

Apply Stens Hell as a single-layer, at least 20 mm covering masonry, level the surface when setting and scrape it. Drying time min. 1 day per mm plaster thickness.

Medium to high levels of salt in the masonry – multi-layer

Apply the first layer of a restoration undercoat plaster with Stens Hell at min. 10 mm covering the masonry, roughen surface horizontally when setting and allow to dry. Drying time min. 1 day per mm plaster thickness.

Apply further layer(s) of Stens Hell of min. 10 mm to maximum 20 mm and roughen surface(s) horizontally when setting. Drying time min. 1 day per mm plaster thickness. The total plaster thickness of 40 mm should not be exceeded.

With total plaster thickness > 40 mm, work with Stens Grund as an undercoat plaster base. The total plaster thickness of 80 mm should not be exceeded.

As the last functional layer, Stens Hell is applied in a plaster thickness of at least 15 mm.

Plinth application

Do not apply the restoration plasters right down to the soil and floor coverings conveying moisture, but rather terminate them \geq 20 mm above the ground line with a stainless steel plaster stop profile. Apply UP 310 as a cove to the existing joint between the stainless steel profile and flooring and protect using Sockel-Dicht.

Plaster surfaces contacting soil

Cleaned and dried masonry on the shaft bottom must receive a full coverage of Stens Haft restoration rough cast up to approx. 5 cm above the ground line. After setting apply 10 mm of UP 310 to cover the masonry. After drying out, all rendered surfaces below the ground line shall be waterproofed/protected against moisture ingress, starting from the basement wall waterproof barrier up to approx. 50 mm above the ground line using Sockel-Dicht. Apply Sockel-Dicht in a wet layer thickness of at least 2.5 mm (dry layer thickness at least 2 mm); apply a double layer.

Apply a fleece laminated dimpled sheet up to the ground line after drying.

Plaster reinforcement

With a change of material on the substrate, a Knauf basecoat mesh with at least 200 mm joint overlay on all sides of the flanking components, must be applied near the surface in the last restoration plaster layer. Also apply diagonal reinforcement on building openings using Gewebeeckpfeile mesh corner arrows or reinforcement mesh strips (approx. 30 x 50 cm) starting directly from the corner. With plaster thicknesses exceeding 30 mm, on mixed brickwork or with brushed final coat textures, a reinforcement layer over the entire surface in the last restoration plaster layer or an additional reinforcement plaster with SM700 Pro full surface mesh reinforcement is recommended. Use Rotkalk Fein as a reinforcement plaster in interiors.

Caution	The effect of all restoration plasters is influenced by supplementary measures such as, e.g:
	■ Horizontal and/or vertical moisture protection (DIN 1053 / DIN 18533)
	■ Installation of a drainage or filter layer in the area contacting the soil
	■ Diversion of water away from the building by changes in the slope

When plastering the cellar interior, ensure that the room moisture (relative air humidity < 65 %) is discharged and thus drying of the plaster is supported. In case it cannot be guaranteed, there is a danger of accelerated absorption of salt and the penetration of salts right up to the plaster surface.

Plaster must be applied acc. to applicable WTA-Guideline 2 – 9, issued 03/2020/D, DIN EN 13914, DIN 18550 and DIN 18350, VOB part C.

Application temperature/climate

The temperature of the StensHell, the substrate and the air should not be below +5 °C during application and until drying is completed. Protect fresh mortar from frost and rapid drying.

Cleaning

Clean the machines and tools with water immediately after use.

Suitable finish coats and paints with special demands on the texture and colour shade meeting the requirements for the covering layers according to WTA Code of Practice 29, edition 03/2020	Field of application	
	Exterior	Interior
Mineral-based finishing plasters		
SM700 Pro, Noblo, SP 260, Noblo Filz, MineralAktiv Dry, MineralAktiv	•	•
Rotkalk finishing plasters, Raumklima finishing plasters, FIP 290		•
Paints		
Minerol, MineralAktiv façade paint	•	
Silikatweiss E.L.F., Rotkalk Farbe E.L.F., Raumklima Farbe E.L.F.		•

Technical data

Description	Standard	Unit	Stens Hell
Reaction to fire	DIN 4102-1	Class	A1
Graining	–	mm	1.2
Compressive strength category	EN 998-1	Category	CS II
Water vapour diffusion resistance μ	EN 998-1	–	6
Thermal conductivity $\lambda_{10, dry, mat}$ at P = 50 % P = 90 %	EN 1745	W/(m·K) W/(m·K)	≤ 0.47 ≤ 0.54
Capillary water absorption W_{24}	WTA 2-9-03/2020/D	kg/m ²	> 0.3
Water penetration depth	WTA 2-9-03/2020/D	mm	< 5.0

The stated technical data were evaluated acc. to the respective test standards. Deviations under site conditions are possible.

Material requirement and efficiency

Coat thickness mm	Consumption approx. kg/m ²	Yield approx.	
		m ² /bag	m ² /tonne
10	12.0	2.6	84
20	24.0	1.3	42

The exact consumption can only be determined with a test application on the individual object.

Product range

Description	Graining mm	Application kg / bag	Packaging unit Bags/pallet	Material number	EAN
Stens Hell	1.2	30	36	00054688	4003950030390



Observe safety data sheet!

For safety data sheets and CE marking see

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