TECHNICAL DATA SHEET

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Stolit K

Organically bound facade finish plaster in accordance with DIN 18 558,
with stippled texture.

Material description

Type of material
Synthetic resin plaster, cement free, with film preservation.
Stippled texture.
Various grain sizes.
Ready for use.

Water-based material containing an organic binder, mineral fillers and additives.

Binder
Acrylate mixed polymer dispersion.

Fillers
Mineral fillers: Marble stones, quartz sand, ground quartz.

Additives
Film forming agents, anti-foaming agents, thickeners, preservatives.
White and coloured inorganic pigments.

Thinner
Diluting agent: Water

Uses

Uses
On wall and ceiling surfaces, as top coat on:

- Sto External Wall Insulation Systems (EWIS):
  - StoTherm Classic
  - StoTherm Vario
  - StoTherm Wood
- Rainscreen ventilated facade system:
  - StoVentec Facade (Verotec Futur Facade)
  - StoVerotec Facade
- EWIS renovation system:
  - StoReno Facade
- Sto Anti-Crack System
- All load-bearing mineral and organic substrates

Areas of use
For exterior use.

Restrictions
- Do not apply on damp substrates
- Not for horizontal surfaces
- Only apply in thin coats

Uses not clearly described in this Technical Data Sheet should only take place after consultation with Sto AG.

Application

Substrate
The substrate should be load-bearing, level, clean and dry as well as free of efflorences and separating agents.

Critical substrates must be tested for suitability (create a test surface).

Substrate preparation
Remove loose renders, paint and plaster coatings.

Allow new renders to set for at least 14 days before proceeding.

Non load-bearing, weak, suction substrates have to be primed. (See table 1).

Coating procedure
Undercoat (if necessary)
According to type and condition of substrate
(See table 1).

Intermediate coat
Sto Primer (Sto-Putzgrund), diluted by up to 10 % with water.
When using tinted Stolit K/R/MP Sto Primer should be tinted to the same colour as the top coat.

Product characteristics

- High expansion capability; therefore reduced susceptibility to cracking.
- High algae and fungus prevention.
- Highly resistant against driving rain.
  Highly weather resistant.
- Can be tinted in a large range of colours.
  High colour stability.
- Very good application properties.

Table 1: Substrate preparation and intermediate coats

Substrate		Treatment	Undercoat *)	Intermediate coat *)
Paint	Dispersion paint	Clean and prime	StoPlex W	Sto Primer
	Silicon resin paint	Clean and prime	StoPlex W	
	Silicate paint	Clean and prime	StoPlex W	
	Paint, chalking	Brush, clean and prim	StoPlex W	
	Paint, peeling	Remove with Sto Coating Stripper (= Sto-Fassaden-abbeizer). Steam clean and prime.	StoPlex W	
Plaster, render	Acrylic based plaster (synthetic resin plaster)	Clean, prime and level	Stoplex W	Sto Primer
	Mineral plaster	Clean and prime	StoPrim Micro or Stoplex W	
	Plaster, chalking	Clean and prime	StoPrim Micro or Stoplex W	
	Plaster, absorbent	Clean and prime	StoPrim Micro or Stoplex W	
	Plaster, sanding surface	Clean and prime	StoPrim Grundex	
	Unevenness > 1 cm/m	Levelling plaster with lime cement mortar (drying time min. 14 days)	StoPrim Micro or Stoplex W	
EWIS	External Wall Insulation Systems	1)	-	Sto Primer
Other	Concrete	Clean and prime 2)		Sto Primer
	Cement-bound wood particle board	Clean and prime 3)		
	Wood particle board V100G	Clean and prime 3)		

*) Primers should always be diluted appropriately for the substrate. The primer must not dry to a glossy finish.

1) See broschure "Sto External Wall Insulation Systems" and ask for technical advice
2) See broschure "Sto Decorative Plasters" and ask for technical advice
3) Ask for technical advice

Top coat
Stolit K, diluted with clean water to achieve best working consistency.

Material preparation
The material is - after mixing thoroughly - ready for use.

If necessary, dilute the material slightly with clean water to achieve best working consistency.

Application time (open time) is almost unlimited. Opened containers can be reopened and used again after several months.

Manual application
Stolit K and Stolit R are applied to the thickness of the largest grain size, using a stainless steel trowel.

A hard plastic trowel should be used to texture Stolit K and Stolit R. Grain sizes 3,0 mm and 6,0 mm should be textured using a wooden float.

Depending on application conditions, other suitable tools may also be used for texturing.

Stolit MP is applied using a stainless steel trowel. Layer thickness at least 2 mm, in individual cases max. 8 mm.

To be structured - depending upon desired surface texture - with any of a number of tools to achieve the desired effect: trowel, brush, structure rollers, spoon, scraper, sponge o.ae.
Stolit MP is not feltable.

During the processing it is to be made certain that cavities in the substrate are avoided. These can lead to blisterings.
Do not model with to damp tools: Danger for spotting!.

On washed Stolit MP we recommend an additional painting with StoSilco Color G or other Sto facade paints with film preservation.

Machine application
Suitable for spray application:
Stolit K can be spray applied using the Sto Funnel Spray Gun (Sto-Spritzpistole, art.-no. 18854-001), Inotec Inomat M8 (Sto art.-no. 12150-001) or any other fine plaster spray machine.

Adjust the amount of added water according to the appropriate machine/pump type.

The application technique and tools, as well as the substrate will have a considerable influence on the look of the finish

Drying time
Stolit K dries purely physically by water evaporation.

The drying time depends on the temperature and the relative humidity.

At 20 °C and 65 % relative humidity the product will be touch dry in 6 hrs. and can be overcoated after approx. 24 hrs. The product will be completely dry after approx. 14 days.

Drying times will be prolonged by lower temperatures and/or higher humidity.

In unfavourable weather conditions, e.g. high relative humidity and low temperatures, use Stolit QS K (quick setting).

Consumption
Stolit K
Grain 1,0 mm: approx. 1,8 kg/m²
Grain 1,5 mm: approx. 2,3 kg/m²
Grain 2,0 mm: approx. 3,0 kg/m²
Grain 3,0 mm: approx. 4,3 kg/m²
Grain 6,0 mm: approx. 6,0 kg/m²

The mentioned consumption figures serve only as an approximate guide. More precise figures can only be determined on site, since project-specific factors may affect consumption.

Application temperature
Air and substrate temperature should not be less than + 5 °C (until the material has completely set.)

Protective measures
No special protective measures (respiratory protection e.g.) are necessary. The usual precautionary measures while handling chemicals are to be considered.

Cleaning of tools
Immediately after use with water. Set material can only be removed mechanically.

Maintenance

Facade cleaning
Stolit K can be cleaned with water using a normal household detergent. If a steam jet machine is used, the following values should be observed:
- Water pressure: 30 - 40 bar.
- Water temperature: up to max. 30 °C.
- Nozzle distance: 30 - 50 cm.

Trial area recommended.

Facade refurbishment
Stolit K can be overcoated with all Sto dispersion and silicone resin paints.

Supply

Product code and name
Stolit K : with stippled texture
00130 grain 1,0 mm
00131 grain 1,5 mm
00132 grain 2,0 mm
00134 grain 3,0 mm
00135 grain 6,0 mm

Also available:
Stolit R : with rilled texture
Stolit MP : with free style texture

Quick setting products:
Stolit QS K
Stolit QS R
Stolit QS MP

Packaging
Pail (PE) 25 kg
00130-001 grain 1,0 mm, white
00131-001 grain 1,5 mm, white
00132-001 grain 2,0 mm, white
00134-001 grain 3,0 mm, white
00135-001 grain 6,0 mm, white

00130-005 grain 1,0 mm, tinted
00131-053 grain 1,5 mm, tinted
00132-003 grain 2,0 mm, tinted
00134-003 grain 3,0 mm, tinted
00135-002 grain 6,0 mm, tinted

Exportpail, 25 kg.
00130-021 grain 1,0 mm, white
00131-031 grain 1,5 mm, white
00132-031 grain 2,0 mm, white
00134-030 grain 3,0 mm, white
00135-024 grain 6,0 mm, white

00130-035 grain 1,0 mm, tinted
00131-061 grain 1,5 mm, tinted
00132-058 grain 2,0 mm, tinted
00134-059 grain 3,0 mm, tinted
00135-010 grain 6,0 mm, tinted

StoSilo large containers
(not available in all countries).

Colours
Available in white and tinted to the colours of the StoColor System. Refer to the colour card for surcharges.

Can be tinted with StoColor Tint or up to 1 % with StoTint Aqua.

As top coat on StoTherm Classic etc. the colour light reference value
may not fall below the value of 20 %. (No dark colours allowed.)

During strong mechanical load it is possible that - with intensive colours - discoloration may occur. This is, due to the white natural moulding sand used by filler break or pigment abrasion of and/or used natural fillers, these may appear lighter. The product quality and functionality are not affected by it.

Algae and fungus prevention
Stolit is manufactured with additional bactericidal, fungicidal and algicidal additives.

Please note that while this will prolong the prevention of algae and fungus growth, the effects are not guaranteed to last indefinitely.

Storage and transport

Marking
In accordance with European Union guidelines and national regulations:

VbF: -
EU/GefStoffV: -
GGVS/ADR: -
UN-Nr.: -

GISBAU-Code: M-DF02F
VVS-Code: 1610

Storage
Keep containers tightly closed and store in frost free conditions. Keep out of direct sunlight and avoid temperatures above + 35 °C.

Storage life
In unopened original containers (pails), product can be stored for a minimum of 18 months; in StoSilo large containers, at least 9 months. (Relevant data: refer to packaging).

Transport
No special protective measures or hazardous goods markings are necessary.

Environment and health

Health
Application of Stolit K poses no known or suspected health risk when correct procedures are followed.

The bound material likewise poses no known or suspected health risk in the light of present knowledge.

Risk warnings (R-phrases)
None.

Safety precautions (S-phrases)
None.

Measures in case of accident
In case of accident: absorb material and dispose of in accordance with local regulations.

Keep out of the reach of children. If swallowed seek medical advice immediately and show this container or label.

Disposal
Waste has to disposed considering the local, official regulations. Material into drains to arrive do not leave.

Dried or set material can be disposed of with normal building site rubbish.
Non-set material should be mixed with cement, left to dry and then disposed of.

Waste key in accordance with the European Waste Catalogue:
08 01 12.

For further information on handling, storage and disposal of the product, please refer to the current EU Material Safety Data Sheet, available for professional users. (Relevant data).

Physical data

Fire behaviour
Heavy inflammable B1
in accordance with DIN 4102.

Stolit's fire behaviour was tested as a part of the StoTherm External Wall Insulation Systems (EWIS).

Table 2: General approvals for use as a construction material in Germany

Approval DIBt	System *)
Z-33.41-116	StoTherm Classic / Vario (adhesive fixed), External Wall Insulation System (EWIS), Top coat with e.g. Stolit K/R/MP
Z-33.43-61	StoTherm Classic / Vario (adhesive and dowels fixed), External Wall Insulation System (EWIS), Top coat with e.g. Stolit K/R/MP
Z-33.42-129	StoTherm Classic / Vario (track fixing), External Wall Insulation System (EWIS), Top coat with e.g. Stolit K/R/MP
Z-33.44-134	StoTherm Classic L, External Wall Insulation System (EWIS), Top coat with e.g. Stolit K/R/MP
Z-33.47-811	StoTherm Classic / Vario / Classic L for timberframe constructions, External Wall Insulation System (EWIS) Top coat with e.g. Stolit K/R/MP
Z-33.43-66	StoTherm Cell, External Wall Insulation System (EWIS), Top coat with e.g. Stolit K/R/MP
Z-33.47-659	StoTherm Wood for timberframe constructions, External Wall Insulation System (EWIS), Top coat with e.g. Stolit K/R/MP
Z-33.43-925	StoTherm Wood for solid wall constructions, External Wall Insulation System (EWIS), Top coat with e.g. Stolit K/R/MP
Z-33.2-394.	StoVentec Facade, Rainscreen ventilated facade system, Top coat with e.g. Stolit K/R/MP
Z-33.2-601	StoVerotec Facade for timberframe constructions, Rainscreen ventilated facade system, Top coat with e.g. Stolit K/R/MP
Z-33.2-124	StoReno Facade EWIS renovation system. Top coat with e.g. Stolit K/R/MP
Z-33.49-742	Doubling up of EWIS (EWIS renovation), Top coat with e.g. Stolit K/R/MP

*) Without grain 6,0 mm.
Detailed system: See approval

DIBt = Deutsches Institut für Bautechnik in Berlin
Supervision: FMPA-Forschungs- und Materialprüfungsanstalt Baden-Württemberg in Stuttgart

Physical data
See table 3.

Certificates and test reports

- FMPA-Forschungs- und Materialprüfungsanstalt Baden-Württemberg in Stuttgart. P-BWU03 -I-16.5.151: General approval: fire behavior classification. (01.10.2002).
- General approvals for use as a construction material in Germany: See table 2.
- European Technical Approval ETA-03/0027: StoTherm Classic 1, reinforcement with StoArmat Classic. EOTA Brussels / CSTB Paris
- European Technical Approval ETA-05/0130: StoTherm Vario 1, reinforcement with StoLevell Uni. EOTA Brussels / DIBt Berlin

Approvals, certificates, test reports o.ae. in Germany and other countries on request.

General information

For all contracts - whether made verbally or in writing - Sto AG general conditions of sale apply.

Validity
This Technical Data Sheet is valid outside Germany, in all countries without Sto subsidiary.

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Table 3: Physical data

	Tested to	Value/Test result	Unit
Density			
in supplied form (wet material in container)	EN ISO 2811-1	1,70 - 1,90	[g/cm³] [1])
when hardened	EN ISO 2811-1		[g/cm³] [1])
pH-value	VIQP 011		
	Sto internal) standard	8,5 - 9,5	[1]
Fire behaviour			
Fire protection class	DIN 4102	B1 Heavy inflammable	
Thermal conduction			
Thermal conductivity λ (calculation value)	DIN 4108	0,70	[W/m.K]
Water-vapour diffusion			
Water-vapour transmission rate V	EN ISO 7783-2	73 - 81 [2])	[g/m².d]
Diffusion-equivalent air layer thickness s_d (material thickness = 1,5 mm)	EN ISO 7783-2	0,25 - 0,30 [2])	[m]
Water vapour diffusion resistance factor μ	EN ISO 7783-2	160 - 200	[1]
Water permeability			
Liquid-water transmission rate w	EN 1062-3, § 10	< 0,05 [3])	[kg/m².$h^{0,5}$]

[1]) g/cm³ = kg/dm³
[2]) class 2 (medium)
[3]) class 3 (low)

With the indication of the characteristic values it concerns average values. Due to the use of natural raw materials in our products the actual value can deviate slightly, without impairment of the product suitability.

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