TECHNICAL DATA SHEET

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StoArmat Classic

(formerly: StoElasto)

Cement-free reinforcing coat with calibration grain. Ready for use.

Material description

Type of material
Cement-free reinforcing and filling material with calibration grain. Ready for use.

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

Binder
Acrylate mixed polymer dispersion, plasticiser-free.

Fillers
Mineral fillers:
quartz sand, ground quartz.

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

Thinner
Diluting agent: Water.

Uses

Uses
On wall and ceiling surfaces:

a) As reinforcing coat for embedding Sto Glassfibre Mesh on:

- Sto External Wall Insulation Systems (EWIS):
  - StoTherm Classic
- Rainscreen ventilated facade systems:
  - StoVentec Facade (Verotec Futur Facade)
- EWIS renovation system:
  - StoReno Facade
- Sto Anti-Crack System

b) As levelling coat on:

- all load-bearing mineral and organic substrates

Areas of use
For exterior and interior use.

Restrictions
- Do not use on damp substrates.
- Not suitable for use when providing a top coat of mineral plaster or silicate plaster (with the exception of StoSil plasters).
- Only apply in thin coats for reinforcing and levelling purposes.

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 (when used as reinforcing material), 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
See table 1 for details.

a) When used as reinforcing coat:

Sto External Wall Insulation Systems (EWIS):
The insulation panels should be applied staggered (like brick-work) and tightly butt-jointed. Any open joints between the panels must be filled with insulation material or Sto PU Foam (under no circumstances with mortar). The surface must be completely level and roughed up.

Product characteristics

- High expansion capability; therefore reduced susceptibility to cracking.
- High reliability against impact stresses.
- Highly weather resistant.
- Usually no intermediate coat necessary.
- No diagonal reinforcement near wall openings necessary.
- Very good manual and machine application properties.
- Economical material consumption.
- Can be tinted in a large range of colours.

b) When used as a reinforcing layer (Sto Anti-Crack-System) or as a levelling coat:

Remove non load-bearing renders, paint or plaster coatings. Allow new renders to set for at least 14 days before proceeding.

Coating procedure
Undercoat (priming coat)
If necessary: According to type and condition of substrate (See table 1 for details).

Intermediate coat
An intermediate coat between StoArmat Classic and top coat (e.g. Stolit) is not usually required. (See table 2 for details).

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
a) As reinforcing coat:
Apply StoArmat Classic to the insulation panels using a stainless steel trowel.
Press Sto Glassfibre Mesh into the wet material and level the surface.
Mesh strips should be overlapped approx. 10 cm at the edges.
The glassfibre mesh must be completely embedded.
Thickness of coating: approx. 1,8 - 3,0 mm.

b) As levelling coat:
Apply StoArmat Classic in thin coats and level.

Machine application
Suitable for machine application using mixer pumps.
(More details on request.)

Table 1: Substrate preparation
Before reinforcing/levelling with StoArmat Classic

Substrate	Treatment	Priming coat *)
Plaster, chalking	Clean and prime	StoPlex W
Synthetic resin plaster	Clean	-
Paint, chalking	Brush, clean and prim.	StoPlex W
Paint, peeling	Remove with Sto Coating Stripper (= Sto-Fassaden-abbeizer. Steam clean.	-
Absorbent	Clean and prime	StoPlex W
Sanding surface	Clean and prime	StoPrim Micro
Unevenness > 1 cm/m	Levelling plaster with lime cement mortar (drying time min. 14 days)	-

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

Drying time
StoArmat Classic 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 can be overcoated after approx. 24 - 48 hrs.

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 StoArmat Classic QS (quick setting).

Consumption
a) As reinforcing coat:
For embedding Sto Glassfibre Mesh over Sto EPS Boards, approx. 3,0 - 3,5 kg/m².

b) As levelling coat:
Dependent on substrate.

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 (e.g. respiratory protection) 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.

Delivery

Product code and name
0250 StoArmat Classic white
3101 StoArmat Classic tinted

Also available:
Quick setting product
StoArmat Classic QS.

Packaging
Pail (PE), 23 kg.
StoSilo large containers
(not available in all countries).

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

Algae and fungus prevention
StoArmat Classic, like all organically bound plasters and levellers, can be manufactured with additional bactericidal, fungicidal and algicidal additives. When ordering, please attach the term "film preservation". (additional price).

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-DF02
VVS-Code: -
BAGT-Nr.: -

Table 2: Intermediate coat
Coat between StoArmat Classic and top coat

Top coat	Intermediate coat	Remarks
Sto synthetic resin plaster	Sto Primer	1)
Sto silicone resin plaster	StoPrep Miral	1)
Sto silicate plaster	StoPrep Miral	1) 2)
Sto mineral plaster	-	2)
StoSuperlit plaster	Sto Primer	
Sto Brick Slips	none	
Ceramic facade covering	-	2)

1) Intermediate coats are only necessary with StoArmat Classic in the case of a top coat with rilled texture (tinted StoArmat Classic can also be used instead of an intermediate coat).

2) StoArmat Classic is not suitable for overcoating with a top coat of silicate plaster (excepting StoSil plasters), with mineral plasters, or ceramic facade coverings fixed using StoColl KM.

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 StoArmat Classic 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 or 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.

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 Catalog:
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 on request for professional users. (Relevant data).

Physical data

Fire behaviour
Heavy inflammable B1 according to DIN 4102.

StoArmat Classic's fire behaviour was tested as part of a StoTherm External Wall Insulation System (EWIS).

Physical data
See table 3.

Certificates and test reports

European Technical Approval ETA-03/0027:
StoTherm Classic 1, reinforcement with StoArmat Classic.
EOTA Brussels / CSTB Paris

Approvals, certificates, test reports o.ae. on request.

Table 3: Physical data

	Tested to	Value/Test result		Unit
Density				
in supplied form (wet material in container)	DIN 53 217	1,50 - 1,60		[kg/dm³]
when hardened	DIN 18 555-3	1,70		[kg/dm³]
pH-value				
		8,0 - 9,0		[1]
Fire behaviour				
Fire protection class	DIN 4102	B1 heavy inflammable		
Adhesive strength (tear-off strength)				
on concrete	UEATc	> 1,200		[N/mm²]
on Sto EPS Board	UEATc	≥ 0,100 *)		[N/mm²]
on Sto Mineral Fibre Board	UEATc	≥ 0,015 *)		[N/mm²]
on Sto Mineral Fibre Lamella	UEATc	≥ 0,100 *)		[N/mm²]
on StoVentec Carrier Board	UEATc	≥ 0,150 *)		[N/mm²]
Flexional strength				
(after 28 days)	DIN EN 196-1			[N/mm²]
Compressional strength				
(after 28 days)	DIN EN 196-1			[N/mm²]
Dynamic E-modulus				
(after 28 days)	TP PE-PCC			[N/mm²]
Thermal conduction				
Thermal conductivity λ (calculation value)	DIN 4108	0,70		[W/m.K]
Water vapour diffusion				
Water vapour transmission rate V	DIN EN ISO 7783-2	35 - 52	Class II	[g/m².d]
Equivalent to air layer s_d (thickness = 2,5 mm)	DIN EN ISO 7783-2	0,40 - 0,60	Class II	[m]
Water vapour diffusion resistance factor μ	DIN EN ISO 7783-2	160 - 240		[1]
Water permeability				
Water permeability rate w	DIN EN 1062-3, § 10	< 0,10	Class III	[kg/m².$h^{0,5}$]

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.

*) Break in the insulation board. The tear-off strength of StoArmat Classic is greater than the strength of the board!

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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