

## Sto Flexyl

**Cementitious dispersion leveller, in wet form. For priming, sealant, adhesion, and reinforcing.**

### Material description

#### Type of material

Cementitious dispersion leveller, supplied in wet form.

The water based material contains an organic binder, mineral fillers and additives.

#### Binder

Portland cement CEM I to DIN 1164-1 and a copolymerisate synthetic resin dispersion.

#### Fillers

Mineral additives: quartz sands, ground quartz.

#### Additives

Anti-foaming agent, thickener, preservatives.

#### Diluting agent

Water

### Uses

#### Areas of use

Wall and ceiling surfaces, after mixing 1 : 1 (by weight) with portland cement:

StoTherm EWIS systems:

Plinth level insulation (in splash zone).

Perimeter insulation (foundation level).

1. As priming coat (adhesion improver): for priming the substrate before sealing against water pressure or before adhering extruded Sto insulation boards. Dilute mixed material with approx. 10 % water.
2. As adhesive mortar: for adhering Sto UHD boards or extruded Sto insulation boards at plinth and foundation levels (also on bitumen). An additional dowel fixing of the boards is usually not advisable in these areas: the sealing sheets may not be damaged!
3. As reinforcement material: for embedding Sto Glassfibre Mesh in the splash zone and below. Alternative solution for reinforcement at plinth level.
4. As undercoat (damp protection): for overcoating the reinforcement in the splash zone and below. Dilute mixed material with approx. 10 % water. Not necessary when reinforcing with Sto-RFP.
5. As sealer: for sealing exterior walls at foundation level against water pressure. According to test report, can withstand water pressure to 7 bar, i.e. a water column of 70 m).

#### Restrictions

Do not use on damp substrates.

Only apply thin coats for reinforcing or levelling purposes.

Uses not described in this Technical Data Sheet should be discussed with Sto AG.

### Application

#### Substrate preparation

The substrate should be load-bearing, level, clean and dry. Remove loose paint and plaster coatings. New plaster should be left to harden for at least 14 days.

Substrate pre-treatment according to table 1.

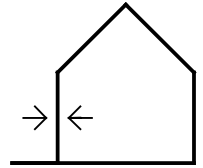
When used as a reinforcement coat (StoTherm systems): the insulation boards must be adhered in staggered rows and tightly butt-jointed. Any open joints between boards must be filled with insulation material or Sto Filler Foam (never with mortar). The surface must be completely smooth.

#### Coatings procedure

Priming (intermediate) coat according to table 2.

An intermediate coat over the Flexyl layer is necessary with all top coats (whether stippled or rilled structure), as the material is very dark.

#### Material preparation



## Sto Flexyl

Mix 1 : 1 by weight with portland cement (i.e. 18 kg per container).

Mix thoroughly. Take particular care that no lumps remain. The material is then ready for immediate use.

If necessary, dilute the material with water to achieve a good working consistency. Only ever use portland cement PZ 35 F.

Application time (pot life) is approx. 2 - 3 hours.

### Application

#### StoTherm EWIS systems

Plinth level insulation (in splash zone) and perimeter insulation (at foundation level).

As priming coat (adhesion improver): dilute mixed material with approx. 10 % water. Brush on and allow to dry.

As adhesive mortar: apply Sto-Flexyl with a 15 x 15 mm toothed trowel to the insulation boards. Apply the boards in staggered rows (like brickwork), working from the bottom up. The boards should be adhered to leave a completely level surface and tightly butt-jointed.

There are two kinds of adhesion:

whole-surface adhesion (for smooth substrates)

spot-edge adhesion (for substrates with uneven-nesses of up to 1 cm/m)

Take care that no mortar comes into contact with the facing or sides of the board.

As reinforcement material: apply Sto-Flexyl with a stainless steel trowel to the insulation boards. Press Sto Glassfibre Mesh into the wet material and level the surface. Mesh strips should be overlapped at the edges by approx. 10 cm. The glassfibre mesh must be completely covered by the reinforcement material. Coating thickness: 2 - 3 mm.

As undercoat (damp protection): dilute mixed material with approx. 10 % water. Brush onto the reinforcement layer and allow to dry.

As sealing coat: apply Sto-Flexyl to the priming coat (adhesion primer) with a stainless steel trowel. Never use less than the recommended consumption value!

### Spray application

Can be machine applied:

with mixer pumps

with spiral pumps (combined with a continuous mixer or thoroughly pre-mixed).

Further details available on request.

### Drying time

Sto-Flexyl dries both hydraulically and physically through water evaporation.

At +20 °C and 65 % relative humidity: next coat possible after approx. 24 - 48 h. The material will be completely hardened after 28 d.

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

### Consumption

#### StoTherm EWIS systems

Plinth level insulation (splash zone)  
Perimeter insulation (foundation)

As priming coat (adhesion improver): approx. 0.5 kg/m<sup>2</sup> (without cement) / 1.0 kg/m<sup>2</sup> (with cement).

As adhesive mortar: approx. 2.0 kg/m<sup>2</sup> (without cement) / 4.0 kg/m<sup>2</sup> (with cement).

As reinforcement material: approx. 1.3 kg/m<sup>2</sup> (without cement) / 2.6 kg/m<sup>2</sup> (with cement).

As undercoat (damp protection): approx. 0.5 kg/m<sup>2</sup> (without cement) / 1.0 kg/m<sup>2</sup> (with cement).

As sealer: approx. 3.9 kg/m<sup>2</sup> (without cement) / 7.8 kg/m<sup>2</sup> (with cement).

### Application temperature

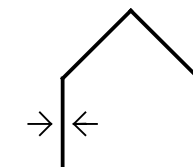
Minimum air and substrate temperature (until material has completely hardened): +5 °C.

### Cleaning of tools

Immediately after use with water. Hardened material can only be mechanically removed.

### Protective measures

Normal protective measures when adding concrete (face mask).



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Otherwise, normal protective measures for working with cementitious materials.

### Disposal

Dried or set material can be disposed of with normal household rubbish. Old, non-set material should be mixed with cement, left to dry and then disposed of.

### Delivery

#### Product code and name

0780 Sto-Flexyl

#### Packaging

18 kg PP pail (0780-001)

#### Colour

In container: light grey. After mixing with cement / hardening: cement grey.

### Storage and transport

#### Storage

Protect from frost. Do not expose to direct sunlight at temperatures above +35 °C.

Can be kept for at least 15 months in unopened original containers.

#### Transport

No special protective measures or hazardous goods markings are necessary.

### Environment and health

#### Health

Always observe warnings and safety advice during application.

No health risk or danger is posed by the hardened material in the light of current knowledge.

#### Warnings and safety advice

Recommended safety procedures:

Mortar / plaster reacts strongly alkaline with water. Protect skin and eyes. Should the mortar come into contact with either skin or eyes, rinse thoroughly with water. In case of contact with eyes, seek immediate medical attention.

#### Countermeasures in case of accident

Absorb material and dispose of in accordance with local regulations.

Bound or dried material can be disposed of with normal construction site waste. Non-hardened material should be mixed with cement and disposed of in accordance with local regulations.

Clean containers can be recycled under the German "grüner Punkt" recycling system. Only clean, empty containers are suitable for recycling in this way.

### Properties

#### Adhesion

Good adhesion to all suitable, load bearing and if necessary, suitably treated substrates.

The required adhesive strength (min. 0.1 N/mm<sup>2</sup>) for EWIS systems with EPS foam insulation and weight less than 0.1 kN/m<sup>2</sup> is ensured with Sto-Flexyl (also in wet state).

#### Waterproofing

Watertight to 7 bar water pressure (equivalent to a 70 m high water column) with material consumption of 7.65 kg/m<sup>2</sup> (including cement), i.e. a coating thickness of approx. 4 mm.

#### Weatherproofing

Limited weatherproofing. Filler coats must be overcoated with a suitable finish render. Frost resistant.

#### Non-crack drying

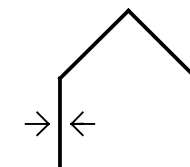
Sto-Flexyl dries without cracks.

#### Saponification resistance

Alkali resistant.

#### Physical values

See table 3.



## Sto Flexyl

<b>Table 1 Substrate preparation</b>		
Before adhesion / reinforcement / levelling with Sto-Flexyl		
Substrate	Treatment	Priming coat*
Soaked	Determine cause, allow to dry	-
Dusty, dirty	Brush off, steam clean	-
Efflorescences	Brush off, steam clean	-
Moss, algae, fungus	Clean, treat with StoPrim Fungal. Do not wash down after treatment.	-
Mortar bead	Knock off	-
Sinter skin	Mechanically remove	-
Greasy, forming oil remains	Steam clean with added cleansing agent. Wash down with water.	-
Smooth	Roughen	-
Crumbling, non load-bearing plaster	Mechanically remove.	-
Damaged plaster	Break open hollow areas. Repair with lime-cement mortar.	-
Chalking plaster	Clean and prime	Stoplex W, Sto-Flexyl (diluted)
Synthetic resin plaster	Clean	-
Chalking paint coat	Clean and prime	Stoplex W, Sto-Flexyl (diluted)
Peeling paint coat	Remove with Sto Coatings Stripper. Steam clean.	-
Highly absorbent	Clean and prime	Stoplex W, Sto-Flexyl (diluted)
Sanding surface	Clean and prime	StoPrim Micro, StoFlexyl (diluted)
Unevennesses > 1 cm/m	Levelling coat of lime cement mortar (hardening time min. 14 days)	-

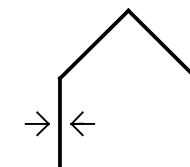
\* Priming coats should always be diluted appropriately for the substrate. They must not remain as a glossy film on the surface!

<b>Table 2 Intermediate coat</b>	
Coating between Sto-Flexyl and top coat	
Top coat	Intermediate coat
Sto synthetic resin plasters	Sto-Primer
Sto silicone resin plasters	StoPrep Miral
Sto silicate plasters	StoPrep Miral
Sto mineral plasters	StoPrep Miral
Sto Superlit plasters	Sto-Primer
Sto Brick Slips	none
Ceramic facade system	none

<b>Table 3 Physical properties</b>			
Criteria	Standard/test	Value	Unit
Density	DIN 53 217	1,2	g/cm <sup>3</sup>

## TECHNICAL DATA SHEET

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# Sto Flexyl

<b>Solids</b>	<b>VIQP 033/VILS 001</b>	<b>64</b>	<b>M%</b>
<b>pH value</b>	<b>VIQP 011 (Sto intern)</b>	<b>8</b>	
<b>Water vapour permeability sd –value</b>	<b>DIN EN ISO 7783-2 <sup>(3)</sup></b>	<b>3 7 5700</b>	<b>g/(m<sup>2</sup>.d) m</b>
<b>μ value <sup>(2)</sup></b>			
<b>Water absorption rate</b>	<b>DIN EN 1062-3</b>	<b>0,005 class III (Low)</b>	<b>kg/(m<sup>2</sup>√h)</b>

(1) g/cm<sup>3</sup> = KG7L

(2) calculated value from the sd value

(3) deviation at 23° C dried

### Contract terms

Liability for defects caused through construction settlement or movement, misuse, mis-handling, improper storage, improper application, improper combination

with Sto products or those from third parties, or failure to follow Sto's specifications or application procedures, will not be accepted under any circumstances.

For all contracts, whether made verbally or in writing, Sto AG

general conditions of sale as printed in the price list apply.

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