# **SUPERFLEX**

### TWO-COMPONENT, HIGH - PERFORMANCE, POLYURETHANE ADHESIVE FOR CERAMIC TILES AND STONE MATERIAL

Klebend Superflex is two-component solvent and water free adhesives which are flexible and waterproof. They are made up of a polyurethane base (component A) and a special hardener (component B).

Klebend Superflex is an improved (2) reaction resin adhesive (R) and slip resistant (T) classified as R2T.

#### Features & Benefits:

- Easy workability.
- Excellent durability and resistant to ageing.
- Perfect adhesion on all surfaces used in building.
- Hardens by chemical reaction without shrinkage (until it becomes highly resistant).
- High deformability.
- In the case of Superflex, highly thixotropic: it can be applied vertically without slump and without letting even heavy or large tiles slip.

#### **Area of Application:**

- Fixing wall and floor tiles indoors and outdoors. The tiles can be made of: Ceramic, stone material and mosaic.
- Fixing on screeds, renders, concrete, asphalt, wood, metal, PVC, reinforced polyester, asbestos -cement, gypsum, gypsum board, gypsum panels etc.
- Bonding ceramic tiles, stone material and all types of mosaic in showers and on sheets used for prefabricated bathrooms.
- Bonding ceramic tiles and mosaics on wooden work surfaces or in kitchens in order to achieve a waterproof substrate.
- Bonding ceramic tiles, stone material and mosaics on balconies, external terraces domes or flat roofs subject to foot traffic.
- Bonding natural stones and reconstructed stone (marble of every t ype, slate etc.) also subject to movement and size variation due to the absorption of water (class C of size stability according to Klebend standards).
- Bonding ceramic tiles and stone material on surfaces subject to vibration and deflection.



#### **Preparation of Substrates:**

- The substrate must be cured, mechanically strong, free of loose particles, grease, oil, paint, wax and be sufficiently dry.
- Cement substrate must not be subject to shrinkage after the installation of the tiles. During spring and summer renders must be cured for at least one week for every centimeter of Thickness and cementitious screeds must be cured for at least 28days.
- Rust on iron surfaces must be removed by sandblasting. It is recommended to reinforce gypsum, gypsum board and anhydrite substrates with a coat of Primer.

#### **Preparation of the Adhesive:**

Apply to the substrate a uniform layer of Superflex with a notched trowel. Choose a trowel that will give coverage to the back of the tiles of at least 65 -70% (see "consumption"). For exterior installations, the tile backs must be completely covered with the adhesive. When both waterproofing and bonding are required, for example on wooden kitchen worktops, one of two procedures may be followed:

- Spread Superflex on the substrate with a flat trowel to a thickness of at least 2mm; then rework the surface with a notched trowel so as to line it all over, but without reducing the thickness to less than 1mm. Thickness must be maintained even after the tiles have been installed, especiall y when the tile backs have high lugs or ribs.
- Spread Superflex with a flat trowel to a uniform thickness of 1mm for waterproofing and, after hardening (in any case within 24 hours), apply a second layer of Superflex with a notch trowel.

#### **Application:**

- Tiles must be absolutely dry.
- Apply firm pressure to the ?les to ensure good contact and covering of the back. If the Layer of fresh Superflex is also to act as a waterproofing membrane, make sure that any ribs and lugs do not go through the layer.



- If Superflex is used for installing on particularly deformable substrates, all coverings larger than 5x5 cm must be installed with wide joints.
- The open time of Superflex under normal temperature and moisture conditions is approximately 50 minutes. Any adjustment must be carried out within 90 minutes of installation.

#### **Precautions & Limitations**

- Do not use on very damp surfaces or where there is a risk of rising damp.
- The packs are pre-measured, therefore mixing errors are impossible. Do not use partial quantities. A wrong mixing ratio could cause damage during the curing process.
- Use the products in temperature between  $+10^{\circ}$ C to  $+30^{\circ}$ C.
- In case of use on surfaces subject to continuous immersion in water, consult the Klebend Technical Services Department beforehand.
- Do not use Superflex to bond transparent glass material.

### **Technical Information:**

Product Identity

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	Colours	White & Grey		
	Mixing Ratio	5kg [Part A 3.75kg : Part B1.25kg]		
		10kg [Part A 7.5kg : Part B 2.5kg]		
	Density (gm/cm <sup>3</sup> )	Part A (1.56) & Part B (0.93)		
	Dry Solids content (%)	Part A (97) & Part B (100)		
Application Data				
	Pot life	30-40 minutes		
	Open time	50 minutes		
	Adjustability time	90 minutes		

from  $+10^{\circ}$ C to  $+30^{\circ}$ C



Application temperature range

Setting time :

-initial	6 hours
-final	8 hours
Set to light foot traffic	12 hours
Grouting	12 hours
Ready for use	7 days
Density of mix. (Kg/m³)	1520
Final Performances	
Shear adhesion strength (N/mm²):	
-Initial shear adhesion strength	2.6
_Shear adhesion strength after immersion	2.0
Shear adhesion strength after thermal shock	2.4
Resistance to ageing	High
Resistance to solvents & oils	Good
Resistance to acids & alkalis	Good
Resistance to temperature	from - 40°C to 100° <b>C</b>
Deformability	Highly deformable

### Coverage:

Mosaic & small size tiles (trowel no. 4):	2.5kg/m <sup>2</sup>
Normal size tiles (trowel no. 5):	3.5kg/m <sup>2</sup>
Large size tiles, marble, stones (back buttering):	5 kg/m

## Packing:

5kg & 10kg

#### Shelf life & Storage:

Superflex are stable for at least 24 months when stored in sealed drums. Component B (hardener) must be stored in warm place to avoid crystallization during cold weather (at least at  $+10^{\circ}$ C). Should crystallization occur, re-dissolve by warming before use. Stir the product before use.



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