

FLEKSMÖRTEL®

Mastertile® 93 Flex

Cement Based Polymer Added Flexible and High Performance Ceramic and Granite Adhesive

Description of Product

FLEKSMÖRTEL® is a cement based polymer added highly stable high performance flexible adhesive used in adhesion of ceramics, granites, marbles, natural stones, glass mosaics, and press bricks.

Consistent with the TS 11140 EN 12004 - C2T class.

C2 = Cement based adhesive with improved additional properties
T = With reduced sliding

Fields of Application


- In inner and outer areas for vertical and horizontal applications.
- In the adhesion of ceramics, granites, marbles, natural stones, glass mosaics, and press bricks to cement based surfaces exposed to temperature differences.

- In the adhesion of ceramics, granites, marbles, natural stones, and glass mosaics on surfaces effected from temperature differences such as; plasterboard, gypsum-plaster, heat insulation sheets, gas concrete, after priming with **Astar A®**.
- In wet volumes like swimming pools, water tanks, bathrooms, etc. In underfloor heating surfaces, heated pools, thermal pools, swimming pools that are not emptied in winters.
- In the wall and floor tiles of cold storage houses.
- In ceramic and granite applications and repairs of building exteriors, in adhesion of ceramic on to ceramic.

Features and Benefits

- Easy to prepare and apply.
- Long process time.
- No sliding in vertical applications.
- Resistant to freezing - thawing cycle.
- Resistant against tensions and vibrations rooting from temperature differences.

Technical Data

Structure of the Material	Mineral sealants, synthetic additives, powder polymer and special cement.	
Color	Gray - White	WK
Tensile Adhesion Strength	≥ 1.00 N/mm ² (28 days)	
Application Thickness	Max. 8 mm	
Joint Sealant Period	24 hours	
Application Ground Temperature	+5°C +25°C	
Service Temperature	-20°C +80°C	
Maturity Period	3 - 5 minutes	
Usage Period	2 hours	
Period of Open Waiting	20 minutes	
Slide (mm)	None	
Wetting Ability	Min. 90%	
Time to Wait Before Walking on it	24 hours	
Time to Wait Before Opening to Traffic	3 days	

Obtained in +23°C, 50% relative humidity conditions. Higher temperatures decrease the time, lower temperatures increase the time.

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Application Procedure

Preparation of Substrate

Application surface has to be strong, dry, bearing, dustless, clean, and also in balance. Surface must be cleaned off all kinds of oil, grease, rust, and paraffin traces that can weaken adherence and no loose particles must be present. Disordered surface with 5 to 20 mm depth must be repaired with **Emaco® S88 C** repair mortars two days before the application. If the application surface is over +25°C, then it must be moisturized.

Gypsum Based Surfaces

ASTAR A® is applied on highly absorbent gypsum-plasterboard, gypsum-plaster, gas concrete, lime plaster, and chipboard surfaces after diluting 1/1 ratio in the first layer, and concentrated in the second layer. After 24 hours of **ASTAR A®** application, adhesion process can be started.

Wooden Chip Based Surfaces (Osb and Chipboards)

Wooden chipboards must contain maximum 10% moisture. Wooden chipboard applied on floors (V100) must be 25 mm minimum, and the ones applied on walls 19 mm minimum. Plates have to be screwed to the surface with 30 cm spaces between them. Edge joints have to be at least 8 mm wide. Joints of the plates grooved and filled with **Sonolastic® NP1**. In dry environments, wooden plates have to be primed by **Astar 303®**. If the plates are in humid environments (exteriors), then **Yapfleks® 306** or **Thoroseal® FX 100** has to be applied in two layers and reinforced with netting.

Mixing

Necessary amount of water is poured into a clean mixing container with the help of a scale. **FLEKSMÖRTEL®** is slowly added to the water and mixed with a 400 - 600 RPM mixer for 3 - 5 minutes until a homogenous and unumpy mixture is obtained. After resting it for approximately 3-5 minutes and mixing again for 30 seconds, the material is ready to use.

Mixing Ratios

FLEKSMÖRTEL®	For 1 kg powder	For 25 kg bag
Amount of Mixture Water	~0.28 liters	~7.00 liters
Density of Mixture	~1.57 kg/liter	

Application Method

1 mm **FLEKSMÖRTEL®** is applied on application surface with the flat side of trowel. In an area that can be covered in 20 minutes, period of open waiting, **FLEKSMÖRTEL®** is applied by serrated side of trowel in single direction in uniform thickness. In the adhesion of ceramics or granites with different thicknesses, to repair the disorder on application surface, it is suggested to apply 1 mm mortar under each ceramic or granite. When applying ceramics or granites to the place of application, ceramics or granites are floated on mortar to enable full contact of adhesion mortar. Suggested joint gap according to applied ceramic or granite dimension is left and the application is finished. To fill the left joint gaps, **BASF Yapı Kimyasalları San. A.S.** joint sealants must be used. Fugation of joints can be realized after approximately 24 hours.

Suggested Joint Width

Up to 5 cm x 5 cm	3 mm
Up to 15 cm x 15 cm	4 mm
Over 15 cm x 15 cm	6 - 8 mm

Suggested Reed Dent Dimensions

Ceramic Dimensions	Ceramic Reed Dent Dimensions	Mortar Bearing Thickness
Up to 15 cm x 15 cm	6 mm	~2 - 3 mm
Up to 30 cm x 30 cm	8 mm	~3 mm
Over 30 cm x 30 cm	10 mm	~4 mm

Applicability Test of Adhesive (Period of Open Waiting)

Fingers are pressed on the adhesive applied surface. If the adhesive smeared on the fingers, application of ceramics or granites is continued. If the fingers are clean, it means the application time of adhesive has passed. In this case, the adhesive is scraped off the surface and new adhesive is applied.

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Coverage

FLEKSMÖRTEL®	Density of Mixture (kg/liter)	1 mm/m ² Powder Coverage (kg)	Mixture Water Amount (liter)	Ceramic Reed Dent Dimensions and Coverage (kg/m ²)		
				6 mm	8 mm	10 mm
25 kg	1,57	1,23	~7,00	3,68	4,91	6,13

Watchpoints

- If environmental temperature is below +5°C or over +25°C in **FLEKSMÖRTEL®** application, then suitable temperatures must be waited for. Also **FLEKSMÖRTEL®** application should not be made in very hot, rainy or windy weathers.
- **FLEKSMÖRTEL®**'s spread thickness must not exceed 8 mm (min. 3 mm).
- Ceramics with high water absorption have to be watered well before application.
- Under no circumstances, water and new material must be added to drying **FLEKSMÖRTEL®** mixture.
- In exterior surface applications, the applied surface must be protected from excessive sunlight, wind, freezing, and rain for the first 24 hours.

Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After **FLEKSMÖRTEL®** is hardened, it can only be removed from the surface mechanically.

Packaging

25 kg polyethylene reinforced kraft bag.

Storage

Must be stored in unopened original packing, and in cool and dry environment protected from freezing. In short-term storing, maximum 3 palettes can be stowed on top of each other and delivery has to be according to first in first out system. In long-term storing, the palettes must not be stowed on top of each other.

Shelf Life

12 months after the production date under appropriate storing conditions. Opened packages have to be stored by tightly sealing the bag, and must be used in one week.

Health and Safety Precautions

Work cloth, protective gloves, goggles and masks concordant with Work and Worker Health rules must be used during the application. Due to irritant effects of the non-cured material, avoid contact to skin and eyes during storing and application. If such a contact occurs, it must be washed by soap and plenty of water. Consult a physician urgently if swallowed. Food and drink must be kept outside the application areas. Must be stored away from children. Please look at the Material Safety Data Sheet for detailed information.

Disclaimer

This information given here is true, represents our best knowledge and is based not only on laboratory work, but also on field experience. However, BASF Yapı Kimyasalları San. A.S. is only responsible from the quality of the product. BASF Yapı Kimyasalları San. A.S. cannot be hold responsible from the results caused by applications of the product not in accordance with the written suggestions of how and where to use the product and/or faulty applications. This technical document is valid until a new one is printed and abates the previous editions. 01/2008.