

# ULTRAFLEKS®

## Mastertile® 99

### Special Cement Based Polymer Added Flexible Quick High Strength and High Performance Ceramic, Granite and Natural Stone Adhesive

#### Description of Product

**ULTRAFLEKS®** is a cement based highly stable high performance adhesive used in adhesion of ceramics, granites, cottos, press bricks, porcelains, glass mosaics, marbles, natural and composed stones to all kinds of surfaces.

#### Consistent with the TS 11140 EN 12004 - C2FTE class.


- C2 = Cement based adhesive with improved additional properties
- F = Rapidly hardening cement based adhesive
- T = With reduced sliding
- E = With increased period of open waiting

#### Fields of Application

- In inner and outer areas for vertical and horizontal applications.

- In the adhesion of ceramics, granites, cottos, press bricks, porcelains, glass mosaics, marbles, natural and composed stones to all kinds of surfaces (like cement based surfaces, concrete, precast concrete components, plasters, etc.).
- 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.

#### Technical Data

Structure of the Material	High-tech sealants, synthetic additives, and special cement.		
Color	Gray - White	MK	
Tensile Adhesion Strength	≥ 1.00 N/mm <sup>2</sup> (28 days)		
Application Thickness	Min. 1 mm Max. 15 mm		
Joint Sealant Period*	~5 to 10 hours		
Application Ground Temperature	+5°C +25°C		
Service Temperature	-30°C +80°C		
Maturity Period	3 - 5 minutes		
Usage Period	~90 minutes		
Period of Open Waiting	≥ 30 minutes		
Slide (mm)	None		
Wetting Ability	Min. 99%		
Time to Wait Before Walking on it	~24 hours		
Time to Wait Before Full Loading	~5 to 10 hours		

Obtained in +23°C, 50% relative humidity conditions. Higher temperatures decrease the time, lower temperatures increase the time.  
\*Joint sealant process has to be made in 5 to 10 hours in spread thickness of up to 5 mm, and 24 hours later in applications over 5 mm spread thickness.

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### Features and Benefits

- Special light weight fine sealant combination produced with high technology.
- Has nearly double coverage compared to known adhesives.
- Easy to prepare and apply.
- High flexibility.
- Long process time and quick set.
- No sliding in vertical applications. Has perfect vacuum effect.
- Resistant to freezing - thawing cycle.
- Resistant against tensions and vibrations rooting from temperature differences.

### 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.

#### PVC Based Surfaces

Existing PVC pavement must be well adhered to surface. All kinds of adherence reducing materials

must be cleaned of the surface and the surface has to be primed with **Astar 303®** after rubbing with emery.

#### Metal Surfaces

Indoor metal surfaces (steel, aluminum, etc.) must be fixed well. Surface must be cleaned of from adherence reducing materials like rust, dirt, dust and oil, and primed with **Astar 303®**

#### Wooden Chip Based Surfaces (Osب 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. **ULTRAFLEKS®** is slowly added to the water and mixed with a 400 - 600 RPM mixer for 3 - 5 minutes until a homogenous and unlumpy 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

ULTRAFLEKS®	For 1 kg powder	For 15 kg bag
Amount of Mixture Water	~0,60 liter	~9,00 liter
Density of Mixture	~1,30 kg/liter	

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### Suggested Reed Dent Dimensions

Ceramic Dimensions	Ceramic Reed Dent Dimensions	Mortar Bearing Thickness
Small Mosaics	4 mm	~1 - 2 mm
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 tiles 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.

### 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

### Coverage

ULTRAFLEKS®	Density of Mixture (kg/liter)	1 mm/m <sup>2</sup> Powder Coverage (kg)	Mixture Water Amount (liter)	Ceramic Reed Dent Dimensions and Coverage (kg/m <sup>2</sup> )			
				4 mm	6 mm	8 mm	10 mm
15 kg	~1,30	0,81	~9,00	1,63	2,44	3,25	4,06

### Application Method

1 mm **ULTRAFLEKS®** is applied on application surface with the flat side of trowel. In an area that can be covered in 30 minutes, period of open waiting, **ULTRAFLEKS®** 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, pavements 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.

### Watchpoints

- **ULTRAFLEKS®** has to be mixed by mechanic mixers, it shouldn't be mixed with a trowel.
- If environmental temperature is below +5°C or over +25°C in **ULTRAFLEKS®** application, then suitable temperatures must be waited for. Also **ULTRAFLEKS®** application should not be made in very hot, rainy or windy weathers.
- **ULTRAFLEKS®**'s spread thickness must not exceed 15 mm (min. 1 mm).
- In exterior surface applications, the applied surface must be protected from excessive sunlight, wind, freezing, and rain for the first 24 hours.
- Pavements with high water absorption have to be watered well before application.
- Under no circumstances, water and new material must be added to drying **ULTRAFLEKS®** mixture.

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### Cleaning of Tools

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

### Packaging

15 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.

