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MasterTile® FLX 29 (Formerly known as Ultrafleks®)

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

Description of Product

MasterTile® FLX 29 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.

Complies with the EN 12004-C2TE S1 class.

C2= Cement based adhesive with improved additional properties

T= With reduced sliding

E= Extendent open time

S1= Deformable

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 parts, 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 **MasterTile® P 300 RC**.
- In wet areas like swimming pools, water tanks,

Technical Data

Structure of the Material	High-tech, Synthetic Additives and Special Cement.	
Color	Gray-White	
Tensile Adhesion Strength	≥1.00 N/mm ² (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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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

- 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 **MasterEmaco® S 488** repair mortars two days before the application. If the application surface is over +25°C, then it must be moisturized.

Gypsum Based Surfaces

MasterTile® P 300 RC is applied on highly absorbent gypsum-plasterboard, gypsum-plaster, gas concrete, lime plaster, and chipboard

surfaces. After 5 minutes of **MasterTile® P 300 RC** 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 **MasterTile® P 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 **MasterTile® P 303**.

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 **MasterSeal® NP 474**. In dry environments, wooden plates have to be primed by **MasterTile® P 303**. If the plates are in humid environments (exteriors), then **MasterTile® WP 666** 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. **MasterTile® FLX 29** is slowly added to the water and mixed with a 400-600 RPM



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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

MasterTile® FLX 29	For 1 kg powder	For 15 kg bag
Mixture Water	~0.60 liter	~9.00 liter
Density of Mixture	~1.30 kg/liter	

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

Suggested Reed Dent Dimensions

Ceramic Dimensions	Ceramic Notched Trowel Dimensions	Mortar Bedding 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

Application

1 mm MasterTile® FLX 29 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, MasterTile® FLX 29 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 joint grouts must be used.

Coverage

0.81 kg/m² for a thickness of 1 mm adhesive

MasterTile® FLX 29	Ceramic Notched Trowel Dimensions and Coverage (kg/m ²)			
	4 mm	6 mm	8 mm	10 mm
15 kg	1.63	2.44	3.25	4.06

Watch Points

- MasterTile® FLX 29 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 MasterTile® FLX 29 application, then suitable temperatures must be waited for. Also MasterTile FLX 29 application should not be made in very hot, rainy or windy weathers. MasterTile® FLX 29'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.



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- Under no circumstances, water and new material must be added to drying **MasterTile® FLX 29** mixture.

Must be stored away from children. Please look at the Material Safety Data Sheet for detailed information.

Cleaning of Tools

All the tools and equipments must be cleaned by water after application. After **MasterTile® FLX 29** 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.

Disclaimer

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EN 12004 Improved Cementitious Adhesive C2TES1	
Reaction to Fire	Class A1/A1 _{fl}
Initial Tensile Adhesion Strength	≥ 1,0 N/mm ²
Tensile Adhesion Strength After Heat Ageing	≥ 1,0 N/mm ²
Tensile Adhesion Strength After Water Immersion	≥ 1,0 N/mm ²
Tensile Adhesion Strength After Freeze/Thaw Cycle	≥ 1,0 N/mm ²