

FMörtel® 20 FC (MasterFlux™ TIL Flex 20 FC)

Cement Based Easily Flowing and Set Retarding Flexible Adhesive for Natural Stone, Ceramic, Granite and Marble

Material Description

FMörtel® 20 FC, is a cement based easily flowing and set retarding highly stable and high performance flexible adhesive used in adhesion of ceramics, granites, marbles, and natural stones.

Complies with the EN 12004 -C2F class.

C2= Cement based adhesive with improved additional properties

F= Rapidly hardening cement based adhesive

Areas of Application


- Indoor and outdoor areas for only horizontal applications
- In the application of ceramics, granite ceramics, big sized flagstones, cottos, base bricks, and smooth and rough surfaces of natural stone plates

- In underfloor heating surfaces and industrial surfaces
- In balconies, terraces, and wet volumes
- In repairs, adhesion of ceramic on to ceramic

Characteristics and Benefits

- Easy to prepare and apply.
- Quick set.
- Reduces application time, since there is no need for adhesive mortar on the back surface of the plates.
- FMörtel® 20 FC** can be rapidly and easily applied to the surface with reed dent because of its flowable consistency.
- Long process time. High adhesion strength.
- Resistant to freezing-thawing cycle. Resistant against tensions and vibrations rooting from temperature differences.

Technical Properties

Structure of the Material	Mineral Sealants, Synthetic Additives, Powder Polymer and Special Cement.	
Color	Grey	
Tensile Adhesion Strength	≥1,00 N/mm ²	
Application Thickness	Min. 4 mm Max. 15 mm	
Joint Sealant Period	3 hours	
Application Ground Temperature	+5°C +25°C	<div>WK</div> 
Service Teemperature	-30°C +80°C	
Slake Time	3 minutes	
Usage Period	50 minutes	
Period of Open Waiting	10 minutes	
Wetting Ability	% 98	
Walkable After	3 hours	
Open to Full Traffic After	24 hours	

The above values are given for +23°C and 50% relative humidity. High temperatures shorten the time, low temperatures lengthen the time.

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Processing Method

(A) 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 **MasterCrete™ S88 C** repair mortars two days before the application. If the application surface is over +25°C, then it must be moisturized.

(B) Mixing

Necessary amount of water is poured into a clean mixing container with the help of a scale. **FMörtel® 20 FC**, 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 Ratio

FMörtel® 20 FC	Amount of Mixture Water	Density of Mixture
For 1 kg powder	~0,20 / 0,23 liter	~1,90 kg/liter
For 20 kg bag	~4,00 / 4,60 liter	

(C) Processing

1 mm **FMörtel® 20 FC** is applied on application surface with the flat side of trowel. In an area that can be covered in 10 minutes, period of open waiting, **FMörtel® 20 FC** is applied by serrated side of trowel in single direction in uniform thickness. 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, **MBT Tech** joint grouts must be used. Grouting of joints can be realized approximately 3 hours after ceramic or granite application.

Suggested Reed Dent Dimensions

Ceramic Dimensions	Ceramic Notched Trowel Dimensions	Mortar Bedding Thicjness
Up to 30 cm x 30 cm	8 mm	~ 3 mm
Up to 60 cm x 60 cm	10 mm	~ 4 mm
Over 100 cm x 100 cm	15 mm	~ 7,50 mm

Suggested Joint Width

Up to 30 cm x 30 cm	4 mm
Up to 60 cm x 60 cm	6 mm
Over 100 cm x 100 cm	6-8 mm

Consumption

1.58 kg/m² for a thickness of 1 mm adhesive

FMörtel® 20 FC	Ceramic Notched Trowel Dimensions and Coverage (kg/m ²)	
	8 mm	10 mm
20 kg	6,33	7,92

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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Point to Consider

- If environmental temperature is below +5°C or over +25°C in **FMörtel® 20 FC** application, then suitable temperatures must be waited for. Also **FMörtel® 20 FC** application should not be made in very hot, rainy or windy weathers. **FMörtel® 20 FC**'s spread thickness must not exceed 15 mm (min. 4 mm).
- Pavements with high water absorption have to be watered well before application.
- Under no circumstances, water and new material must be added to drying **FMörtel® 20 FC** 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 **FMörtel® 20 FC** is hardened, it can only be removed from the surface mechanically.

Packaging

FMörtel® 20 FC is available in 20 kg polyethylene reinforced kraft bag.

Shelf Life

6 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.

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.

Health and Safety

It is dangerous to approach the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is only responsible for the quality of the product **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

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