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MasterTile® 700 (Formerly known as Epofuga®)

Epoxy Based, Two Part, Grouting Filling and Ceramic Adhesive Resistant to Chemicals and Bacteria

Description of Product

MasterTile® 700 is an epoxy reaction resin based grouting and adhesion material that can be cleaned with water, easily applied, is resistant to chemicals and bacteria, and used in the adhesion or grouting hole filling of materials like ceramics, marble, granite, antacid ceramics, glass mosaic and glass brick.

Complies with EN 13888-RG class (For grouting hole filling)
Complies with 11140 EN 12004-R2T class (For Ceramic Adhesive)

RG= Reaction resin based grouting filling materials.

R2= Reaction resin based adhesive with developed additional properties

T= Reduced sliding property

Fields of Application

- In indoor and outdoor spaces, in vertical and horizontal applications,
- In filling the grouting holes of ceramics, marble, granite, antacid ceramics, glass mosaic and glass bricks adhered to existing surfaces.
- In beer, wine and raisin industries,
- In beverage and fruit juice industries,

Technical Data

Structure of the Material Mastertile® 700 Part A	Epoxy Resin	
Mastertile® 700 Part B	Epoxy Hardener	
Pressure Resistance	≥45 N/mm ²	
Bending Resistance	≥30 N/mm ²	
Rupture Resistance	≥2.50 N/mm ²	
Adhesion Resistance In Cutting	≥2.00 N/mm ²	
Water Absorbtion	≤0.10 gr (after 240 minutes)	
Application Surface Temperature	+10°C +25°C	WK
Service Temperature: Continuous In Dry Media In Wet Medium	-20°C +80°C -20°C +50°C	
Usage Duration	~45 minutes	
Open Waiting Duration	≥20 minutes	
Sliding	None	
Walking Over Duration	24 hours	
Duration For Opening to Traffic	7 days	

All figures are at +23°C with a relative humidity of 50%. High temperatures cause shorter cure times and vice versa.



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- In milk, cheese and yogurt industries,
- In tomato paste, pickle and canned food industries,
- In meat and fish industries,
- In medicine, paint, paper, accumulator and manure industries,
- In printing houses, hotel kitchens and laundries, In hospital laboratories, dining halls, wet spaces and hygienic environments,
- In swimming pools and thermal pools,
- Waste water and purification facilities,
- In shopping centers.

Features and Benefits

- It is resistant to chemicals, acids, alkalis and oils
- It has anti-bacterial properties and it does not compose mildew, fungus and bacteria
- It has high abrasion resistance
- Applied **MasterTile® 700** does not keep the dirt on it and its after cleaning is easy
- It is suitable for grouting hole widths from 2 mm up to 10 mm
- It is resistant to sudden temperature changes that last for a short period of time
- It is freeze-thaw cycle resistant
- It can be used in contact with drinking water (complies with BS 6920 standards)

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.

Ceramic Application

The surface must be dry and must have taken its resistance for 28 days. A spread thickness of 2 mm must be obtained by using a rake with 4 mm prongs depending on the dimensions of the ceramics and the filling of the interlines must be started the following day.

Preparation of Substrate for Grouting

Before filling antacid ceramics and granite grouting holes, wait for the used adhesive to achieve sufficient hardness. The surface must be cleaned with methods that will not damage the ceramics just before the application of interline materials.

Mixing

MasterTile® 700 has been packed in the amount that has to be mixed. If only some of the Packaging content is going to be used, a mixture is prepared in the ratio Part A/Part B: 100/4 (by weight). Mix the two parts for at least 3 minutes with a mixer that has a frequency of 400-600 rev/min until a homogeneous mixture is obtained.

Mixing Ratios

MasterTile® 700	Part A	Part B
Mixture Water	5.00 kg	0.20 kg
Density of Mixture	1.70 kg/liter	

Trowel Application

Spread the **MasterTile® 700** prepared for the interline application over the application surface and fill it in the grouting holes with a plastic or





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hard rubber trowel. Skim the excessive material off the grouting holes with diagonal moves. (In deep grouting holes, first wait for the settling of the material and then repeat this procedure). Wait for about 15 to 30 minutes depending on the ambient and surface temperatures, clean the surface with an appropriate sponge and hot detergent containing water with circular moves and give the final shape to the interlines. Change sponges that become dirty during the cleaning.

Gun Application

Fill the **MasterTile® 700** prepared into the grouting holes with an aperture filled gun. Skim the excessive materials off the grouting holes using a hard rubber trowel with diagonal moves. (In deep grouting holes, first wait for the settling of the material and repeat this procedure.) Wait for about 15 to 30 minutes depending on the ambient and surface temperatures, clean the surface with an appropriate sponge and hot detergent containing water with circular moves and give the final shape to the interlines. Change sponges that become dirty during the cleaning.

Cleaning of the Ceramics

Clean the last film membrane on the ceramics 4 to 10 hours after the application with the assistance of an appropriate sponge and hot detergent water by making circular moves and wipe the surface with a final cleaning water into which spirit should be added in a ratio of 10%. **MasterTile® 700** is also suitable for being filled with a planer and being cleaned with felt.

Coverage

1.70 kg/m² for a thickness of 1 mm adhesive

Ceramic Dimensions	MasterTile® 700						
	Coverage Table for Epoxy Based Grouting (Depth: 8 mm)						
	2mm (gr/m ²)	3mm (gr/m ²)	4mm (gr/m ²)	5mm (gr/m ²)	6mm (gr/m ²)	8mm (gr/m ²)	10mm (gr/m ²)
10x10	600	900	1200	1500	1800	2400	3000
10x20	500	700	950	1150	1400	1850	2300
15x15	400	600	800	950	1150	1550	1900
15x20	350	550	700	900	1100	1400	1800
20x20	350	500	650	800	1000	1300	1650
20x25	300	450	600	750	900	1200	1500
20x30	300	400	550	700	800	1100	1400
30x30	250	350	450	550	650	900	1100

Watch Points

- **MasterTile® 700** must be mixed with mechanical mixers, it must definitely not be mixed with a trowel.
- The working and reaction times of resin based systems depend on the ambient and surface temperatures as well as the relative humidity of the air. The chemical reaction slows down in low temperatures and this elongates the pan life, the duration in which it can be covered and the working time. Since the viscosity ascends at the same time Coverage increases. High temperatures speed up the chemical reaction and the durations indicated above correspondingly get shorter. In order to have the material complete its regimentation, the ambient and surface temperature must not fall below the allowed minimum temperature.
- Avoid **MasterTile® 700** application under excessive heat or wind and/or when the ambient and/or substrate temperature is below +5 or above +25. Furthermore no applications should be made in very hot, rainy or windy





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weather.

- In applications in cold weather, in order to take the machinability of the material to the highest level the Packagings must be made ready for usage by conditioning in +20°C - +25°C.
- Do not add water and/or new material to an **MasterTile® 700** mixture which has started getting dry under any circumstances.
- 15-30 minutes after the application of the material, the cleaning must be started. The surface cleansing procedure must not be carried out by using sawdust. In order to prevent the leakage of water under the ceramics, the ceramics, installations (entrances and exits of pipes), concrete, grouting holes between the plaster, corner and edge grouting holes in between the ceramics with suitable mastics such as **MasterSeal® NP 474**.

Cleaning of Tools

Used tools and equipment must be cleaned with water after the application. Once cured **MasterTile® 700** can only be removed by mechanically.

Standard Colors

White
Gray

Packaging

5.20 kg (A+B) tin container set

Storage

Store in an unopened, original container, under dry and cool conditions and protect against frost. For short term storage, do not stack more than 3 palettes on top of each other and dispatch them on a first come-first go basis. Palettes should not

be stacked on each other on a long term basis.

Shelf Life

12 months in original unopened packaging if stored in appropriate conditions. Opened packagings should be consumed in one week.

Health and Safety Precautions

It is dangerous to approach storage and application areas with fire. Fresh air should be circulated at storage and application area. The following protective measures should be taken when working with the material: Wear safety gloves, goggles and protective clothing which comply with the Occupational Health and Safety Precautions Rules. Because of the irritation effect of the uncured material, part should not come in contact with the skin or eyes. Under such circumstances, the effected area should be washed with plenty of water and soap. If swallowed, seek medical attention immediately. Do not drink or eat at the application site. Keep out of reach of children. Please, refer to the Material Safety Data Sheets for detailed information.



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Disclaimer

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TS EN 12004 Improved Reaction Resin Adhesive R2T	
Reaction to Fire	Class B
Initial Shear Adhesion Strength	$\geq 2,0 \text{ N/mm}^2$
Shear Adhesion Strength After Water Immersion	$\geq 2,0 \text{ N/mm}^2$
Shear Adhesion Strength After Thermal Shock	$\geq 2,0 \text{ N/mm}^2$



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Table of Resistance to Chemical Substances (It has been tested for 500 hours at +20°C)

Acetond	Up to 5%	-	Soda	Up to 50&	+
Acetic Acid	Up to 30%	(+)	Sodium Hypochloride	Concentrated	+
Aluminum chloride	Up to 40%	(+)	Sodium Tiosulfate	Up to 20%	+
Aluminum sulfate	Up to 1%	+	Oxalic Acid	Up to 10%	+
Formic acid	Concentrated	(+)	Paraffin Oil		+
Ammonia	Up to 10%	+	Petroleum Ether		+
Ammonium Chloride	Up to 50%	+	Phosphoric Acid	Up to 50%	(+)
Ammonium Carbonate	Up to 50%	+	Nitric Acid	Up to 10%	+
Ammonium Sulfate	Up to 40%	+	Hydrochloric Acid	Concentrated	+
Barium Chloride	Up to 10 %	+	Sulfuric Acid	Up to 70%	+
Boric Acid		+	Silicone Oil		+
Brine		+	Cooking Oil		+
Buthanol	Up to 40%	+	Olive Oil		+
Calcium Chloride	Up to 20 %	+	Turpentine Oil		+
Calcium Hydroxide	Up to 50%	+	Tartaric Acid	Up to 25%	+
Calcium Nitrate	Up to 30%	+	Sitric Acid	Up to 10%	+
Ferric Sultate	Up to 50%	+	Zinc Chloride	Up to 50%	+
Acid Acetate		+	Waters that corrupt concrete		+
Fuel Oil		+	Beer		+
Isopropyl Alcohol	Up to 20%	+	Coca Cola		+
Potassium Carbonate	Up to 5%	+	Dibutilftalat		+
Potassium Permanganate	Saturated	+	Jet Fuel IP4		+
Salt Water	Up to 15 %	+	Glycerin		+
Copper Sulfate	Up to 10 %	+	Hydrogen Peroxide	Up to 33%	(+)
Lactic Acid		(+)			

+ Resistant, (+) Short Term Resistant, - Not Resistant

COVERAGE TABLE

Ceramics Dimensions	Ceramics Rake Prong Size	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
Larger than 30 cm x 30 cm	10 mm	~4 mm