

# MASTERTILE

## 30

**For interior and exterior fixing of ceramics, glass mosaics and stone claddings in permanent submerged and high risk conditions**

### Description

MASTERTILE 30 is a cement based tile adhesive for thin or thick bed fixing of ceramic tiles in interior or exterior situations, especially those exposed to permanently wet conditions.

MASTERTILE 30 is suitable for fixing materials such as marble, stone cladding and brick slips. The weight of which should not exceed 40kg/m<sup>2</sup> unless mechanical fixing is also used.

Suitable substrates are concrete, sand cement screeds and renders, glazed and unglazed tiles, terrazzo, and suitably prepared timber.

### Typical applications

MASTERTILE 30 is the adhesive of choice for swimming pools and may be used with confidence in all wet process applications including: abattoirs, shower rooms, institutional kitchens, bathrooms, and decorative, high risk cladding. MASTERTILE 30 may be used to tile directly onto glazed tile surfaces and is especially recommended for non-porous or high density and glass mosaics where it may be used to both fix and grout.

Used in conjunction with MASTERTILE 550, the system is suitable for use where chemical resistance or a high standard of hygienic quality is essential.

For extreme conditions such as vibration or temperature extremes etc. MASTERTILE 30 can be mixed with MASTERTILE 200 instead of water.

### Advantages

- Waterproof: immersion will not affect adhesion.
- Non-slip.
- Ready for use - just add water.
- Thin or thick bed.
- Exceeds British Standard requirements.
- Extended open / wet time.
- High adhesive bond strength.

### Packaging

MASTERTILE 30 is available in 25kg bags.

### Composition

MASTERTILE 30 is a blend of Portland cement, and graded sand, reinforced with a high organic polymer content.

## Typical properties\*

\* Properties listed are only for guidance and are not a guarantee of performance.

Colours:	Off white and Grey
Flash point:	None
Plastic density:	1.8 kg/lit
Yield:	A 25kg bag mixed with 5 litres of water yields 16.7 litres of mixed adhesive.

## Standards

BS 5980 Part 10 : 1980

ANSI A.118.1

ANSI A.118.4 (MASTERTILE 30 mixed with  
MASTERTILE 200)

## Coverage

Solid bed fixing:	3 - 6 mm depth 5.4kg - 10.8kg/m <sup>2</sup>
Notched trowel:	smooth surface 2kg/m <sup>2</sup>

## Application procedure

Surfaces to be tiled, should be sound, dimensionally stable, clean and free from loose laitance, paint, oil, grease, mould release agent and residual curing compound. The exception to this is where surfaces have been cured with MASTERKURE 181 which when applied at the specified coverage rate, forms an excellent primer system. It should be ensured that tiles are dry, and free of contaminants that could impair adhesion.

### Concrete / screeds / renders:

Porous concrete or mortars should be primed with RHEOMIX 121 to reduce suction.

### Timber surfaces:

Timber surfaces should be checked to ensure rigidity and soundness to accept the additional loading without deflection.

Provision must be made to ensure adequate ventilation beneath tiled timber flooring. Tongue and groove, parquet and sprung floorings must first be strengthened by screwing 12mm thick exterior grade plywood at 200mm centres onto the existing timber base.

Timber partition walls should be stiffened by screwing at 200mm centres onto studding, in both directions.

Timber surfaces should always be primed with RHEOMIX 141 / CEMENT SLURRY. RHEOMIX 141 / CEMENT SLURRY should only be applied after MASTERTILE 30 has been mixed, to ensure adhesive is ready to apply immediately onto wet primer.

### Mixing instructions:

Add MASTERTILE 30 to cool, clean water at the following rates:

By weight 5:1 by volume approximately 3.3:1, mix to a uniform lump free consistency and allow to stand for 5 minutes before use. Full bag volumes should be mixed in a forced action mixer. Part bags should preferably be mixed using a slow speed drill and mixing paddle.

### Application instructions:

Apply MASTERTILE 30 to a uniform thickness of 3mm 6mm or sufficient to cover the studs or keys on the tile back; (on a working area of not more than 1 m<sup>2</sup>). Solid bed fixing is

recommended for wet conditions and for ceramic, quarry, terrazzo and marble flooring tiles, and vertical heavy duty applications including decorative stone cladding. If preferred, the MASTERTILE 30 can additionally be buttered on the backs of the tiles to ensure full adhesive contact. For all other vertical application the adhesive bed should be combed horizontally with a notched trowel to remove excess.

Tiles should be dry and fixed by pressing into place with slight twisting motion, ensuring the tile back achieves full contact with the adhesive.

Ceramic tiles should never be butt joined.

Leave a minimum of 2mm around tiles.

Adjustments to tiles should only be made during the adhesives open wet time.

Remove excess adhesive from the face of the tile with a damp sponge or cloth before it sets.

Similarly, joints must be raked out in readiness for grouting.

Leave for a minimum of 24 hours before grouting.

Select the appropriate grout for joint size and in service use from the MASTERTILE range of products.

## Watchpoints

Movement joints should be provided in accordance with normal practice. Refer to published local standards or BS 5385.

MASTERTILE 30 should not be used on painted or metal surfaces. The use of chilled mixing water will extend open wet time in high ambient temperatures.

Gypsum plaster boards and surfaces, must be subjected to pre-treatment. Please consult Degussa's Technical Services Department for advice.

## Storage

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction.

## Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Reseal containers after use. For further information, refer to material safety data sheet.

## Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local Degussa representative.

Degussa reserves the right to have the true cause of any difficulty determined by accepted test methods.

## Quality

All products produced by Degussa certified manufacturing facilities, are produced to conform to systems designed to meet internationally recognised quality standards.

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## MASTERTILE

200

( Replaces Atrosive K-100 )

**Multi use water resistant latex additive and bonding agent for cementitious mortars**

## Description

MASTERTILE 200 is a specially formulated latex additive, for use with Portland cement and sand to form high strength mortars for the installation of ceramic, wall, floor, marble, mosaic or quarry tiles, slip brick, natural or artificial stone.

## Primary uses

MASTERTILE 200 is used wherever increased abrasion, water and chemical resistance is required. For swimming pools, dairies, food processing factories, abattoirs, etc. It may be used to enhance the properties of sand/cement mortars for tiling or added to MASTERTILE range adhesives and grouts. Used as an additive with MASTERTILE adhesives, a degree of flexibility is imparted, improving the adhesive's suitability for use where road traffic or machine vibration is indicated. Consult your Degussa representative for dosage rates.

## Advantages

- Increased adhesion.
- Improves flexibility.
- Chemical resistance.
- Resistance to impact and thermal shock.
- Water resistant.
- Economical.
- Non-toxic.

## Packaging

MASTERTILE 200 is available in ; 4 , 10 ,& 210 litre drums.

## Composition

A synthetic rubber emulsion containing hydrophilic additives, fungicides and defoaming agents.

## Typical properties\*

\* Properties listed are only for guidance and are not a guarantee of performance.

3:1 sand cement mortar modified with MASTERTILE 200:

Appearance:	High viscosity white liquid
Specific gravity:	1.01 at 20°C
Compressive strength (dependent on quality of sand utilised):	40N/mm <sup>2</sup>
Tensile strength:	6.5N/mm <sup>2</sup>
Flexural strength:	13 N/mm <sup>2</sup>
Shear strength:	6 N/mm <sup>2</sup>
Freeze thaw resistance:	Excellent
Adhesion:	Excellent to concrete, brick, steel, glass, marble, ceramics, etc.
Coefficient of thermal expansion:	
-20 to + 20°C	12.8 x 10 <sup>-6</sup>
+20 to + 60°C	12.9 x 10 <sup>-6</sup>
Shrinkage during cure:	0.01%
Resistance to water at -3 m head:	No water penetration.
Water absorption BS 1881:	< 2%
Water vapour permeability:	Reduced by 96%
Pot life of mixed mortar:	Approx. 3 hours at 35°C
Toxicity:	MASTERTILE 200 modified mixes are non-toxic after cure, and can be safely used in conjunction with potable water.
Chemical resistance:	Excellent to alkalis, dilute acids, milk, sewage effluent, mineral oils, etc.

Note: values given are those achieved under controlled conditions with cement and sands of known quality. Different results may be obtained under site conditions.

## Application procedure

### Surface preparation:

As with all bonding materials surface preparation is of paramount importance. Remove all laitance, oil, grease, mould oil, curing compound, leaving an open textured surface. Damp down the surface prior to application of MASTERTILE 200 modified mortars, ensuring surface is damp, but no free water is visible.

### Mixing:

All mixing should be carried out in a forced action mixer although hand mixing is acceptable where the total weight of mix does not exceed 25kg. Charge the mixer with the correct quantity of sand and cement, and premix for one minute. Pour in the desired quantity of MASTERTILE 200 (premixed with water if necessary), and mix for 3 minutes. Owing to the strong plasticising action of MASTERTILE 200 care should be taken to ensure prolonged mixing does not occur. Material will remain workable for at least 3 hours at 35°C. Where possible protect mixed material from wind, or direct sun.

### Application:

Apply to surface using notched trowel technique. Working in areas of approximately 1 metre at a time to avoid skinning of the adhesive. Set dry tiles in bed of mortar, and slightly twist to ensure good adhesion. When

tiles are aligned in final position lightly tap using a wooden float. Allow tiles to set for 24 hours before grouting. Alternatively, especially when tile fixing in permanently wet conditions, or fixing heavy decorative cladding, solid bed fixing is recommended. Apply solid bed to required depth, and "push" the tiles into place. Ensure that the ribs on the back of the tiles are filled in using buttering techniques. This will ensure 100% contact of adhesive.

## Watchpoints

### Expansion joints:

Wherever tiles are being laid over existing concrete surfaces it is important that expansion joints in the subfloor or background are carried through the MASTERTILE 200 modified mortar. This can be done by fitting a temporary timber batten wrapped in one layer of polyethylene.

Minimum width of expansion joints should be 6.5mm. Seal the joint after tiling using MASTERFLEX BACKER ROD followed by MASTERFLEX 700.

## Mix design

### Thin bed fixing of wall and floor tiles:

- 50 kg of cement (fresh).
- 50 kg medium grade sand.
- MASTERTILE 200 10 litres.
- Water - It is normally found that a 1 / 1 dilution of MASTERTILE 200 with water will prove suitable.

Yield approximately 50 litres of mortar.

Materials should be mixed until a thick paste is formed.

**Thick bed fixing:**

- Fresh cement 50 kg.
- 150 kg of medium grade sand.
- MASTERTILE 200 10 litres.

It may be necessary to add water to achieve the desired consistency dependant upon type of sand utilised.

Yield approximately 100 litres of mortar.

**Grouting**

MASTERTILE 200 can be utilised to produced a waterproof and chemically resistant tile grout for floor and wall tiles in swimming pools, abattoirs, animal houses, dairy farms, etc.

The proportion of sand to cement will vary with the width of joint to be grouted.

Recommended mix designs for tile grouts are as follows:-

Joint size	Fine sand	Cement	MASTERTILE 200	Yield
upto 3mm	50kg	50kg	10 litres	0.05m <sup>3</sup>
upto 12mm	100kg	50kg	10 litres	0.75m <sup>3</sup>
over 12mm	150kg	50kg	10 litres	0.10m <sup>3</sup>

**Storage**

Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Degussa's Technical Services Department.

**Note**

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**Quality**

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