

# 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**

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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