

# MasterBrace<sup>®</sup> 1438

General purpose, epoxy bonding paste

## DESCRIPTION

**MasterBrace 1438** is a two part epoxy resin based bonding paste for general purpose bonding.

The two parts are distinctly coloured to facilitate proper mixing - a white coloured Part 'A' and a black coloured Part 'B', which on correct mixing in the ratio 2:1 (A:B) by volume, yields a smooth bonding paste.

## RECOMMENDED USES

**MasterBrace 1438** is recommended for use as an adhesive to bond most surfaces used in general construction:

- pinning loose or broken tiles and masonry.
- bonding rubber, plastics, foam and other such
- flexible materials onto metal, concrete and other rigid materials.
- fairing uneven or very rough surfaces.
- filling gaps, joints and voids.

## FEATURES AND BENEFITS

- **Non sag gel consistency** - Advantage in vertical or overhead applications.
- **Bonds to damp surfaces** - Avoids expensive surface preparation to achieve completely dry substrates.
- **Tough** - Tenacious adhesion. Withstands impact loads.
- **Different coloured components** - Visual indication of correct mixing. Avoidance of blending errors.
- **Convenient mix ratio** - Easy to proportion during application. Saves time.

## PROPERTIES

Tensile strength @ 30°C :	7 Days	24 MPa
Elongation at break (ASTM D638)	7 Days	0.7%
Compressive modulus (ASTM D695) :	7 Days	2,750 MPa
Slant shear strength :	7 Days	34 MPa
Compressive yield strength :	7 Days	69 MPa

	Part A	Part B	
Form	Paste	Viscous liquid	
Colour	White	Black	
Density (mixed) :	1.3 – 1.4 kg/L		
Non-sag thickness @ 30°C (ASTM D2730)	13 mm		
Heat deflection temperature (ASTM D648)	480C		
Application temperature,	10°C - 30°C		
Curing properties	10°C	21°C	30°C
Pot life. (100 g)	120 minutes	40 minutes	20 minutes
Min. open time	5 hours	3 hours	2 hours
Initial cure (AASHTOT- 237)	7 days	1 day	1 day
Cure time (ASTM D695)	21 days	7 days	2 days

## APPLICATION

### Surface preparation

Correct substrate preparation is critical for optimum performance. Surfaces should be structurally sound, clean, and free from loose particles, oil, grease, or any other contaminants.

Remove oil grease and wax contaminants by scrubbing with industrial grade detergent or degreasing compounds followed by mechanical cleaning. Cement laitence, loose particles, mould release agent, curing membrane, and other contaminants must be removed from the surface by scarifying or gritblasting followed by vacuum cleaning.

In case of application on steel surfaces, remove grease and oil with suitable industrial grade cleaning and degreasing compounds. Remove rust and mill scale by gritblasting. Blast steel to white metal followed by vacuuming or blowing clean using oil-free, dry air.

If totally dry surface is impossible to achieve, blow clean any free water from the surface using oil-free air blast.

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**MasterBrace 1438** bonds to damp surfaces though a superior bond is achieved between completely dry surfaces.

## Mixing

Mechanical mixing is necessary. A slow speed (600 rpm) drill with a grout stirrer is recommended.

Ideally, the entire contents of both Part A and Part B containers should be mixed together to avoid batching errors.

However, if part mixing is necessary, stir each component individually and then measure out precisely each component in the simple ratio of 2:1 (A:B) by volume into a clean, dry pail for subsequent mixing.

Ensure that the leftover in each container is not contaminated. Mix Part A and Part B together until the streaks of black and white disappear to yield a homogeneous grey mixture. If needed, add dry, graded sand to the mixture and continue mixing for a further 2 minutes to get a lump free mix. Mix only quantities that can be consumed within the pot life of the product to avoid wastage.

## Placing

Apply **MasterBrace 1438** within its pot life. **For bonding** : Trowel apply **MasterBrace 1438** to a thickness of 0.8 to 3 mm depending on the job, so as to allow for a small quantity of the bonding paste to extrude out of the bond line when pressure is applied to the two surfaces. **For deep surface irregularities**: Firmly trowel the sanded bonding paste to fill in the deep irregularities, and finish to a smooth surface.

## Curing

**MasterBrace 1438** is self-curing. The curing time depends on the ambient temperature, the quantity mixed and placed. At 30 degree, it will attain initial cure within 1 day and full cure in 2 days

## ESTIMATING DATA

Actual consumption of **MasterBrace 1438** depends on the sand content, thickness of the coat, surface profile, loss and wastage. Typical coverage for the unsanded mix for a 3 mm thick coat ranges from 0.15 m<sup>2</sup>/L on rough surfaces to 0.33 m<sup>2</sup>/L on smooth surfaces.

Therefore, on smooth surfaces, for a 1 mm thick application, the consumption will be 1.3 – 1.4kg/m<sup>2</sup>.

## PACKAGING

**MasterBrace 1438** is available in 15 L sets. The components of **MasterBrace 1438** are available in the following packaging.

MasterBrace 1438 Part A: 10 liters

MasterBrace 1438 Part B: 5 liters

## SHELF LIFE

**MasterBrace 1438** has a shelf life of 12 months. Store out of direct sunlight, clear of the ground on pallets protected from rainfall.

## PRECAUTIONS

For the full health and safety hazard information and how to safely handle and use this product, please make sure that you obtain a copy of the BASF Material Safety Data Sheet (MSDS) from our office or our website.

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