

# MasterBrace I446

Thixotropic epoxy mortar and adhesive for high build applications esive

## Material Description

**MasterBrace I446** is a thixotropic paste adhesive based on a two component epoxy resin system. MasterBrace I446 is designed as a structural adhesive and may be used to bond precast elements and segments. The consistency of the material ensures that minor variations in the bonding surfaces can be catered for without compromising the strength of the bond.

**MasterBrace I446** may also be used as a polymer repair mortar and will bond to a wide variety of building and construction materials including concrete, masonry, timber and metals.

**MasterBrace I446** is ideally suited to applications in the water treatment industry.

The individual product components A and B have been pigmented to provide a visual aid to mixing.

## Areas of Application

- Structural bonding of precast elements
- Fixing injection ports for crack injection
- Bonding a wide variety of building and construction materials
- As a repair mortar, may be mixed with kiln dried sands for deep repairs (>25mm)
- Repair/bonding applications in potable water applications
- Abrasion resistant lining or repair

## Characteristics and Benefits

- Low VOC
- Multi-purpose - excellent adhesion to concrete steel and damp substrates
- Simple on-site QA - components pigmented & pre-proportioned to aid mixing
- Wide application window - applicable at low temperatures
- Suitable for contact with potable water - approved AS/NZS 4020:2002 for contact with potable water

## Properties

Compressive strength	70 MPa (7 days)
Tensile strength	14 MPa (7days)
Flexural strength	38 MPa (7 days)
Bond strength to : concrete	>2.5 MPa (7 days)
steel	14 MPa (7 days)

*NOTE: The data shown is based on controlled laboratory tests. Reasonable variations from the results can be expected in practice.*

	Part A	Part B	Mixed
Form	Paste	Paste	Paste
Colour	White	Black	Grey
Specific Gravity			
Mix Ratio (w/w)	2	1	1.6
Application temperature range	5-40°C		
Pot Life	~30 minutes at 23°C		

## Application

### Surface Preparation

Surfaces must be free of dirt, dust, paint, grease, oil, rust or other contaminants. Surfaces may be dry or damp. Mechanical methods are preferred for surface preparation of metals, concrete, stone and rigid plastics. Where this is not possible consult Master Builders Solutions regarding alternative methods such as waterblasting. Small holes (bug holes) can be prefilled using **MasterBrace I446** mixed with clean dry sand.

### Mixing

Mix Part A thoroughly, add Part B and blend thoroughly using a slow speed (max. 600 rpm) mixer fitted with a helical (e.g. jiffy) paddle. Mix for at least 3 minutes until the blend is a uniform grey colour and streak free.

### Method of Use

#### Adhesive

Immediately spread the mixture over the surface and promptly place other surface to be adhered into tight contact. Use clamps where necessary until hardened.

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## Patching mortar

Pack tightly into cracks, spalls, etc. with a clean trowel or putty knife. Wipe the trowel with a damp cloth saturated with thinners frequently to aid finishing. **MasterBrace I446** can be ground after cure. MasterTop F5 sand may be added for thicknesses greater than 25mm, or where a stiffer mix is required at a rate of 2 parts MasterTop F5 to 1 part MasterBrace I446.

Primer (such as **MasterEmaco 2525**) is required with this fill ratio of the **MasterBrace I446** and the filled MasterBrace I446 should be applied into the wet **MasterEmaco 2525**.

## Estimating Data

1.6kg of **MasterBrace I446** will cover approximately 1 m<sup>2</sup> at 1mm of thickness.

Estimated yield of a 15kg kit is 9.5L

MasterBrace I446 wet film thickness				
L	Thickness in mm /m <sup>2</sup>	m <sup>3</sup>	pails /m <sup>3</sup>	m <sup>2</sup> /mm thickness
9.5	9.5mm	(0.0095)	105	9.5 m <sup>2</sup>

## Disclaimer

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