

# MasterStrength I446

Thixotropic epoxy mortar and adhesive for high build applications

## Material Description

**MasterStrength I446** is a thixotropic paste adhesive based on a two component epoxy resin system. **MasterStrength 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.

**MasterStrength 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.

**MasterStrength 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 (7 days)
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 **MasterStrength 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. **MasterStrength I446** can be ground after cure. MasterCoat FIL 5 sand may be added for thicknesses greater than 25mm, or where a stiffer mix is required at a rate of 2 parts MasterCoat FIL 5 to 1 part MasterStrength I446.

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

## Estimating Data

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

Estimated yield of a 15kg kit is 9.5L

MasterStrength 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>

## Packaging

**MasterStrength I446** is a two component system available in a 15kg kit size, Part A 10kg & Part B 5kg.

## Storage & Shelf Life

**MasterStrength I446** has a shelf life of 24 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, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

## Disclaimer

MasterStrength-I446-ANZ-V2-1125

### STATEMENT OF RESPONSIBILITY

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