

# MasterBrace<sup>®</sup> ADH 1414

Epoxy bonding agent for concrete repairs, bonding concrete to concrete, steel and granolithic toppings

## DESCRIPTION

**MasterBrace ADH 1414** is a permanent epoxy adhesive for internal or external bonding of renderings, granolithic toppings, and concrete to concrete. It tolerates a degree of moisture before and during curing and is insoluble when cured.

The ultimate bond strength is greater than the tensile strength of concrete.

**MasterBrace ADH 1414** does not shrink and provides an even and stress-free bond.

## PRIMARY USES

**MasterBrace ADH 1414** may be applied to clean, sound and durable surfaces, i.e. steel, glazed tiles and bricks, ceramic and quarry tiles, terrazzo tiles and floors. Also to smooth and worn granolithic pavings, old and worn concrete, engineering and semi-engineering bricks.

## ADVANTAGES

- High strength
- Non shrink
- Moisture tolerant
- Durable
- Resistant to chemical attack
- Supplied in pre-weighed units

## PACKAGING

**MasterBrace ADH 1414** is available in 3kg units containing the base resin and reactor component.

## STANDARDS

ASTM C881 Type 2 Grade 2, Class B & C.

## TYPICAL PROPERTIES\*

Mixed density @ 25°C	1485kg/m <sup>3</sup>
Open time ASTM D2471	25°C 6 hours 40°C 2.5 hours
Tack free time ASTM D2471	25°C 9 hours 40°C 5 hours
Full cure ASTM C661	7 days
Slant shear bond strength ASTM C882-99	>20N/mm <sup>2</sup>
Water absorption ASTM D570	<0.1%
Compressive strength ASTM D695-91	>45N/mm <sup>2</sup>

## APPLICATION PROCEDURE

### PREPARATION

All surfaces must be thoroughly cleaned and prepared. All loose particles, laitance, dust, curing compounds, floor hardeners, oil, grease, fat, bitumen and paint must be removed if good bond strength is to be achieved. Gloss surfaces must be abraded.

If oil, grease, fat, etc. are present, they should be removed before starting any other form of preparation. All laitance weak or friable concrete should be removed by chipping, grit blasting, or scabbling until a sound base is obtained.

All laitance should be removed by mechanical scarification, grit blasting, or by acid etching. Visible signs of mould growth, lichen, or algae, should be removed and treated with a fungicidal wash.

New concrete should have cured until the shrinkage and moisture movement is low. Surfaces heavily impregnated with mould oil should be degreased and grit blasted or mechanically scarified to remove the contaminated surface. All curing compounds should have disintegrated or be removed and application carried out only onto a clean, dust free surface.

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## MIXING

Carefully transfer the entire contents of the smaller container of **MasterBrace ADH 1414 REACTOR COMPONENT** to the larger **MasterBrace ADH 1414 COMPONENT** tin and thoroughly mix, using a stout palette knife or a slow running drill with a paint mixing paddle until uniformity is achieved. This normally takes about three minutes. Do not attempt to mix only part of the contents. Do not attempt to thin.

## GUIDE TO APPLICATION

**MasterBrace ADH 1414** should be applied evenly across the whole surface with a clean, short haired paint brush or a laying-on trowel.

After application, the **MasterBrace ADH 1414** must be left to stand before overcoating. The time delay will depend on surface and prevailing conditions but will typically be 60 minutes at 25°C or 45 minutes at 40°C.

The **MasterBrace ADH 1414** should be protected during this time to prevent contamination. This is particularly necessary on horizontal surfaces.

## RENDERINGS AND SCREEDS

Once the render or screed has been applied over the **MasterBrace ADH 1414** recognised methods of working may be adopted. It is essential that granolithic paving and sand cement renders and screeds are cured. This can be achieved by curing with a fine spray of clean water and polythene sheeting. More effective is to spray the surface with a curing membrane from the **MasterKure** range. Failure to observe these precautions may cause the render or screed to crack and craze.

Expansion joints formed in the substrate should be carried through the rendering or screed and may be filled with **MasterSeal GG 470** (gun grade) or **MasterSeal PG 470** (pouring grade), 2 part polysulphide joint sealant.

## TEMPERATURE

Since low temperatures retard the setting and curing of **MasterBrace ADH 1414**, avoid working in cold weather if possible. Although **MasterBrace ADH 1414** will cure slowly at low temperatures, a temperature of 7°C to 10°C can be considered to be the lowest at which work on vertical rendering may proceed satisfactorily without shuttering.

## EQUIPMENT CARE

Use **MasterTop THN 2** to clean tools when **MasterBrace ADH 1414** is still wet or tacky. Once **MasterBrace ADH 1414** has set hard, it can only be removed by chipping or burning.

## COVERAGE

2-2.7m<sup>2</sup>/kg dependent on substrate profile.

## STORAGE

Store under cover out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air conditioned environment.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage and disposal advice consult BASF's Technical Services Department.

## SAFETY PRECAUTIONS

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which may also be tainted with vapour until product is fully cured). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Reseal containers after use. For further information refer to the Material Safety Data Sheet.

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## NOTE

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

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

## QUALITY AND CARE

All products originating from MBCC's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

\* Properties listed are based on laboratory controlled tests.

® = Registered trademark of the MBCC-Group in many countries.

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## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this MBCC publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

## NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by MBCC either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not MBCC, are responsible for carrying out procedures appropriate to a specific application.

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