

MasterBrace[®] ADH 4000

Adhesive for MasterBrace LAM Fibre Reinforced Polymer Strengthening Systems

DESCRIPTION

MasterBrace ADH 4000 is the adhesive for the **MasterBrace LAM system**.

The **MasterBrace LAM system** is based on ready to use carbon fibre laminate (pultruded plate) that provides high tensile strength combined with light-weight and is used for flexural reinforcement of concrete and other building materials.

TYPICAL APPLICATIONS

For use as a structural adhesive when used in conjunction with **MasterBrace LAM system**.

ADVANTAGES

- High Strength
- Non-Slump
- Strong Adhesion
- Chemical Resistant
- Easy to use
- Supplied in pre-weighed units.

PACKAGING AND COLORS

MasterBrace ADH 4000 is available in 6 kg units and available in Grey.

TYPICAL PROPERTIES*

Composition	Two-component epoxy-based adhesive
Specific gravity @ 25°C	1.75
Compressive strength BS 6319 / ASTM C579 @ 40°C	>80 N/mm ²
Flexural strength ASTM C580	>30 N/mm ²
Tensile strength ASTM C307	>13 N/mm ²
Bond strength to Concrete	>3 N/mm ² (failure in concrete)
Pot life @ 40°C	45 min

APPLICATION GUIDELINES

SURFACE PREPARATION

The surfaces of the elements to be strengthened should be ground or treated by abrasive blasting to remove any existing coatings, laitance and other loose material.

The prepared substrates should be free of all oils,

grease, dust or any curing membranes.

Following preparation, the elements to be strengthened should be vacuumed to ensure the removal of all dirt and dust before application of the **MasterBrace ADH 4000**.

Clean the surface of the **MasterBrace LAM** with a suitable thinner (Xylene / MEK / Acetone) to ensure all carbon dust, and any oil or grease is removed.

Note: The minimum adhesive tensile strength of the substrate should be 1.5 N/mm².

MIXING

Mechanically mix component PTA and component PTB for approximately 3 minutes until a smooth mix has been obtained and no streaks are visible in the material.

PLACING / APPLICATION

Apply one layer of **MasterBrace ADH 4000** a minimum of 1.5 mm thick onto both the surface of the substrate and **MasterBrace LAM**. Immediately install the **MasterBrace LAM** by hand onto the substrate. Using a roller, exert a constant pressure onto the installed by moving the tool both ways in the direction of the fibres so that the adhesive squeezes out of the sides of the laminate.

Remove excess adhesive.

CURING

MasterBrace ADH 4000 will cure at temperatures as low as 5°C although at lower temperatures cure is retarded.

CLEANING

Tools must be cleaned immediately after use with a suitable thinner (Xylene / MEK / Acetone).

COVERAGE / YIELD

A 6 kg pack will be sufficient to bond @ 3 mm thickness approximately 14 Lm of 80 mm wide **MasterBrace LAM** (excluding wastage).

MasterBrace[®] ADH 4000

WATCHPOINTS

Surfaces exposed to U.V. rays should be protected within two days (maximum seven days) with the special product from the **MasterSeal** range in order to ensure perfect bonding between the protective layer and FRP.

STORAGE AND SHELF LIFE

Store at ambient temperatures in cool, dry warehouse conditions in manufacturer's sealed containers. Shelf life is 12 months when stored as above.

HEALTH AND SAFETY

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

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 the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Solvents based products

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, e.g. when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

Resin products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

Powder products

Should be handled to minimize dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes which should be protected during use.

Spillage

Chemical products can cause damage; clean spillage immediately.

QUALITY AND CARE

All products originating from Master Builders Solutions 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 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

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

MBS_CC-UAE/Br_4000_03_01/v2/10_15/v3/09_19/v4/08_21

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions 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 Master Builders Solutions either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

Master Builders Solutions
Construction Chemicals LLC
P.O. Box 37127, Dubai, UAE
Tel: +971 4 8090800
www.master-builders-solutions.com/en-ae



A brand of
MBCC GROUP

Disclaimer: the TUV mark relates to certified management system and not to the product mentioned on this datasheet