



SAINT-GOBAIN

durafibre CFP adhesive

**TWO COMPONENT EPOXY
ADHESIVE/REPAIR
COMPOUND**

DESCRIPTION

Two component, solvent free, fine aggregate filled, thixotropic, non-slump, polyamide cured epoxy.

USES

Repairing and patching defects in concrete such as honeycomb and spalls. Fabricating components and repairing defects in fibre cement products.

In applications as a bedding mortar, gap filling and concrete repairs like spalling, crack filling and repairs to arrisses.

Including external carbon fibre structural reinforcement to be bonded to elements for structural strengthening, see **durafibre CFP** data sheet.

ADVANTAGES

- Easy-to-apply
- Smooth finish easily obtained
- Non-shrink
- Excellent adhesion/bonding properties
- High strengths obtained
- Excellent creep resistance
- Thixotropic, soft non-sag paste
- No primer required
- Excellent mechanical and chemical resistance
- Excellent water resistance
- Solvent free
- Impermeable to liquids

SURFACE PREPARATION

Any surface to be repaired with **durafibre CFP** must be clean, mechanically sound and dry. Concrete surfaces should be chipped to expose main aggregate and in the case of honeycomb, all suspect material must be cut out. See our concrete repair systems. The prepared surface must have an open textured finish and be free of all laitance, paint, prior surface treatments, loose or friable particles, debris and any contaminants that may impair the bonding properties of the adhesive prior to placing the **durafibre CFP adhesive**.

The surface must be level and surface irregularities must not exceed ≤ 1.0 mm in height. Level tolerance must not exceed 10 mm over a 2 m span.

The final prepared surface to receive the **durafibre CFP adhesive** and **durafibre CFP** plates must provide a minimum tensile adhesive strength of 1.5 MPa.

The concrete element should be at least 28 days old.

The existing ground face of the **durafibre CFP** plates are to be thoroughly wiped with MEK solvent and allowed to dry completely, approximately 10 minutes before applying the **durafibre CFP adhesive**.

All blemishes in the surface such as pop-outs, omegas, blowholes and honeycomb should be patched with **epidermix 314®** or **durafibre CFP adhesive**, or as advised by **a.b.e.®**

Where the surface property values are suspect then view the **durafibre CFW** carbon fibre wrap system.

MIXING

Set up equal volumes of base and activator side-by-side on a clean board. Do not take more than about 250 ml of each compound. Using a trowel or spatula mix thoroughly until a uniform colour is obtained. Mechanical mixing may be carried out using a drill at slow speed not greater than 500 rpm and a helical mixing paddle. Mix the two components together thoroughly, approximately 3 minutes, until a uniform colour is obtained.

Avoid high speed mixing as this will entrap air and impair the products performance.

Note: Ensure that all the mixing equipment and containers are clean prior to use.

Do not mix more than can be applied as per the product's pot life.

Do not add solvents for thinning purposes, should the material stiffen up due to time lapse of the pot life the material must be discarded and a fresh batch to be mixed.

BONDING/PRIMING

No primer required.

APPLICATION

General

Mixed **durafibre CFP adhesive** should be pressed into place in the repair area using a small amount first to wet out the surface and then building up the required thickness. The viscosity of **durafibre CFP adhesive** is sufficient to hold its place in soffit and on vertical face repairs. If the volume is too large to repair in one application, leave the contact surface rough to act as a key for a subsequent placing once the first one has set.

A final smooth finish may be obtained by trowelling off the surface of the still uncured **durafibre CFP adhesive** with a water dampened steel trowel.

durafibre CFP (carbon fibre plate bonding)

Apply approximately 1 mm thick layer of **durafibre CFP adhesive** to the prepared concrete surface to enhance the bonding properties. This is followed by a layer on the cleaned ground side of the carbon fibre plate 2 mm thick tapering up to 4 mm along the centre line.

TEMPERATURE AND RELATIVE HUMIDITY

durafibre CFW system should be applied at material temperatures between 12 °C and 18 °C and ambient temperatures of 5 °C to 30 °C. Temperatures should not fall below 5 °C in the 24 hours after application. Do not apply coating if the substrate temperature is at least 3 °C (5 °C is better) above dew point or highly humid conditions to cause condensation.

COVERAGE

Theoretical coverage rates are provided in the “Properties During Application” table. The coverage rates may vary subject to surface profile irregularities and or porosity.

DESIGN WORK

Consultation with a structural engineer is imperative when the design criteria and application configurations are required subject to load calculations of the various elements that are under consideration.

PROPERTIES OF WET MATERIAL	
Mixing ratio	1 base: 1 activator by volume or mass
Density (typical)	1.7 g/cm ³
Colour:	
Base activator	Off white grey
Mixed material	Grey – approximate to concrete
Finish	Trowelled to smooth finish with water wet steel trowel
Flash point	Nil
Dilution	Not to be diluted
Consistency	Each component is a heavy paste
Toxicity	Uncured material is toxic
Shelf-life	2 years from date of manufacture
Storage conditions	Store under cover in cool conditions

PROPERTIES DURING APPLICATION	
Application by	Gloved hand and/or steel trowel
Pot life	80 – 100 mins/500 ml @ 25 °C
Volume solids	100%
Theoretical coverage	1 m ² /ℓ/mm thick on smooth surface
Theoretical coverage for the durafibre CFP adhesive	200 ml/m (50 mm wide) 400 ml/m (100 mm wide)
Maximum recommended thickness per layer	25 mm
Tack free time @ 23 °C	70 minutes
Sag flow @ 23 °C (3 and 5 mm thick)	Nil
Curing time @ 25 °C	Touch dry: 2 hours Practical cure: 12 hours Full cure: 7 days
Overcoating time @ 25 °C	Minimum: 4 hours Maximum: 23 hours
Application temperature range	10 °C to 40 °C
Fire resistance of wet material	Non-flammable
Equipment clean up	abe® super brush cleaner

PROPERTIES OF CURED MATERIAL	
Maximum service temperature	Dry: 70 °C Immersion: 60 °C
Compressive strength @ 25 °C (ASTM C 109)	60 MPa in 24 hours 75 MPa in 7 days
Tensile strength @ 25 °C (ASTM C 307)	17 MPa
* Tensile bond strength applied to 50 MPa concrete @ 22 °C to 25 °C – DYNA Z Pull-off digital manometer (ASTM D 4541)	> 3.0 MPa (@ 1 and 3 days) Using a 2 mm bond line thickness
**Arizona slant shear (ASTM C 882)	> 40.0 MPa (@ 1 and 3 days) > 60.0 MPa (@ 7 days)
Lap shear on grit blasted steel	8 MPa using 2 mm bond line thickness
% Volume change @ 23 °C	Nil
* The pull off test included and excluded the carbon fibre plate, in both cases adhesive failure occurred in the concrete substrate	
** Failure occurred within the 50 MPa concrete	

CHEMICAL PROPERTIES OF CURED FILM	
Toxicity	Non-toxic after curing
Water resistance	Excellent
Solvent resistance	Resists, aliphatic, solvents, oils, petrol, diesel, fuel
Chemical resistance	Resists dilute inorganic acids and dilute alkalis

HEALTH AND SAFETY

Uncured **durafibre CFP adhesive** must be regarded as toxic. Gloves should be worn at all times and care must be taken not to ingest any of the material by eating or smoking while working with the compound. If working in a confined space, provide adequate ventilation. Cured **durafibre CFP adhesive** is inert and non-toxic.

CLEANING

Clean tools with **abe® super brush cleaner** while uncured and use a little of this liquid to remove any splashes on the skin. Wash finally with soap and warm water. Cured material will have to be mechanically removed.

PACKAGING

durafibre CFP adhesive is supplied in:

2 litre kit (code: 20402002)

5 litre kit (code: 20402005)

HANDLING AND STORAGE

Epoxy compounds in their uncured state are toxic and prolonged skin contact can give rise to dermatitis. When handling epoxy compounds, use should always be made of disposable gloves and barrier creams. Involuntary habits such as face starching and spectacle adjustment must be avoided. Similarly eating and smoking whilst or after working with epoxy must be avoided until the individual has washed up. This product has a shelf-life of 24 months if kept in a cool dry place.

IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.**® endeavours to ensure that any advice, recommendation, specification or information is accurate and correct, the company cannot accept any liability for application – because **a.b.e.**® has no direct or continuous control over where and how **a.b.e.**® products are applied.

FURTHER INFORMATION

Where other products are to be used in conjunction with this material, the relevant technical data sheets should be consulted to determine total requirements.

a.b.e.® has a wealth of technical and practical experience built up over the years in the company's pursuit of excellence in building and construction technology.

Please consult our website for our latest datasheets.

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