Cemfix W

(Cementitious tile adhesive)

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General Notes:

The information below is a detailed overview of the application of DCP's **Cemfix W** tile adhesive and should be read in conjunction with the relevant technical data sheet prior to application. All DCP Products should be applied by experienced specialist contractors.

All the points below assume the correct preparation of the relevant surface.

High-Temperature Working:

It is suggested that, for temperatures above 35°C, the following guidelines are adopted as good working practice:

   i.Unmixed materials and equipment should be stored in a cool shaded area and away from direct sunlight.

  ii.Avoid application during the peak temperature of the day.

 iii.Plan for enough materials, tools, and labor to ensure a continuous applicant process.

 iv.It is recommended to use tap water with a temperature not exceeding 25°C.

Low-Temperature Working:

It is suggested that, for temperatures below 10°C, the following guidelines are adopted as good working practice:

  i. Unmixed materials should be stored in a warm.

  ii. Cold temperatures will affect the properties of the adhesive.

 iii. Avoid applying the adhesive if the temperature is around 5°C and falling.

System Products:

Primer: **Keybond 2000** [if required].

Tile adhesive: **Cemfix W**.

Tools and Equipment:

It is suggested that the following list of equipment are adopted as a minimum requirement

Personal protection	:	Protective overalls
	:	Goggles or a face mask
	:	Good quality gloves
	:	Safety shoes
	:	Safety helmet

Equipment	:	Mixing drill (Fig.1)
	:	Mixing paddle (Fig.2)
	:	Empty bucket (25 ltr) (Fig.3)
	:	Notched trowel (Fig.4)
	:	Hand-held grinder (Fig.5)
	:	Rubber hammer (Fig.6)

Fig.1: Mixing drill

Fig.2: Mixing paddle

Fig.3: Empty bucket

Fig.4: Notched trowel

Fig.5: Hand-held grinder

Fig.6: Rubber hammer

Section B : Application

1.0   Substrate Preparation

1.1   The substrate should be sound, clean, and free from dust, oil, grease, paints, or any contamination. Surface laitance should be removed by grit blasting or scabbling.

1.2   Concrete and cement-based substrates must be sufficiently cured and dimensionally stable. Allow time for shrinkage and structural strain movements.

1.3   Repair any damages, cracks, and honeycombing with the appropriate **DCP concrete repair system**.

1.4   Provide a flat, smooth surface and remove any irregularity, flaky, or peeling layers using a hand-held grinder.

Note: The substrate must be flat to prevent forming an undesirable appearance or defects that can affect tiles behavior after fixing them.

1.5   Check concrete and cement-based substrates porosity:

   ➢   Pour some water onto the substrate.
   ➢   If the water is absorbed in less than 1 minute the substrate is considered porous and requires priming using **Keybond 2000**

Porous substrates:

Gypsum boards, plaster boards, anhydrite screeds, or any highly absorbent cement-based substrates such as hollow blocks, foam concrete, and cement boards.

➢   Ensure the substrate is sufficiently dry, free from dust and the residual moisture during application, not more than 5%.

➢   Anhydrite screeds and plaster walls residual moisture must not exceed 0.5% during application.

➢   Dilute **Keybond 2000** with water at a ratio of 1:4 by volume (1 part Keybond 2000 to 4 parts water).

➢   Apply **Keybond 2000** primer and allow sufficient time for setting and curing

Re-tiling after removing old tiles:

➢ Ensure that all old tiles and any traces of coatings or adhesives are removed and no film residues remain.

2.0 Mixing

2.1 A mechanically powered mixer or drill fitted with a suitable paddle-type should be used to ensure proper mixing.

2.2 Locate the mixer or the mixing container as close as possible to the area of application in order to minimize the transporting time.

2.3 Measure 5.6 - 6.0 litres of clean fresh water for each 25 kg bag of adhesive powder (water/powder ratio = 0.28 – 0.30 by weight).

2.4 Place the mixing water into a clean container, and add the dry powder slowly to the liquid while mixing continuously with a low-speed mixer/drill (400 – 600 rpm).

2.5 Mixing should be continued for 3 minutes until a uniform consistency and a lump-free mixture are obtained.

2.6 Allow the mix to rest for 2 - 3 minutes, then remix for an additional 1 minute without adding any more water.
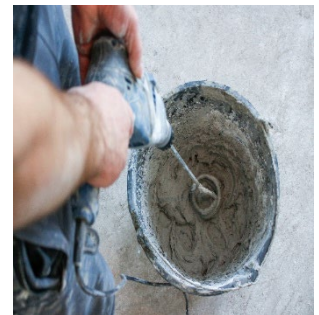
Notes:
➢ *Slow speed mixer should be only used. Do not mix by hand.*
➢ *While mixing, ensure that the mixing blade is kept below the surface of the adhesive to prevent air entrapment.*
➢ *Do not mix more than the amount of adhesive to be placed within its pot life (2 hours at 25°C).*
➢ *Potable water should only be used for mixing.*
➢ *The contractor has to place the tiles within 30 minutes of applying the adhesive onto the substrate.*
➢ *Do not use adhesives from damaged bags.*

3.0 Placing

3.1 Prior to placement, ensure that all surfaces are dry and free from any contamination or dust.

3.2 Choose the size of the trowel that will give the right thickness on the back of the tile:

➢ <u>For tiles with a total area < 900 cm^2</u>: it is recommended to use a 3 mm thickness of tile adhesive this thickness can be achieved using a 6 mm x 6 mm square notched trowel.

➢ <u>For tiles with a total area between 900 cm^2 and 1600 cm^2</u>: it is recommended to use a 4 mm thickness of tile adhesive this thickness can be achieved using a 8 mm x 8 mm square notched trowel.

➢ <u>For tiles with a total area > 1600 cm^2</u>: it is recommended to use a 5 mm thickness of tile adhesive, this thickness can be achieved using a 10 mm x 10 mm square notched trowel.

3.3 Apply the adhesive as **immediately** as possible after mixing to the substrate, only apply over the area that can be tiled within its open time (30 minutes).

3.4 Apply a thin layer of the adhesive into the substrate using the flat edge of the trowel.

3.5   Comb the adhesive with a suitable notched trowel horizontally to achieve a bed thickness of up to 5 mm.

Note: For large tiles (> 1600 cm²) it is recommended to apply a thin coat of the adhesive to the back of the tile (back buttering) in order to ensure full coverage under the tile.

3.6   Place and align the tiles in a twisting motion with firm pressure to ensure proper contact with the adhesive.

Note: for vertical applications, tiling should begin from the bottom upwards after drying, clean the tiles surface using a dry cloth.

3.7   Leave appropriate clearance for joint grouting and make any adjustments within the products' open time.

3.8   Provide sufficient movement joints among the tiled surface to eliminate stresses and allow for slight movements.
Note: The following guidelines are recommended for the placement of expansion joints between tiles:

➢   *For interior application: a movement joint should be provided every 7.5 m in each direction.*
➢   *For exterior application: movement joint should be provided every 3.5 to 5.5 m in each direction, with joint width: 12 mm for 3.5 m and 18 mm for 5.5 m.*
➢   *Minimum widths must be increased by 1.5 mm for each 10°C tile surface temperature change greater than 38°C between summer high and winter low.*

3.9   Clean off any excess adhesive with a damp cloth or sponge before it sets.

3.10   Leave the tiled surfaces for 24 hours before grouting

For heavy traffic, submerged areas, large or un-calibrated tiles:

➢   Apply a thin layer of the adhesive onto the substrate using the flat edge of the trowel.
➢   Comb the adhesive with a suitable notched trowel horizontally to achieve the required bed thickness.

➢   Apply a thin coat of the adhesive to the back side of the tile using the trowel to ensure proper adhesion (back-buttering).

➢   Place and align the tiles with firm pressure to ensure proper contact with the adhesive.

> Lift any tile and assess adhesive coverage after fixing to ensure that the required contact is achieved.

Note: Pre-calculation of the exact needed volume of adhesive is essential to ensure full coverage under tiles.

4.0   Thickness Limitations

4.1   **Cemfix W** should be applied in a single layer at thicknesses up to 5 mm.

5.0   Cleaning

5.1   All tools should be cleaned **immediately** after finishing using clean water. Hardened materials should be cleaned mechanically.

6.0   Remarks

6.1   Confirm availability of mixing equipment.

6.2   Do not apply at a temperature below 5˚C.

6.3   Do not use **Cemfix W** thick bed applications, tile over tile applications, and cases where rapid utilization for the surfaces is required.

6.4   Do not use **Cemfix W** on metal, rubber, PVC, or wood substrates.

6.5   Check the substrate in advance. Ensure that the substrate is in good condition and clean.

6.6   Do not change the product mixing ratio.

6.7   In the case of underground heating, the heating system must be off and should be turned on gradually 5 days after tiling.

6.8   For large format and heavy tiles where the weight of the tiles cannot be supported by the adhesive, the installation method shall follow a bottom-up approach, and if more than two rows of tiles are to be fixed simultaneously, the tiles are to be mechanically supported using temporary anchor nails in between tile gaps or by using inclined support stud.

6.9   For tiles fixed to fresh cement mortar, it is recommended to apply a tile adhesive layer to the back of the tiles. This will improve the bond between the mortar bed and the tiles.

Section C : Cautions

Health and safety

Cemfix W may cause irritation to skin or eyes. Avoid contact with skin or eyes. In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

Fire:

Cemfix W is nonflammable.

For further information on refer to the Material Safety Data Sheet.

Section D : Approval and Variations

This method statement is offered by DCP as a 'standard proposal' for the application of **Cemfix W**. It remains the responsibility of the Engineer to determine the correct method for any given application. Where alternative methods are to be used, these must be submitted to DCP for approval, in writing, prior to commencement of any work. DCP will not accept responsibility or liability for variations to the above method statement under any other condition.