

## EF3

### RAPID SETTING FLEXIBLE WHITE FLOOR AND WALL TILE ADHESIVE

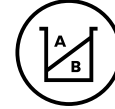
- + Genuine S1 Flexible Rapid Setting
- + Walk On After 3 Hours
- + Suitable for Wide Range of Substrates
- + Ideal for Use With Underfloor Heating Systems



INTERIOR +  
EXTERIOR USE



WALKABLE  
After 3 Hours



MIXING RATIO  
20kg to 4 – 4.4  
Litres of Water



WORKING TIME  
25 – 45 Minutes



IDEAL TEMP  
5°C to 30°C



STORAGE  
12 Months

#### ECO FUSION RAPID SET FLEXIBLE

is a white, ultra-low carbon, cement free, highly polymer modified, fast setting thin-bed adhesive with increased adhesion and non-slip properties. It is an ultra-low carbon adhesive.

Eco Fusion Rapid set white is a genuine S1 adhesive and conforms to EN 12004 C2FS1.

#### APPLICATION

Specifically formulated for fixing a wide variety of tiles including:

- + Ceramic Wall and Floor Tiles
- + Porcelain
- + Vitrified Tiles
- + Natural Stone
- + Marble
- + Slate
- + Mosaics to Walls and Floors
- + Floor Clinker Slabs and Clinker Tiles

Formulated for fast-track installations, tiles can be grouted approximately 3 hours after fixing, depending on site conditions. Eco Fusion Rapid set Flexible provides superb grip and adhesion. Eco Fusion Rapid Set is ideal for use on most interior and exterior installations, for application onto concrete, block work, timber panels, plywood, floor screeds, and power floated concrete, without the need for the addition of a flexible admixture. With an enhanced flexural strength and water resistance, it is suitable for swimming pools and showers as well as more demanding installations such as underfloor heating.

#### TILE TYPES

Suitable for most tile types including:

- + Ceramics
- + Porcelain
- + Natural Stone
- + Terracotta
- + Quarry

#### AREAS OF USE

- + Walls
- + Floors
- + Internal
- + External
- + Dry Areas
- + Wet Areas
- + Swimming Pools
- + Underfloor Heating
- + Limited Movement / Vibration

#### SUBSTRATES

Specific substrate preparation can be found in the Substrate Preparation Guide section and those instructions must be followed before tiling commences:

- + Tile Backer Boards
- + Sand and Cement Screeds
- + Plasterboard
- + Paster
- + Plywood Overlay (Class 3 Flooring Grade)
- + Flooring Grade Asphalt
- + Existing Vinyl Tiles
- + Existing Ceramics, Porcelain and Natural Stone Tiles
- + Epoxy DPM
- + Concrete Brick / Block
- + Concrete
- + Cement Render
- + Calcium Sulphate Screeds

#### PREPARATION OF SUBSTRATE

Preparation of all substrates is crucial to the success and longevity of all tiling installations.

Before starting, the substrate must be rigid, clean, dry, structurally sound and strong enough to support the weight of the tiled finish and loading. Anything that could compromise adhesion to the substrate must be removed, it must be clean, free from dust, dirt, oil, grease and loose flaking coatings, laitance, sealers waxes and curing agents must be mechanically removed.

Worn or porous masonry surfaces and old concrete floors should be sealed with Eco Fusion Tiler's Primer.

New brickwork or screeds should be at least 6 weeks old before fixing and plastered walls must be sealed with Eco Fusion Tilers Primer. Skimmed plaster must be allowed dry at least 4 weeks, wire brushed and primed with Eco Fusion Tilers Primer.

Eco Fusion Rapid Set can be used on new and existing concrete. New concrete must be let dry at least 28 days.

**Floors:** Underfloor Heated systems should be turned off 48 hours prior to Screeds: New sand & cement screeds must be allowed to dry for a minimum of 4 weeks. After this drying out period, the underfloor heating system should be turned on at its lowest temperature setting and the screed should be heated slowly at a maximum rate of 5°C per day up to the maximum operating water temperature, as recommended by the heating manufacturer, and maintained at that level for a further 3 days before being allowed to cool to room temperature.

Alternatively, in cold conditions reduce the temperature of the screed to below 15°C prior to tiling. To commission the underfloor heating properly the flow temperature should not be limited by room thermostats. The room thermostats should be disconnected and the temperatures controlled manually via the manifold mixing valve, or at the boiler. Ensure that the surface is clean, dry and free of any contaminants. Prime the surface with Eco Fusion Tiler Primer, diluted 3 parts water to 1 part Primer, and allow to dry. If the

substrate is overly porous then further coats of diluted Primer may be required. Once the floor tiling is installed, the heating system should not be run for at least ten days in order to allow the fixing materials to cure/dry thoroughly. When turning on the heating, start at the lowest temperature possible and then gradually increase the temperature of the system, on the thermostat, by no more than 1°C per day until the required temperature is achieved. Depending on the type and size of the tile being fitted an uncoupling membrane may need to be incorporated into installation.

**Underfloor Heating (Electric):** When tiling onto an electric underfloor system, apply Eco Fusion Level 70 or Level 20, depending on conditions as the cables should be encapsulated into a flexible Eco Fusion levelling and smoothing compound. When the compound has dried prime with Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tilers Primer, and allow to dry. Once the floor tiling is installed, the heating system should not be run for at least ten days in order to allow the fixing materials to cure/dry thoroughly. When turning on the heating, start at the lowest temperature possible and then gradually increase the temperature of the system, on the thermostat, by no more than 1°C per day until the required temperature is achieved. Depending on the type and size of the tile being fitted an uncoupling membrane may need to be incorporated into the installation.

**Tile Backer Board Overlay:** Tile backer boards should be fixed following the manufacturers' instructions and be of the required thickness and material for the specific application. Ensure that the boards are securely fixed and adequately braced to provide a rigid surface. Prime the surface with one coat of Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tilers Primer, and allow to dry.

**Sand & Cement Screeds:** New sand & cement screeds must be allowed to dry for a minimum of 4 weeks. Ensure that the surface is clean, dry and free of any contaminants. Prime the surface with Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tilers Primer, and allow to dry. If the substrate is overly porous then further coats of diluted Primer may be required.

**Plywood Overlay:** Ensure that the timber subfloor is adequately braced, rigid and flat. The plywood must be conditioned to the environment in which it is to be used and be of the required thickness. The plywood must be securely fixed to the subfloor by screw fixing at 150mm centres, staggering the board joints of all plywood sheets. Ensure the surface is clean, dry and free of any contaminants. Prime the surface of existing plywood with one coat of Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tilers Primer, and allow to dry. New flooring grade plywood does not require priming prior to tiling.

**Flooring Grade Asphalt:** The asphalt must be of a suitable flooring grade and must be hard, sound, in good condition, and well adhered to the substrate. Ensure the surface is clean, dry and free of any contaminants. Prime the surface with one coat of Eco Fusion Tilers Primer Grip and allow to dry.

**Existing Vinyl Tiles:** The existing tiles must be sound, in good condition and be firmly bonded to the original substrate. Remove any loose or damaged tiles and make good. Any surface sealers must be removed along with any other contaminants that could affect adhesion. When the tiles are confirmed clean and dry prime the surface with one coat of Eco Fusion Tilers Primer Plus and allow to dry.

**Existing Ceramic, Porcelain & Natural Stone Tiles:** Ensure that the substrate is rigid and can take the additional weight of the new tiles and fixing materials. The existing tiles must be sound, in good condition and be firmly bonded to the original substrate. Remove any loose or damaged tiles and make good. Any surface sealers must be removed along with any other contaminants that could affect adhesion. When the tiles are confirmed clean and dry prime the surface with one coat of Eco Fusion Tilers Primer Plus and allow to dry.

**Epoxy DPM:** The Epoxy DPM must be a suitable flooring grade. The DPM must be sound, in good condition, hard and well adhered to the substrate. Ensure the surface is clean, dry and free of any contaminants. Prime the surface with one coat of Eco Fusion Tilers Primer Plus and allow to dry.

**Concrete:** New concrete must be allowed to cure before having a minimum of 6 weeks continuous air drying. Mechanically remove any laitance and other surface contaminants and remove the dust by vacuum. Prime the surface with one coat of Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tiler Primer, and allow to dry. If the substrate is overly porous then further coats of diluted Primer may be required.

Power floated concrete will require the surface to be mechanically abraded, to open up the pores and to remove any surface contaminants, before priming.

**Calcium Sulphate Screeds:** Calcium sulphate screeds dry with laitance on the surface. The laitance must be removed before the tiling commences by mechanically sanding and/or abrading the surface of the screed. After 7 days the underfloor heating (if the screed is heated) can be commissioned. Once commissioned and allowed to cool the screed can then be moisture tested. Calcium sulphate screeds must be confirmed dry via consistent moisture readings across the whole floor. Ensure for use on calcium sulphate screeds that the residual moisture content of the screed is below 0.5%, or the relative humidity is 75% or below. Ensure that the surface is clean, dry and free of any contaminants. Prime the surface with Eco Fusion Tilers Primer, diluted 1 parts water to 1 part Eco Fusion Tilers Primer, and allow to dry. When the first coat of Eco Fusion Tilers Primer is touch dry, apply a neat coat of Eco Fusion Tilers Primer in the opposite direction to the first coat.

**Walls: Cement Render:** Cement render must be allowed to dry for a minimum of 2 weeks. Ensure that the render is true and is firmly bonded to its background and that it is clean, dry and free of any contaminants. Prime the surface with one coat of Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tiler Primer, and allow to dry. If the substrate is overly porous then further coats of diluted Primer may be required.

**Concrete Brick/Block:** New concrete brick/blocks must be allowed to dry for a minimum of 6 weeks. If tiling directly the wall must be flat and smooth faced. Prime the surface with one coat of Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tiler Primer, and allow to dry.

**Plaster (Finish Coat only):** New plaster must be allowed to dry for a minimum of 4 weeks. Ensure that the plaster is well bonded to its background and that it is completely dry and free of any contaminants. If the plaster has a polished/shiny surface, brush with a stiff bristle brush to abrade/roughen the surface prior to application. A fine wire brush should be used on any water flashed surface, so that any weakly adhered residues are effectively removed. Prime the surface with one coat of Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tilers Primer, and allow to dry. The combined weight of the tile, tile adhesive and grout should not exceed 20kg/m<sup>2</sup>.

Gypsum plaster should be scored with a wire brush and primed with Eco Fusion Tilers Primer diluted 3 parts water to 1 part Eco Fusion Tilers Primer. Gypsum plaster should not be used in wet areas unless additional protection in the form of the Eco Fusion Tanking Kit System is used.

**Plasterboard:** Ensure that the boards are dry, free of any contaminants and securely and rigidly fixed. Prime the surface with one coat of Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tilers Primer, and allow to dry. The combined weight of the tile, tile adhesive and grout should not exceed 32kg/m<sup>2</sup>. Permanently Wet Areas — Plasterboard is unsuitable for frequently wet or damp areas and should be waterproofed using Eco Fusion Tilers Tanking Kit System

**Tile Backer Boards:** Tile backer boards should be fixed following the manufacturers' instructions and be of the required thickness and material for that specific application. Ensure that the boards are securely fixed and adequately braced to provide a rigid surface. Prime the surface with one coat of Eco Fusion Tilers Primer, diluted 3 parts water to 1 part Eco Fusion Tiler Primer, and allow to dry.

#### LARGE FORMAT TILES

Large Format tiles should always be back-buttered.

#### MIXING AND APPLICATION

Always mix powder to water and mix to a smooth, lump free consistency. As a guide for powder to water ratio, 20kg of powder requires approximately 4 – 4.4 litres of water. Never add water after initial mixing, as this will impair the strength of the adhesive. Product that has started to set must be discarded. Key the adhesive into the substrate and trowel out to the required adhesive bed thickness using a notched trowel. Within the open time of the adhesive, bed in the tiles ensuring that there is full, solid bed coverage under the tiles. Regular checks should be carried out to ensure that there are no hollow pockets or voids beneath the tile. Back buttering tiles will help achieve solid bed fixing and will significantly increase the bond strength. Clean surplus adhesive

from the tiles and joints as soon as possible, as set adhesive will prove very difficult to remove later. Clean tools immediately after use with clean water.

#### GROUTING

Do not start grouting until the adhesive has set. This time can vary depending on temperature and site conditions. Impervious surfaces may extend the set time. In ideal conditions grouting can begin after 24 hours. If you are tiling an area with limited movement/vibration, then you must use a flexible grout such as Eco Fusion Grout.

#### COVERAGE

3 – 6mm (Depth) — 4 – 5kg/m<sup>2</sup> (Coverage)

#### STORAGE

This product has a shelf life of 12 months if stored in its unopened packaging in normal dry conditions. Do not use below 5°C and do not use in areas subject to permanent water immersion.

#### HEALTH AND SAFETY

For more information and precautions for use refer to safety data sheet.

The Information given in this technical sheet is given in good faith. Eco Fusion cannot accept liability for loss or damage caused by the incorrect use of its products or poor workmanship. The user must ensure the product's suitability for the application intended and if in doubt should seek written technical advice for the product's application.

### TECHNICAL SUMMARY

CLASSIFICATION	Conforms to EN 12004 C2 FS1
MIXING RATIO	20kg — 4 – 4.4 Litres Water
WORKING TIME	25 – 45 Minutes
TIME TO LIGHT FOOT TRAFFIC @ 20°C	2.5 Hours
FULLY SET IN IDEAL CONDITIONS	3 Hours
FULLY LOADABLE	7 Days
BED THICKNESS	7mm
COVERAGE	3 – 6mm (Depth) — 4 – 5kg/m <sup>2</sup> (Coverage)
BEFORE GROUTING	Approximately 3 hours depending on temperature and substrate, the set time will be increased at lower temperatures and reduced at higher temperatures * Tiling onto an impervious substrate with a non-porous tile will increase the set time.
MINIMUM APPLICATION TEMPERATURE	5°C
MAXIMUM APPLICATION TEMPERATURE	30°C
COLOUR	White
PACK SIZE	20kg
SHELF LIFE	Stored correctly this product has a shelf life of 12 months.



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EN 12004:2007 C2FS1

DoP: Improved Rapid Setting Tile Adhesive

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## FUNDAMENTAL CHARACTERISTICS:

### REACTION TO FIRE

Class E

### RELEASE OF DANGEROUS SUBSTANCE

See SDS

### BOND STRENGTH

- + Early Tensile Adhesion Strength  $\geq 0.5\text{N/mm}^2$
- + Initial Tensile Adhesion Strength  $\geq 1\text{N/mm}^2$

### DURABILITY FOR

- + Tensile Adhesion Strength After Heat Ageing  $\geq 1\text{N/mm}^2$
- + Tensile Adhesion Strength After Water Immersion  $\geq 1\text{N/mm}^2$
- + Tensile Adhesion Strength After Freeze/Thaw  $\geq 1\text{N/mm}^2$

### TRANSVERSE DEFORMATION

2.5mm

### DoP

Please See Our Website: [www.ecofusion.ie](http://www.ecofusion.ie)