

Technical Data Sheet (TDS)

WATERPROOFING

HYDRO™-F2 - FAST SETTING HIGH PERFORMANCE CEMENTITIOUS WATERPROOFING MEMBRANE

HYDRO™-F2 is a one component, flexible, or fiber-reinforced, cementitious mortar and render with hydrophobic abilities. With its fine fillers, high graded aggregates and waterproofing additives it produces a flexible mortar that is ideal for waterproofing surfaces subject to flexural strain where positive and negative pressures are demanding. It is non-trafficable on its own. **HYDRO™-F2** is suitable for application by roller, trowel, brush, or spray equipment. We recommend Wagner PlastCoat 1030 sprayer for maximal application control and a minimum waste of products.

Technical Advantages:

Surfaces protection of concrete, cementitious and mineral substrates,
Waterproofing of concrete infrastructures incl. tanks, basins, pools, pipes, etc.,
Internal and external waterproofing of walls and floors and roofs; incl. backfills.
Waterproofing of terraces and balconies over concrete or existing tiles.

HYDRO™-F2 also protects reinforced concrete structures against the effects of de-icing salts, freeze-thaw and carbon dioxide consolidation.

Benefits:

Suitable for negative and positive pressure up to 5 bar,
Can be applied on damp substrates,
Easy application,
Good sag resistance and easy horizontal and vertical application,
Strong adhesion to many substrates including concrete, cement mortars, stone, ceramics, bricks and timber, steel and PVC
The mixing ratio can be adjusted for consistencies and workability needed with different surfaces;

Application

- mixing water ratio approx. 1:0.22-0.28 – H₂O depending on the type of application method;
- short-medium hair roller will maintain a homogeneous distribution on the substrate;
- Texture roller will create a higher bond surface to other products;
- Notched trowel;
- Brush, use in 2 directions for optimal coverage (diagonally opposite / cross-wise);
- mechanical spray: refer to Wagner PlastCoat 1030 sprayer manual (or other brand);
- Spatula, use high and even pressure onto the substrate;

HYDRO™-F2; clean the application area very well as any residue dust will act as a bond break. The **HYDRO™-F2** will normally adhere very well to a damp surface but most clients (Project Managers etc.) require a primed surface thus to ensure warranty the priming must occur.



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The recommended thickness is two heavy coats. The final thickness depends on the method of application and requirements.

The best waterproofing performance is obtained by applying **HYDRO™-F2** in at least 2 layers, to a total thickness of 4-6mm.

When applying by brush or roller a uniform, even coating of the whole surface must be obtained. In situations where more layers are required wait until the first layer is dry before applying subsequent layers. Drying time, 2-4 hrs before 2nd coat (@20C) depending on humidity (protect from rain). A minimum of 8 hrs curing time is required before any over-coating or 24 hours with direct water contact. A complete hardening is required when in contact with drinking water a drying time of at least 48 hours should be observed.

Add roughly half of the measured mixed water to the mixing container and add continuously small amounts of powder whilst mixing & more water until reaching the desired consistency (which can vary between thin and thixotropic). Due to the high volume of polymer mix slowly for longer than normal, and allow the mix to rest for a minute or two before the finished mix. Either a notched or normal steel trowel is the preferred application instrument as the fibre in the mix tends to "clump" if applied with a brush or roller. When using a trowel apply the required minimum 2mm thickness in a single coat then take a damp roller & lightly roll the surface in a 90-degree action to create a smooth even surface. Please be aware that **HYDRO™-F2** has a self-levelling effect and does not exceed the recommended water-to-product ratio without testing before final application.

Should the applied surface be too thin and watery simply add more dry powder mix to the surface by way of throwing small handfuls over the surface and troweling in well.

The **HYDRO™-F2** can be built up to over 100mm thickness and thus is good for building fillets or covers over poor quality floor joins or wall/floor joins. Most cracks can be filled by **HYDRO™-F2** so long as they are clean of any loose material and have been primed. Colour – **HYDRO™-F2** is a cementitious product and will not develop an even colour appearance due to the cement content. If a uniform colour is required then please use **HYDRO™-TDC** thermal coating that can be tinted to your requirement for a long-lasting and strong coating giving you an extra thermal barrier. Any usage of colours (pigment or inks) will change the product and end any warranty given.

Curing

allow the primer to tack off which can vary depending on the site and weather conditions but normally no less than two hours. The single finish coat will require a minimum of six hours to dry with eight hours being the norm. Most jobs can be primed and coated in a single day with "over" work (e.g. tiling etc.) taking place the following day.

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Spraying

Wagner pro system like PlastCoat 1030 will give you the best finish and the most economical application with a minimum of waste. Use a 6-8 nozzle and a 3-speed setting for the best results. Mix the product a minimum of 4-5 minutes to guarantee full activation and a smooth product.

HYDRO™-F2 is a high-quality "Thin Skin Liner" that can be used on any VCD or Blast Seal providing the nozzle man with the ability to not only gas seal the structure but to build a fillet to the rib and roof and then spray back along a determined distance to ensure the VCD intersection is sound. Simply lightly hose off the application area (do not use high-pressure water as it will damage and saturate the substrate) to rid it of dust prior to spraying. There is no need to apply a primer. Do not blast clean or use any abrasive cleaning before the complete hardening of the material. Wait for complete hardening before removing any imperfections with a light sanding if required.

Joints

At joints or other critical movement areas (for example junctions with vertical surfaces), the waterproofing should be reinforced by using specialty products. It must be applied directly before the first layer of **HYDRO™-F2** according to the instructions.

Tiling

Ceramic tiles and vitreous mosaics can be applied on **HYDRO™-F2** using a specified adhesive with high flexibility and bond strength such as HYDRO Bond or TileX . Joints and gaps must be sealed with specific products such as found in the acrylic sealers specified for the use with cement-based Renders.

Certifications (28 days) EN14891:

Adhesion AS/NZS 1580.408.5:19994 (MPa) up to

On Concrete : 3 MPa

On Steel: 3 MPa

PVC: 1.5 MPa

Flexural and Compressive strength (MPa) up to

Flexural: 7.6 MPa

Compressive Strength: 8.8 MPa

Tensile Strength: 2.7 MPa

Hydrostatic Pressure positive/negative(bar)up to

Positive: pass 5 bar

Negative: pass 1.5 bar



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**Elongation: ISO 527-1/2- ASTM D522 up to
Up to 18%**

**Crack Bridging ASTM D570 up to
2.2 mm**

pH: 10-11

density: 1.5kg/m² – 10-12m²/20kg

Drying time: 6-12 hrs depending on conditions

**working time:
Pot Life: 20-30 Minutes**

Fire test AU/NZS 1530.3:1999: non-flammable

potable water: AS4020:2005 (pending)

HYDRO™-F2 is also available with added strength as a fibre enhanced on request.

Safety

Handling and/or processing of this material may generate dust, which can cause mechanical irritation of the eyes, skin, nose or throat. Avoid exposure and obtain special instructions before use. Do not inhale dust. Do not get in the eyes or on skin or clothing. Use adequate ventilation. Keep tightly closed and sealed when not in use. Wash thoroughly after handling. Corrosive; alkaline mixture in combination with water-based liquids. The product behaves similarly to cement.

Causes skin irritation; May cause an allergic skin reaction – May cause serious eye damage; - May cause respiratory irritation(single exposure);

Precautions for safe handling:

Wear appropriate personal protective equipment as per Australian standards. Keep bulk and bagged cement dry until used. Stack bagged material in a secure manner to prevent falling. Bagged cement is heavy and poses risks such as sprains and strains to the back, arms, shoulders and legs during lifting and mixing. Handle with care and use appropriate control measures. Observe good hygiene and manners and refrain from eating drinking and smoking in areas where the product is in use.



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Available in 20kg pails;

For further information please contact us through www.greentechcement.com

Notice to reader

While the Information provided in this TDS is believed to provide a useful summary of the hazards of this product as it is commonly used, the safety data sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with this product to produce cementitious products or similar. Users should review other relevant material safety data sheets before working with this product or its mixed state.

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