Crosbe
P: 1300 797 560
E: info@crosbe.com
W: crosbe.com
ABN: 58 617 674 085
3 Viewbrook Close, Seven Hills

Technical Data Sheet

CROSflow® 850 Timber Leveller

CROSflow 850 is a high-performance polymer and fibre modified cementitious self-levelling underlayment. It is suitable for use over new and existing concrete substrates, timber and Compressed Fibre Cement (CFC) substrates, prior to the application of floor coverings. It has exceptional flow and adhesion properties.

Recommended Uses:

- Suitable for use over concrete floors, timber floors, particle board, and Compressed Fibre Cement sheeting (including Scyon board).
- Residential and commercial application.
- New construction.
- Refurbishment of existing floors.
- Underlayment for carpet, carpet tiles, timber, vinyl and ceramic tiles after 24 hours cure – refer to Temperature Considerations. It is also suitable for use under floor coatings like epoxy and polyurethane. Refer to Crosbe Technical Bulletin "CROSflow Levellers and Coatings", for more detailed information.
- Suitable for Internal applications only.
- Suitable for use with under floor heating systems.

Advantages:

- CROSflow 850 is classified as Non-Hazardous with respect to Respirable Crystalline Silica (RCS) as it contains less than 0.1% RCS.
- May be applied to a thickness from 3mm to 30mm in a single application.
- Suitable for use via manual installation methods and via pumping.
- Highly accurate and consistent bag weights.
- Excellent adhesion.
- Exceptional flow and workability.
- Trafficable at 4 hours.
- Accepting of floor coverings and floor coatings after 24 hours cure – refer to Temperature Considerations.
- Tear and rain resistant PE bags which are recyclable and reduce product loss from damaged packaging.

Surface Preparation:

Concrete Floors

Concrete floors must be structurally sound, clean and dry. Surface must be free from dust, dirt, wax, grease, asphalt, latex and gypsum compounds, adhesives, paint, curing and sealing compounds and other contaminants which may act as a bond breaker. Concrete must be free from laitance, efflorescence and not be subject to hydrostatic pressure. Mechanically prepare the floor using recommended preparation methods such as shot blasting, scarifying, diamond grinding, or other suitable methods to provide a roughened, clean, sound, solid and open porous surface. Acid etching is not a suitable method of preparing the subfloor. Remove all dust and debris from the floor by vacuuming the surface with a suitable H Class industrial cleaner – must be equipped with a Hepa filter.

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All concrete sub floors must be fully cured and dry in accordance with AS 1884 (Less than 75% relative humidity when measured in accordance with ASTM F2170). Ambient temperature, surfaces and materials should be maintained at temperatures higher than 10°C and below 35°C. For floors with a high humidity content or subject to rising damp, apply Crosbe MVB Moisture Vapour Barrier. Refer to the Crosbe MVB Moisture Vapour Barrier TDS for details.

Refer to Crosbe Technical Bulletin on Concrete Subfloor Preparation for detailed information on preparation of the subfloor.

Timber and CFC Floors

Ensure that all new or existing timber and CFC flooring is fixed in accordance with the manufacturer's recommendations and any relevant Australian Standards. They should be firmly fixed to the background (showing no signs of excessive movement), have adequate load bearing capacity, and be dimensionally stable. The boards need to be dry and showing no signs of delamination. Surface must be free from dust, dirt, wax, grease, asphalt, latex and gypsum compounds, adhesives, paint, sealers or coatings, and any other contaminants which may act as a bond breaker. Any materials which are contaminating the surface, must be removed by mechanical abrasion, to provide a clean, non-contaminated surface. Some particle boards have a form of wax impregnation on the surface, which must be mechanically removed. If in doubt, refer to the flooring manufacturer for instructions. After mechanical abrasion, remove all dust and debris from the floor by vacuuming the surface with a suitable H Class industrial cleaner – must be equipped with a Hepa filter.

Priming:

The use of CROSflow® Primer is recommended over concrete.
For all timber and CFC (Compressed Fibre Cement) surfaces, it is recommended to use CROSflow® Concentrate Primer diluted 1:1 with potable water. Using a soft brush or broom, prime the prepared area and allow primer to dry. A second coat of primer may be necessary on areas with very porous surfaces where the initial coat has been completely absorbed. Allow the primer to fully dry to a clean, thin film (approx. 1- 2 hours depending on ambient conditions) before applying CROSflow® 850. Low temperature can delay the drying time of primer. Do not apply levelling until the primer has dried thoroughly. Refer to the datasheet for CROSflow® Primer and CROSflow® Concentrate Primer for more detailed use and coverage information.

Mixing:

Place the recommended 4.4 – 4.8 litres of potable water into a clean mixing vessel and whilst mixing, slowly add the entire 20kg contents of **CROSflow® 850**. Mixing should take place using a forced action high shear mixing paddle, with a mixer capable of stirring at 600rpm. Mix for approximately 2 – 3 minutes to a lump free consistency. Be mindful of temperature considerations when using externally.
Use mix within 15 minutes after mixing, be sure to only mix a quantity that can be use within this time. This is particularly important when using in external environments.

- Do NOT overwater the CROSflow® 850, use only the recommended mix water volume.
- Do NOT use a concrete or masonry mixer to mix CROSflow® 850.
- Do NOT mix by hand.
- Do NOT attempt to retemper mixed product once the working time of 30 minutes has been exceeded.

Application:

Pour the mixed **CROSflow® 850** onto the prepared substrate and spread into place using a long handled gauged spreader. CROSflow® 850 seeks its own level during the first 10 - 15 minutes after pouring. Subsequent applications of leveller should be made whilst the material on the floor is still fluid and has a wet edge, to allow for easy blending. When applying the CROSflow® 850 over concrete, it must be applied at a minimum thickness of 3 mm and can be applied up to 30mm thick in one application. When applying the CROSflow® 850 over timber or CFC substrates, it must be applied at a minimum thickness of 5mm and can be applied up to 30mm thick in one application. Thicker applications should be carried out in multiple pours and may require a longer cure.
It is recommended that spiked boots be worn, to minimise any indentations in the leveller whilst still fluid.

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CROSflow® 850 can be pumped with the use of an effective positive displacement pump. It is suggested that the pump manufacturer's instructions are followed carefully. Contact Crosbe Technical Services should any additional information be required.

Application over Underfloor Heating:

The subfloor should have been laid and prepared in accordance with Australian Standard AS 1884. The underfloor heating system should have been commissioned in accordance with the manufacturer's instructions and in accordance with Australian Standard AS 1884. Once the heating system is fully commissioned, application of **CROSflow® 850** should be made in accordance with the information in this TDS and the requirements put down in AS1884. Application of any subsequent floor coverings should be made in accordance with the floor covering and flooring adhesive manufacturers instruction.

Set Time:

Allow a cure time of 3-4 hours at 23°C for foot traffic. Allow the **CROSflow® 850** to cure 24 hours at 23°C before applying the respective floor covering. These times can be impacted by air temperature, substrate temperature and relative humidity. Thicker layers will extend drying times.

Coverage:

20kg bag of **CROSflow® 850** will cover approximately 4.0m2 at 3mm thickness, and 2.4m2 at 5mm thickness.

Clean Up:

Wash all tools in water immediately after use.

Temperature Consideration:

The mechanism of interaction between cement and water is temperature sensitive. The set time is delayed at low temperatures and is accelerated at high temperatures. To avoid significant change in setting times, the recommended water temperature, ambient and substrate temperature ranges are:
Water Temperature Range: 15 – 25˚C. Working with temperatures outside of this range will also impact the fluidity of the product.

Ambient Temperatures:

Do not apply at a temperature less than 10˚C. Above 30˚C, consider using cooled water for mixing the product. Do not apply in temperatures above 35˚C.

Substrate Temperature:

Do not apply onto a surface which has a temperature less than 10˚C or above 35˚C.

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CROSflow 850 Timber Leveller - Product Data:

Property	Test Result
Working Time at 23°C	30 minutes
Fresh Mix Density (Kg/m^3)	2060
Yield (L/20Kg bag)	11.8L @ 4.4L water addition
	12.0L @ 4.8L water addition
20 Kg Bags per cubic metre	84 @ 4.4L water addition
	83 @ 4.8L water addition
Foot Traffic at 23°C	Approx. 3-4 hours
Floor Coverings at 23°C	Timber, Vinyl, Carpet & Ceramic Tiles: 24 hours
	Water Based Coatings – 24hrs
	Solvent Based Coatings – Contact Crosbe
Setting Times at 23°C	Initial: 1hr 45 min to 2hr 10 min
	Final: 2hr 30 min
Compressive Strength	1 Day: 13 -16 MPa
	7 Day: 20-25 MPa
	28 Days: 34-38 MPa
Flexural Strength	1 Day: > 3 MPa
	7 Day: > 5 MPa
	28 Days: > 10 MPa
Application Thickness	Minimum: 3mm
	Maximum: 30mm
	Timber/CFC Floors – minimum of 5mm

Testing Parameters: 23% of water. Laboratory at: 23±2˚C > 50% RH. The performance data is typical and based upon controlled laboratory conditions. Actual performance on the job site may vary from these values based on actual site conditions.

Precautions:

•**CROSflow® 850** is designed as an underlayment and must not be used as a trafficable wearing surface. It must be covered with a suitable floor covering or coating.
For Internal applications only.

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Packaging:

20kg Polyethylene (PE) bags.

Shelf Life & Storage:

Shelf Life:
The shelf life of the product is 18 months from the date of manufacture, if stored indoors in accordance with recommended storage conditions.
Storage:
Store in dry conditions, in unopened and undamaged PE bags and in temperatures below 30C. If stored in excessive temperature conditions, externally exposed to the elements or in high humidity conditions, the shelf life may be reduced.

Safety Data:

This product may cause irritation and an allergic reaction to the skin. It may cause serious eye injury and irritation to the respiratory system. In case of contact with the eyes rinse with running water (15 mins) including removal of contaminated clothing. Wear protective gloves, clothing, eye and face protection. Avoid inhaling dust/fume/gas/mist/vapours/spray. Ensure adequate ventilation during mixing and application. A class P2 dust mask is recommended for use when handling powdered material, and whilst grinding or scabbling floors. For detailed information, refer to the SDS for **CROSflow® 850**, available at www.crosbe.com.

Contact Crosbe:

Sydney – Head Office
ABN: 58 617 674 085
3 Viewbrook Close, Seven Hills NSW 2147 Australia
Ph. 1300 797 560 – Fax. 1300 797 580
info@crosbe.com
crosbe.com

Important Notice:

A Safety Data Sheet (SDS) is available from the Crosbe website (crosbe.com). Please read the SDS carefully prior to using this product. In an emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia).

Product disclaimer:

Recommendations and advice regarding the use of this product are to be taken as a guide only. The manufacturer of this product and any of its affiliate companies cannot be held responsible for any loss or damage arising from the incorrect usage of this product. The use of this product is beyond the manufacturers control, and liability is restricted to the replacement of material should the product be proven faulty. The information contained herein is to the best of our knowledge, true and accurate. We reserve the right to update information without prior notice. No warranty is implied or given to its completeness or accuracy in describing the performance or suitability of the product for a particular application.