

Technical Data Sheet (TDS)

The Green Binder



THE ENVIRONMENTALLY FRIENDLY
PERFORMANCE BINDER

Description

Green Binder HP is a multi-purpose combination hydraulic binder which can offer market leading performance where desired.

Rapid, yet controlled curing allows the user to achieve desired results much faster than any other product available on the market.

No additives are required as **Green Binder** already contains dosed amounts of flow, set and workability powders. Simply add potable water. Low carbon (CO₂) output. 85% reduction compared to OPC. 92% carbon reduction compared to CAC cements. Over 7 x (700%) reduction of CO₂ emissions vs OPC. Over a 12 x (1200%) reduction of CO₂ emissions vs CAC cements; and incomparable performance improvements vs other binder types.

If you want to achieve a Green Star rating, then look no further.

Recommended Uses

The **Green Binder** can be used in the following applications:

- Fast set concrete/shotcrete
- Concrete repair
- Pre-cast addition
- Non-shrink grouting
- Underlay
- Casting
- Anchoring
- Base plates
- Rapid construction
- Basement /carpark
- Roadways
- Airport runways
- Marine

Features & Benefits

- Self-levelling
- Rapid early strength
- Controlled late strength
- Low CO₂ output (compared to OPC and CAC)
- Ultra low pH
- Extreme controlled performance
- Can be slowed to improve workability
- Environmentally advantageous

Performance Data

	Compression strength (UCS) *
2 hours	30 MPa
6 hours	40 MPa
12 hours	50 MPa
1 day	80 MPa
7 days	90 MPa
28 days	110 MPa

W:P Ratio @ 0.25:1

AS1478.2. 50mm cubes at 23°C (± 2 degrees)

For chemical properties please refer to the relevant SDS.

Set Times*

Initial set: 30 minutes

Final set: 60 minutes

Note: *from mixing.

Please note these are laboratory generated test results under controlled conditions, and this testing cannot replicate in-situ or field/practical results.

Water:Powder ratio [W:P]

A water powder ratio of 0.20-0.28:1 by weight of binder. Do not exceed 0.3:1 W:P as this W:P may negatively affect overall product performance.

Bleed / Shrinkage

186 Microstrain at 56 days.

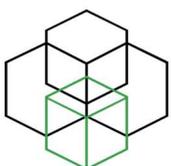
218 Microstrains at 402 days.

Wet density

At W:P 0.25, wet density is 2080kg/m³.

Yield / Addition rate

Each 20kg bag mixed with 5 litres of water yields 0.012m³ volume.



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Application

Application: Considering **Green Binder** can be used as a 100% OPC replacement, down to minimal additions; and can be mixed with varying proportions of aggregate, sand or the like - then use of; application of it considered the responsibility of the user.

Surface Preparation: Free of dust, powders. For overlay, it is suggested one test section is prepared to evaluate suitability of material and procedures.

Mixing: Should be undertaken in an efficient mixer, agitator or volumetric mixer, by adding the powder to water. Water to be clean potable.

Rapid Performance GP Grout

For deeper sections of repair exceeding 100mm normal pour thickness, we recommend using RPG GP Flow Grout.

Storage and Shelf Life

If kept in its original packaging in a dry environment, shelf life of at least 6 months is to be expected. This time may be reduced if the product is subject to elevated temperatures or humidity. Bulk bags are expected to remain covered in plastic until use.

Packaging

The **Green Binder** is packaged in 20kg bags or 1.0/1.2 tonne bulk bags. Other packaging options are available on request. Pneumatic tanker options may be available at a later date. Packing slips will state batch manufacture date and batch number for QC traceability.

Health and Safety

- Avoid contact with skin and eyes. Wear suitable protective clothing.
- Avoid inhalation or ingestion.
- In case of contact with skin or eyes, rinse immediately.
- Seek medical attention immediately if ingested.

Please refer to the relevant SDS for further information. See www.greentechcement.com or contact us.

Disclaimer

The technical information and application advice summarised in this document is based on our current practical knowledge. Intending users should read this TDS as well as the SDS and consider the information provided in the context of how the product will be handled and used in the workplace, including in conjunction with other products.

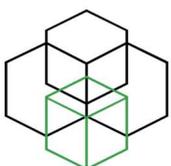
We accept no responsibility for loss or injury caused by improper use, incompetent preparation or ordinary wear and tear.

Our responsibility for product sold is subject to our standard terms and conditions; no warranty expressed is implied as GreenTech Cement Limited has no control over mix design, handling or use of the product.

Contact

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