



TDS HYDRO – HC-Marine Mix

HYDRO HC- Marine ready to use, cementitious grout that can be used for applications underwater. When properly mixed, **HYDRO HC- Marine** will have little clouding of the cement base during the application and is form-holding in the water. **HYDRO HC- Marine** is a blend of high quality Portland cement, graded aggregates and additives, enabling it to achieve an excellent flow, a non wash-out texture with a high compressive strength of a min. of 60MPa as a result.

USES

HYDRO HC- Marine can be a pumped grout applications for underwater, or used for free flowing, reinstating concrete and marine remedial work:

- Underwater grouting
- Bridge columns.
- Void filling
- Mining.
- Pillars, Piles.
- Slipways.
- Water storage; Dams.

BENNEFITS

HYDRO HC- Marine has the following benefits:

- Rapid setting within 30 minutes
- Calcium Chloride-free
- There is little ‘wash-out’ of cement phase when placed underwater.
- Efficient water displacement.
- Shrinkage compensating properties.
- Enhanced early strengths without the usage of chlorides.
- Does not segregate or bleed.
- Good impact, vibration and thermal resistance.
- Non-corrosive to steel or iron. No metallic iron content to cause staining.
- Can be used in the rehabilitation of concrete and timber piles in marine applications.

Compressive Strengths

Gel Time	60 seconds
Water: Powder	022:1
Time	Strength (MPa) *
6 hr	~10 MPa
1 day	~ 20 MPa
7 days	~ 45 MPa
28 days	~ 60 MPa

*50mm cubes to AS1478 at 23°C (+2°C).

Variations are to be expected as a result of changing site conditions, weather, quality of preparation, level of expertise during application & curing.



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HYDRO HC-Marine is a blend of Portland cement, graded fillers and chemical additives. The combination of additives produce a controlled gaseous expansion which occurs in the plastic state.

APPLICATION

Preparation of the surfaces or substrate

All surfaces must be clean, sound and free from oils, grease or other surface contaminants. If the concrete surface is defective, or has laitance, it must be cut back to a sound base. Permanently immersed substrates should be prepared by sand blasting or high pressure water jet. Non-permanently immersed substrates can also be prepared this way, or by scabbling.

Any formwork must be water tight to allow **HYDRO HC- Marine** to flow freely.

Add the powder to potable water at the recommended ratio. Adding the maximum recommended of 4.5 litres per bag produces a flowing grout. Adding less than 4 litres may result in a flash- set grout

A high-shear paddle mixer is recommended for dispersion of the powder. Potable water shall first be added to the mixer and half the powder shall be added and completely dispersed.

The remaining product shall then be mixed into the blend until the desired consistency is reached and the mix is free of lumps. While mixing make sure the mixing time is long enough to achieve a flowing mix. **HYDRO HC- Marine** can be poured through a flexible tube (50mm and bigger) Please restrict the flow during the pour so not to entrap water and be aware not to raise the tube above the surface of the grout.

Due to fast set times initial trials with this product are highly crucial. Potlife @20C; 30 minutes

The wet density of **HYDRO HC- Marine** is approximately 2380 kg/m³. Each 20 kg bag approx 10.5ltr,

Cleaning:

Rinse all tools & equipment with clean water immediately after use, removing all traces of **HYDRO HC-Marine**.

If **HYDRO HC- Marine** is kept in its original packaging in a dry environment, shelf life of 12 months is to be expected.

This time may be reduced if the product is subject to high temperatures or humidity.

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Bulk bags are expected to remain covered in plastic until use. If products are to be stored underground they should be stored in a dry area, free from water ingress.

HYDRO HC- Marine is packaged in **20kg** bags or **1.0/1.2** tonne bulk bags. Other packaging options can be requested.

- 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.



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Further information please contact us through mailbox:fluxdesignaustralia.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. We accept no responsibility for loss or injury caused by improper use, incompetent preparation or ordinary wear and tear. Users should review other relevant material Safety Data Sheets before working with this product or its mixed state.

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