



EpiMax 480 UW

High Performance Underwater Grout

Description

EpiMax 480 UW is a specially developed grouting system for restoring eroded structural piles. This system is also suitable for grouting annular spaces in support columns, offshore risers and subsea pipeline jackets.

EpiMax 480 UW has the ability to displace water by spreading over the surface, remaining immiscible with water and ultimately displaying a higher affinity for the surface than water does. This unique property makes EpiMax 480 UW suitable for use under water and in the splash zone.

EpiMax 480 UW is designed for use by in-situ injection into a plastic jacket casing whereby when cured, it provides protection from further deterioration and restores the structural integrity to the structure, surpassing its original state.



Advantages

- Low viscosity - good pumpability
- High strength curing, underwater
- Self-mixing aggregate extension - even underwater
- Corrosion resistant
- High bond strengths -no interference with dockside activities

Typical applications

- Concrete pile repairs
- Offshore riser grouting
- Dam restoration and repair
- Timber piled structure repair
- Grouting support columns underwater
- Offshore riser and pipeline jacket grouting

Typical properties

- Shelf life: 2 years
- Work time: 2 hours at 25 C
- Cure time, strip formwork: 36 hours at 25 C
- Compressive strength, 3 days:
- Compressive strength, 7 Days:
- Compressive modulus: 4.5 GPa
- Tensile strength: 60 MPa
- Bond strength to concrete, underwater: 2.2 MPa concrete failure
- Bond strength to steel, underwater: 10 MPa
- Water absorption, 14 days at 25 C: 0.07%

in air: 80 MPa
in air: 96 MPa

underwater: 70 MPa
underwater: 90 MPa

Surface Preparation

Methods of surface preparation will vary due to the broad scope of application.

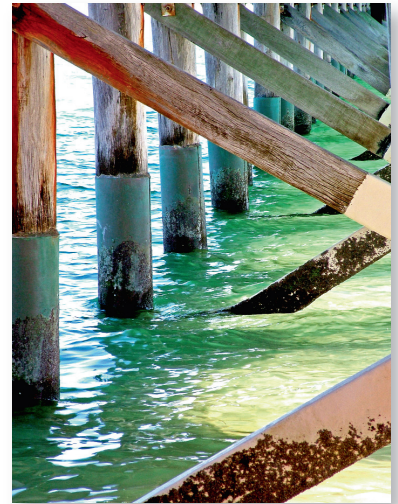
In general all surfaces shall be thoroughly cleaned of marine growth, oil, grease, mud, rust, broken concrete, micro organisms and any other deleterious materials which might prevent proper bonding between the EpiMax 480 UW and the structure.

It is recommended that cleaning be accomplished by water blasting or by divers using powered brushes, but any method that produces the quality of cleaning necessary to meet the bond requirements below may be considered.

Surface preparation should aim to produce a surface finish over the entire area of the structure that will result in a bond strength between the EpiMax 480 UW and the surface of 700 KPa or greater, when tested by the modified Elcometer method.

In environments where active marine growth occurs, it may be necessary to perform the surface preparation in two stages. In such environments, the first stage shall consist of removing marine growth, oil, grease, rust, broken concrete, etc., and shall occur not more than seven days prior to encapsulation. The second stage shall be a final surface preparation, removing all remaining deleterious substances including micro-organisms and shall occur not more than 48 hours prior to the placement of the EpiMax 480 UW.

Surface preparation guidelines cannot cover all site or field contingencies and it is always recommended to perform an on-the-spot adhesion test as a Quality Assurance audit if doubt exists over the process.



Application

Injection Projects

If injection ports are to be used for grout placement, they should be properly installed into the jacket. Jacket assembly and positioning should be performed in such a manner as to assure that no damage to stand-offs and/or set screws occurs and that there is no detrimental movement of the joints while any joint adhesive, if used, is curing.

The jacket should be supported by temporary bracing or other means to ensure that it will not move or distort during the grout placement and curing period and that the minimum annular space of 10 mm between pile and jacket is maintained throughout the entire encapsulation.

Gravity Pour

EpiMax 480 UW can be poured to displace water. This is best accomplished with a tremmie and a suitable pressure head for the rapid displacement of water and the minimisation of grout break up due to wave action.

Large Volume Projects

When filling voids larger than 40mm thickness, pre-fill the void with coarse, round aggregate 10mm or more in diameter.

Packaging

EpiMax 480 UW is available in 50 kg packs. It is pre-packaged in correct proportions for immediate use.

Ordering Information: 50 kg - #9048550

Safety precautions

Read **Material Safety Data Sheet** before commencing any application. Keep away from children. Avoid contact with skin and avoid breathing vapour. Always provide adequate personal protection (gloves & goggles etc) during use. Always provide adequate ventilation, especially in confined spaces. If poisoning occurs, call Doctor or Poisons Information Centre.

Phone 13 11 26. If swallowed, DO NOT induce vomiting. Give plenty of water or milk. If skin contact occurs, quickly remove contaminated clothing and wash affected areas thoroughly with soap and water.

TDG Code: Hardener - UN 1760, Compound - Not Classified