

COSTAR UW MORTAR

High Build Fast Setting Structural Repair Concrete



PRODUCT DESCRIPTION

Costar UW Mortar is a ready to use, quick setting cement-based underwater mortar. The powder, when mixed with water, produces a mortar which is wash-out resistant and waterproof. It was explicitly designed for underwater repair works.

FEATURES

- Easy to use
- Rapid setting
- Can be used above and below the waterline.
- Excellent bond strength to clean concrete, brick, masonry, steel and concrete.
- High resistance to wave action during placing
- Excellent resistance to sulphurous ground waters making it suitable for constant immersion
- It provides a watertight seal when used to repair leaks or seal joints
- Will not disperse, wash-out or break up underwater.
- Safe to use, non-toxic, and non-hazardous in underwater environments.

USES

- Repairing eroded concrete or timber piles, sea walls, wharves
- Repairing leaks or joints in marine structures, concrete reservoirs, swimming pools, pipelines, well etc.
- Offshore locations and applications
- To repair and waterproof precast concrete, tunnels, culverts, sewers and pipes.
- The protection of marine structures below the waterline. The consolidation of sea defenses, harbors, jetties, docks and locks.
- To stop and seal the flow of water or grout in brickwork or concrete.

APPLICATION

Surface Preparation

Ensure that the concrete surface to be repaired is sound and free from dirt, oil, laitance and any other deleterious substances, which reduces adhesion of material to the substrate. Weak, damaged and deteriorated concrete should be removed and edge of repair area should be recessed to a depth of 5mm to prevent feather edging.

To ensure satisfactory bonding, the prepared surface should be dampened down to minimize suction

Preparation

Mix three volumes of Costar UW Mortar with one volume of fresh water only. Place the powder into the container and add half of the water while mixing with hand trowel for about two minutes. Add remaining water and mix thoroughly (3 minutes) until no white streaks are present. Mix only small batches at one time, mixed mortar must be placed within 15 - 20 minutes of mixing.

Costar UW Mortar should be made into a putty-like consistency and shaped quickly into balls of about cricket ball size.

With the use of a gloved hand and fingers, form a CONTACT COAT: RUB the mortar onto and well into any cracks or cavities, and completely cover the substrate.

A contact coat applied properly will reduce voids at the bond line, and promote intimate contact between the repair material and the concrete. It will also prevent peeling and slumping on vertical and soffit substrates. On top of the contact coat, use a trowel or steel float to apply the material and bring up the profile of the surrounding concrete. For ease of application of the mortars above the waterline, and to remove stickiness, keep gloves and all implements wet. Use hand held water spray to wet mortar surfaces, and to produce smooth and attractive finishes.

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TECHNICAL PROPERTIES

Packaging	20kg				
Appearance	Grey				
Shelf life	12 months from date of production				
Storage condition	Product must be stored in original, unopened, and undamaged sealed packaging in dry condition and temperature between +5 °C and +35 °C.				
Water ratio	3.6 - 4 liters of water per 20kg bag of product				
Setting time	Initial: Approx. 20 minutes		Final: 20 to 40 minutes		ASTM C191
Compressive strength	3 hours (13.5 MPa)	24 hours (24.5 MPa)	7 days (33.7 MPa)	28 days (37.8 MPa)	ASTM C109 modified
Slant shear, modified	24 hours: (6.5 MPa)	7 days: (11.8 MPa)	28 days: (13.4 MPa)	ASTM C882	
Length change	28 days in air: ≥ -0.05%		28 days in water: ≤ 0.05%		ASTM C157
Application temp	Minimum 10° C Maximum 30° C				
Density	2.0kg/l				
Open time	Approximately 100 minute@20°C and 45minute@35°C				
Yield	20kg of powder yields 11litres of good mortar				
Coverage	Theoretical coverage is dependent on the method of application and substrate porosity/conditions.				



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STORAGE AND SELF LIFE

Protect from freezing, if frozen or crystallized, thaw gradually and stir to homogenous mixture. Shelf life in unopened original containers is 12 months when stored at 70°F (21°C).

LIMITATIONS

Costar UW Mortar should not be used when the temperature is below 50C and falling. Do not exceed the maximum recommended water content and only use clean potable water. If any doubts arise concerning temperature or substrate conditions, consult your local Costar Building Product office.

HEALTH & SAFETY

- Please ensure that hand gloves and goggles are worn during installation
- Apply in ventilated areas, away from flames
- It is only important that during application and after application, standard safety procedures are done.
- Please consult current MSDS for product.
- *For Professional Use only.*

STANDARD COMPLIANCE

- ASTM C109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens).
- ASTM C157 Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete

ADDITIONAL INFORMATION

Costarchem manufactures a complete range of construction chemical products which include:

- Concrete admixtures
- Waterproofing system
- Flooring system
- Cementitious and epoxy precision grouts
- Damp-proofing products
- Sealants and adhesives
- Repair and refurbishment systems

For more information on any of our products, please contact Costarchem global or regional office.

LEGAL NOTE

The information and recommendations relating to the application of Costarchem products, are given in good faith based on current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with the stated recommendations in the product datasheets. Whilst Costarchem endeavors to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it. The user of the product must test the product's suitability for the intended application and purpose. Costarchem reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.