



# Emcekrete® UW

## Hydraulically setting, Anti-washout, Shrinkage compensation grout for Under water Repair

### Product Properties

- **Emcekrete® UW** guarantees a permanent, reliable bond with under water concrete structure.
- Due to its Anti-Washout Properties it displaces water properly. Performs well in Under water Condition.
- High early strength even if in under water condition.
- **Emcekrete® UW** Provides Better Bonding with the Concrete Substrate.
- **Emcekrete® UW** Provides Shrinkage compensation in Plastic Stage.
- Ready to use – Simply Mix with Water
- **Emcekrete® UW** is free from harmful chlorides and other aggressive constituents. Adjacent steel areas are permanently protected against corrosion.

### Areas of Application

- Repairing of Under water structures like RCC Columns, Pile caps, Splash Zone area Concrete.
- Under Water Grouting of Large Gaps or pockets.

### Application Notes

#### Substrate Preparation

The Substrates for grouting must be free from any other unsound material. Cleaning should be done by Mechanical means till achieving a durable sound surface. Please Take into consideration the advices written on the "General Application Advice" for hydraulically setting grouts.

#### Form work

Must be Rigid and leak-proof. The form work should be strong enough to provide suitable support for flowing and water tightness and prevent the grout matrix from budging.

#### Mixing

**Emcekrete® UW** is ready to use only water with recommended quantity need to be added. To get better workability it is recommended to use mechanical mixture for mixing and the Temperature of water to be added should be 25° C. During mixing of Water in grout 1<sup>st</sup> add 75% of the water and mix for 2-3 min, then add rest 25% of water and mix for 2 min to get better flow and workability. Grouting should be done immediately thereafter.

#### Mounting

The grout needs to be applied immediately after mixing. Pouring of the grout should be continuous and from one side to avoid any air entrapment. For the large area grouting, the grouting should be done from the middle by help of pipe or funnel or any suitable lanching platform.

Grouting should be done with in 20 min after mixing of grout to get full benefit of Gaseous Expansion. Grouting should be poured through Flexible pipe with Pump attachment. Maximum Thickness of 80mm should be recommended for above water application. For Under water application grouting thickness of 150mm should be recommended in one layer. During application and within the fast few hours after pouring, strong vibrations and shocks near the grout area must be avoided. In under water application grouting surface should be kept in restrained condition.

#### Curing

Though **Emcekrete® UW** is a Underwater Grout, Hence Curing is not Required for any Under water application. But if this grout will be used in Splash zone area or above water application then all the exposed surface should be cured with sufficient amount of water to avoid any thermal cracks.

#### Notice

Grouts are suitable for the grouting of Galvanized steel elements in interior spaces. When using outdoors, prevent the contact area between the galvanized elements and the grout from coming into contact with water.



#### Technical Data for Emcecrete® UW

Characteristic	Unit	Value*	Comments
Type		Grouting mortar	
Grain Size	mm	0 – 1	
Grouting Height	mm	20 - 150	
Flow	mm	300 ± 20	At 18% of water
Added Water	Liter	4.8 – 5.4	Per 30kg bag
	%	16 - 18	
Bulk Density	Kg/l	~1,30	@ + 27° C
PH		11-13.5	When mixed with water (Ready to pour)
Early Expansion	%	1 - 4	
Compressive strength	N/mm <sup>2</sup>	~20	After 24 hours as per ASTM C 109 (50 mm cube)
	N/mm <sup>2</sup>	~45	After 7 Days as per ASTM C 109 (50 mm cube)
	N/mm <sup>2</sup>	~55	After 28 Days as per ASTM C 109 (50 mm cube)
Setting Time	minutes	240	Initial Setting Time @ +30° C as per ASTM C403
		420	Final Setting Time @ +30° C as per ASTM C403
Wet Gross Density	Kg/m <sup>3</sup>	2200	@ 0.175 Water powder Ratio

\*All the technical Values were determined in laboratory, at a temperature of 27°C and 65% relative humidity

#### Product Characteristics for Emcecrete® UW

Type of Product	Free flow, non-shrink grout
Form	Gray Powder
Shelf Life	6 Months from date of Manufacture if stored in Unopened Packaging. Protect from Rain, Direct Sunlight, Heat and Frost
Delivery	30 kg sacks
Disposal	Empty packs completely and dispose off carefully to protect our Environment

#### Safety Advice

Please Take notice of the safety information and advice given on the packaging labels, safety information sheets and General Application Advice.

**Note:** - The information on this Data Sheet is based on our experiences and correct to the best of our knowledge. It is However, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our Data refers to the accepted engineering rules, which have to be observed during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees which differ from the data contained in our information sheets are binding if given in written form. The accepted engineering rules must be observed at all times.

**Edition:** - MC/IND/R0/DEC2020, Some Technical Changes have been made to this print medium. Older editions are invalid and may not be used anymore. If a technically revised new edition is issued, this edition becomes invalid.