

PRODUCT DATA SHEET

webertec non shrink grout UW

(Formerly known as E.MIX NON SHRINK GROUT UW)

Extra high strength, rapid hardening, cementitious and non-shrink grout for underwater installations

PRODUCT

webertec non shrink grout UW is a high strength, rapid hardening and free flow non-shrink cementitious grout suitable for pumping. It is specially designed for underwater installations with high converging power, which offers a promising and special performance for underwater constructions. **webertec non shrink grout UW** can be pumped when it is applied in large scale or volume.

Uses

- Underwater or tidal zones
- Underpinning and heavy duty support beneath dams, bridge columns and concrete pillars
- Direct application in seawater and freshwater areas
- Free flow cement grouting
- Fill in grout for hollow blockwalls

Features and Benefits

- Formulated to comply with American Standard and British Standard
- Setting and cured underwater with high converging power
- Excellent fluidity : suitable for pumping
- Displaces water effectively
- High compressive strength : > 60 MPa
- Expansion system compensates for shrinkage
- High flow characteristic and suitable for pump application
- Fast setting : setting time less than 2 hours at +25 °C
- Chloride free : prevent rusting of the steel and anchor bolts
- Pre-mixed and ready-to-use : requires only addition of water

TECHNICAL DATA

Colour	Grey
Component	Portland cement, expansive agent, non-reactive aggregate, graded sand and other chemical additives
Max. aggregate size	2.0 mm
Yield	Approx. 14 L/25 KG bag for 19% water demand Approx. 71 bags/m ³
Density	2.2 KG/L (dry)
Pot life	Approx. 20 minutes
Thickness	10 – 500 mm
Coverage	Approx. 1.8 KG/m ² /mm



PHYSICAL PROPERTIES

Water demand	Approx. 19 – 26% (4.8 – 6.5 L/25 KG bag)	
Yield	14 L	
Age	Compressive strength (BS 6319 : Pt 2)	
	Curing under fresh water	Curing under sea water
1 day	> 12 N/mm ²	> 10 N/mm ²
3 days	> 30 N/mm ²	> 25 N/mm ²
7 days	> 45 N/mm ²	> 40 N/mm ²
28 days	> 60 N/mm ²	> 55 N/mm ²
Expansion in 24 hours	ASTM C 827	> 0.3%
Expansion in 28 days	ASTM C 1090	Expansion
Bleeding	ASTM C 940	No bleeding
Flexural strength (28 days)	BS 6319 : Part 3	> 8.0 N/mm ²

Unless specified, all technical data are average values and refer to 28 days curing time.

Above physical data are taken on laboratory tests. In situ material performance may vary according to environmental & workmanship conditions beyond manufacturer control.

Complied Standards

American Standard : ASTM C 827 (Free expansion within 24 hours),
ASTM C 1090 (Free expansion between 3 – 28 days),
ASTM C 940 (Bleeding)

British Standard : BS 6319 : Pt 2 : 1983 (Compressive strength),
BS 6319 : Pt 3 : 1983 (Flexural strength)
BS 1881 : Pt 124 : 1988 (Chloride content)

PROCEDURE

Substrate Preparation

The substrate surface must be clean, sound and free from oil, grease, curing compounds or any loose materials.

Bolts and anchor holes must be clean and free from dust or loose materials.

Mixing & Installation

Mix a bag of dry-mixed powder (25 KG) with approx. 19 – 26% (4.8 – 6.5 L) of clean fresh water by using an electrical mixer for 3 - 5 minutes.

For continuous or large volume installations, machine mixing is recommended for rapid and consecutive material mixing and supply.

Apply the grout within 20 minutes after mixing to gain the full benefit of the expansion process.

webertec non shrink grout UW can be applied with thickness of 10 – 500 mm in single application.

Do not use mechanical vibrators to assist flowing, as this will cause segregation of product.

Please refer to our method statement for procedures in details.

Curing

For underwater grouting applications, curing is not required

STORAGE AND PACKING

webertec non shrink grout UW is delivered in 25 kg bag. Storage life is 12 months if the product is kept in a dry place.

HEALTH AND SAFETY

Recommend to wear NIOSH approved or equivalent particulate face mask when mixing the material.

Material contains cement, which may produce an allergic effect.

Material may cause irritation to eyes and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical assistance. After contact with skin, wash immediately with plenty of soap and water.

Keep out of reach of children.

Please refer to Material Safety Data Sheet (MSDS) for health, safety and handling of the product.

* Note: The information and physical data in this catalogue is given to the best of our knowledge under standard testing method and controlled environment. The results may vary with different weather / site conditions, workmanship or substrates. This is beyond our control that we shall not be liable for any faults or consequences arising or associated with this. We suggest comprehensive tests to be conducted before final application. Unless specified, all technical data are average values with curing time of 28 days. We reserve the right to update or amend the contents in the light of new findings during the course of research and development.