

POLY GROUT UW

Cementations Non Shrink Under Water Grout

Product Description

POLY GROUT UW is formulated as a natural aggregate system with shrinkage compensating binder and specially selected cement blend with a non wash out characteristics. It is a one part cementations product specially designed for grouting under water where high strength and high fluidity are required.

Product Features

- High strength for maximum load bearing.
- None shrink with minimum positive expansion for high tolerance performance.
- Low porosity with better resistance to sea water attack for embedded reinforced steel.
- None washable characteristics to retain grout properties.
- Highly fluid and extremely peaceable for easy water displacement.
- Chlorides free which may contribute if any to corrosion of base structure.
- Low porosity with better resistance to sea water attack for embedded reinforced steel
- Highly fluid and extremely peaceable for easy water displacement.
- High strength for maximum load bearing.
- Non - shrink with minimum positive expansion for high tolerance performance.
- Chlorides free which may contribute if any to corrosion of base structure.

Typical Application

Under water pumping of:

- Repair of dams & bridge columns.
- Voids in water structures.
- Repair under water concrete.

Properties

Compressive Strength

Tested cubes were casted under water & restrained typical results are shown in Table "1".

Bond strength

Tested at 20°C 22 kg/cm² Test was performed under water and restrained.

Cured for 14 days under water

The tensile strength of substrate concrete was higher than 22 kg/cm²

Density

Of hardened grout 2055 kg / cm².

Volume Change

Tested unrestrained 1 - 4 %

Restrain Plastic Expansion

Pressure

Around 0.005 N/mm²

Time of Expansion

Starts after 15 min.

Setting Time at 25 C⁰

Initial 5.15 hr.

Final 6.00 hr.

Setting Time could be extended or reduced to suit projects requirements for grouting time.

Guide for Applications

Preparation Careful preparation is a must for a successful grouting operation.

Concrete surfaces to be grouted should be clean and free from rust, grease, and oil this could be done by sand blasting or high pressure water jet.

Scrabbling or brush hammering may be used in non immersed or intermittently immersed substrates.

Prepare properly strengthened shutters that are completely impervious to retain the flowing Grout.

Mixing

Use approximately 4.5 liters of potable water to 25 kg bag to reach a fluid consistency.

Do not add sand or cement to the grout since this action will change its characteristics. When filling large volumes, it is advisable to fill out **POLY GROUT UW** with well graded silt free aggregates.

First add the required quantity of water as the mixer operates.

Mix for 5 minutes then place the grout.

For small quantities use paddle mixing drill. For large quantities use paddle type mortar mixer.

Hand mixing is not recommended.

Do not mix any more grout at one time than can be placed in 20min.

Pass the mixed grout through requirements a 5 m. m. sieve to remove any lumps prior to placing

It is very important to gauge accurately the right amount of water & the mixing time

Placing

Continuous pump **POLY GROUT UW** Through a flexible pipe of a minimum diameter of half an inch.

The bottom of the tube should be placed in lowest point in the form; it may be raised if necessary to reduce any back pressure.

The bottom of the tube should never be raised above the level of the grout.

Place the grout within 20 min. and restrict the grout flow at the start of the operation in order to avoid any water entrapment.

POLY GROUT UW may be pumped in thickness up to 20 cm when placed under water.

For thicker sections to be placed, under water, over 20 cm, it is necessary to fill out **POLY GROUT UW** With rounded well graded aggregate, in the size rang 2mm.up to 8mm.with the ratio of 1 : 1 by weight Unrestrained areas should be kept to a minimum.

Yield

The approximate yield per 25 kg bag will reach 14.5 liters.

Packaging

POLY GROUT UW is supplied in 25 kg bags.

Table "1".

Typical results for compressive strength of **POLY GROUT UW** tested at 30 C⁰.

Age (day)	Compressive Strength (N / mm2)
1	35
3	45
7	65
28	75

Curing

Curing is not required when grouting under water.

Shelf Life

One year when stored as recommended.

Storage

POLY GROUT UW should be stored in non humid shaded areas.

Cleaning

Use hot water for cleaning equipments.

Health And Safety .

- **POLY GROUT UW** is non flammable and non toxic, but it is alkaline in nature.
- Any splashes on skin should be washed with water.
- Seek medical assistance in case of contact with eyes, after washing it with running water.

Guarantee / Warranty

We warrant our products to be of good quality and manufactured to rigid standards. This warranty is in lieu of any and all other warranties expressed or implied.

This data sheet is published for information only. It is believed to be correct but no liability is accepted for it or the suitability of the product for any particular purpose.

POLYCOO services are free and the company dose not accepts liability for any loss arising from it.

Technical Services

For any further technical advice and recommendation for the use of all **POLYCOO** products, please consult the nearest **POLYCOO** technical office.



Under technical collaboration with

Polycoo Industries Ltd.

Sole distributor in Egypt: Polycoo Company

www.polycoo.com

5 Kamel Sedki Street, Ramsis Square, Cairo, Egypt

Sales Tel.: ++202-5918653/++2025918053/++20-122-3102700 Fax: ++202-5918053