

EUNIGROUT 500

Cementitious Non-Shrink Grout



Product Description

EUNIGROUT 500 is a premixed cementitious non shrink grout, giving high performance at various consistencies. Formulated to meet ASTM C 1107 and CRD C621 standards, EUNIGROUT500 is nongaseous, non-corrosive, non-oxidizing and is free of chlorides and nitrates.

Advantages

- EUNIGROUT 500 is a true nongaseous grout, free of bleeding, settlement and shrinkage, with long term stability over a wide range of temperatures and humidities.
- Factory blended and packed to eliminate site variations and errors.
- Extremely fluid consistency for easy application in difficult access areas.
- EUNIGROUT 500 has excellent flow retention and long usable life even at high ambient temperatures.
- High, non-corrosive, bonding to steel and concrete.
- High early strength characteristics for rapid return to service.
- Excellent ultimate strength, even at fluid consistency.
- Non-shrink maintains maximum contact with surface

Uses

EUNIGROUT 500 can be used in all grouting situations where shrinkage is undesirable. Typical uses are underplate grouting, space grouting, and repairs to precast concrete, bedding bearing plates, anchor bolt fixing, and cable grouting and crane rail assembly. Concrete repairs and floor toppings can also be carried out using EUNIGROUT 500.

Method of Use

Surface Preparation All surfaces must be clean and sound. Remove surface laitance by acid etching or grinding. Thoroughly wet all surfaces 6-24 hours before starting and keep in a moist condition during placing. Any free surface water must be removed before application.

Mixing

Always use a mechanical grout mixer for optimum dispersion and workability. Conventional or hand mixing will result in lower workability. DO NOT add more than the maximum water content, otherwise loss of properties will result. Mix the dry powder and add the water quantity over 1-2 minutes. Continue mixing for an additional 2-3 minutes until smooth and cohesive. As far as possible use exact and constant timings for each operation to obtain consistent results.

Application

1. Underplate Grouting

Use flowing or fluid consistency. Check that the formwork is sealed against grout leakage and that a minimum hydrostatic head of 100mm can be maintained. Ensure sufficient material is available to complete the work and obtain a continuous fill. Pour from one side only to avoid air entrapment, keeping a head on the grout to promote flow. DO NOT vibrate but rods, straps and chains can be used to aid complete filling.

Preplaced aggregate grout

Fluid or flowing consistency grout should be used and pumped or poured into place. Compressive strength development and ultimate strength of the concrete are reduced slightly compared with flowing grouts.

2. Grouting large volumes

For grout thickness greater than 75mm, the addition of clean well graded 10mm aggregates is recommended to reduce temperature rise. Use a maximum of one part aggregate to one part of grout by weight. Conventional concrete pan mixers and pumps can be used for mixing and placement.

Typical compressive strengths for a 1:1 mix of EUNIGROUT 500 and 10mm gravel at flowing consistency are:

1 day 15 N/mm²

7 days 40 N/mm²

28 days 50 N/mm²

3. Pumping

EUNIGROUT 500 may be pumped using piston, ram or diaphragm type grout pumps fitted with ball valves.

4. Concrete repairs/floor

Patching Use a workable consistency suitable to the repair in hand. A polymer/ grout bond coat will aid bonding between the repair and substrate.

EUNIGROUT500 50kg. EURIPARE BA3 4 liters Water 5 liters (The above provides for a plastic/ flow consistency depending on the level of water added).

Note : Up to 50kg. Of 3mm gravel / granite chips can be added without reducing mechanical properties.

5. Thin bed mortar

To meet ANSI standards and for floor topping/levelling mixes, EUNIGROUT 500 should be used in conjunction with EURIPARE BA9 bonding agent. An example of a suitable mix is:

EUNIGROUT500 50 kg Sand (medium) 30 kg EURIPARE BA9 6 liters Water 6-8 liters This yields 0.042m³ of non-shrink polymer mortar.

Curing

Good curing is essential on all exposed surfaces particularly in dry, sunny conditions. Failure to do so will reduce bond, strength and durability. Alternative methods of curing can be used, such as water ponding, mist spraying, wet hessian, etc.,

but in all cases these must be maintained for at least 7 days. In hot climatic conditions, particular care should be given to curing, to achieve maximum properties and service life. Keep the grout above 8°C at all times during application.

Typical Properties	Value		
Appearance	Gray, granular powder		
Mixed Density	2100kg/m to 2300kg/m Dependent on consistency		
Coefficient of Thermal Expansion	1.3x 10 ⁻⁵ mm/mm/°C		
Water Absorption, Age Analysis (Oven Dry) At 1 hour At 24 hours	+0.5% +0.9%		
Exothermic, Adiabatic, 1 kg sample 15 °C Ambient: 25 °C Ambient: 35 °C Ambient:	+11 °C +25 °C +38 °C		
Restrained Expansion, ASTM C 878	+0.6% at 28 days		
Freeze/Thaw	50 cycle - no weight loss		
Tensile Strength, BS 6319, part 7	4.5 N/mm ²		
Bond Strength, BS 6319, part 4	45.4 N/mm ²		
Mix Proprieties	Pourable	Flowing	Fluid
Approx water requirement per 25kg	3.75-4.5 lit	4.5-5 lit	5-5.5 lit
Flow table Spread, ASTM C 109	230%	>250%	>250%
Marsh cone (sec)	-	90	35
Concrete Flow Trough Initial (mm) At 45 min (mm)	400 -	600 400	700 500
Approx yield per 50 kg Bag (m ³)	0.0254	0.0260	0.0266
Setting Times at 20°C Initial set (Hours) Final set (Hours)	7 9	8.5 11	10 13

Typical results for a range of grouting condition are given below

Temperature:20 °C - Compressive strength N/mm2 (BS 6319, PART 2)			
Days	Plastic (W:3.5-4.5L)	Flow (W: 4.6-5L)	Fluid (W:5.1-5.5L)
1	30.0	27.0	20.0
3	48.0	40.0	35.0
7	56.0	42.0	35.0
28	60.0	48.0	40.0
Temperature:32 °C - Compressive strength N/mm2 (BS 6319, PART 2)			
1	35.0	30.0	25.0
3	50.0	43.5	37.0
7	57.7	45.0	40.0
28	63.0	52.0	44.0
Temperature:20 °C - Flexural - strength N/mm2 (BS 6319, PART 3)			
14	8.5	7.5	7.0

Packaging

EUNIGROUT 500 is supplied in 25 kg multiply paper bags.

Storage

This product must be stored in a dry place, free from moisture contact.

Health and Safety

For further information see the EUNIGROUT 500 Material and Safety Data Sheet, or our technical department.

Technical Service

The Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

Contact Information

Al-Faiha for Engineering Products
techsupport@alfaihaengineering.com
www.alfaihaengineering.com

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