

# EUNIGROUT 500 HD

## CEMENTITIOUS NON-SHRINK GROUT

### DESCRIPTION

EUNIGROUT 500 HD is a preblended powdered grout composed of high strength cement, graded aggregates and strength admixtures in order to achieve high strength properties. EUNIGROUT 500 HD, when mixed with water, is transformed into a fluid grout without segregation that is able to fill intricate spaces. EUNIGROUT 500 HD can be used in all grouting situations when shrinkage is undesirable.

### USES

EUNIGROUT 500 HD is a versatile grouting solution suitable for a wide range of applications involving concrete and earth water retaining structures. It finds typical uses in various scenarios such as grouting in earth and concrete dams, water spillways and underwater grouting. Additionally, it is employed for under-plate grouting, space grouting, repairs to precast concrete, bedding bearing plates, anchor bolt fixing, cable grouts and crane rail assembly.

### ADVANTAGES

- Non-gaseous grout, free of bleeding with long stability over a wide range of temperatures and humidities.
- Could be factory- or site-blended.
- Extremely fluid consistency for easy application in difficult access areas.
- Excellent flow retention and long usable life, even at high ambient temperatures.

### TYPICAL PROPERTIES

At an ambient temperature of 30°C and with the addition of 3 - 4 liters of fresh water per 25 kg of EUNIGROUT 500 HD grout bags, a compressive strength of approximately 60 MPa can be achieved. However, it should be noted that these figures may vary under different conditions, such as site variations and ambient temperatures. EUNIGROUT 500 HD meets the ASTM C204 requirements for the fineness of hydraulic cement when tested using an air method.

**Appearance:** Dark grey cementitious powder

**Compressive Strength (@30°C) (BS 6319, Part 2):**

**3 days:** ≥ 48 MPa

**7 days:** ≥ 52 MPa

**28 days:** ≥ 60 MPa

### MIXING

For optimum dispersion and workability, it is recommended to use mechanical grout mixers. Conventional or hand mixing may lead to lower workability. It is important not to exceed the minimum water content, as it can result in a loss of properties. Start by mixing the dry powder and gradually add the water over a span of 1 - 2 minutes. Continue mixing for an additional 2 - 3 minutes until the mixture is smooth and cohesive. It is advisable to maintain consistent timings for each operation to achieve consistent results whenever possible.

### APPLICATION

#### Surface Preparation

Prior to application, it is important to ensure that all surfaces are clean and in good condition. Remove any surface laitance by using acid etching or grinding methods. It is recommended to thoroughly wet all surfaces 6 - 24 hours before starting the application and maintain a moist condition during the placing process. Any excess surface water should be removed prior to applying the product. This preparation ensures optimal bonding and performance of the material.

#### Application Instructions

##### 1. Underplate grouting

When performing underplate grouting, it is recommended to use a flowing or fluid consistency grout. Ensure that the formwork is properly sealed to prevent grout leakage and maintain a minimum hydrostatic head of 100 mm. Sufficient material should be available to complete the entire task and achieve a continuous fill. It is advisable to pour the grout from one side only to prevent air entrapment, while maintaining a head on the grout to encourage smooth flow. Avoid vibrating the grout, but rods, straps and chains can be used to assist in achieving complete filling. For preplaced aggregate grout, a fluid or flowing consistency grout should be utilized and either pumped or poured into place. It is important to note that the compressive strength development and ultimate strength of the concrete may be slightly reduced compared to flowing grouts.

##### 2. Pumping

EUNIGROUT 500 HD can be effectively pumped using grout pumps equipped with ball valves, such as piston, ram or diaphragm pumps.

## **CURING**

Good curing is crucial for all exposed surfaces, especially in dry and sunny conditions. Neglecting proper curing can result in reduced bond, strength and durability. Various methods of curing can be employed, including water ponding, mist spraying and wet hessian, among others. Regardless of the method used, it is important to maintain the curing process for a minimum of 7 days. In hot climatic conditions, extra attention should be given to curing in order to achieve optimal properties and extend the service life of the structure.

## **PACKAGING**

EUNIGROUT 500 HD is supplied in 25 kg multiply paper bags.

## **STORAGE**

EUNIGROUT 500 HD should be stored and maintained in dry and cool conditions at temperatures between 2°C and 40°C. The shelf life of EUNIGROUT 500 HD is 12 months from the date of production.

## **HEALTH AND SAFETY**

For more information, please check the Material Safety Data Sheet.

## **CONTACT**

Al-Faiha for Engineering Products is the exclusive licensee manufacturer for ECA.

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