

# Hydratac 500

*High performance plasticized expanding grout admixture*

*Innovative products for your success*

## Uses

**Hydratac 500** is an admixture for cementitious grouts where a reduced water/cement ratio and positive expansion is required. Applications include bed grouting, duct grouting, non-shrink infilling and jointing.

## Advantages

- Gaseous expansion system compensates for plastic shrinkage and settlement in properly designed cementitious grout.
- Reduced water/cement ratio mixes in the grout mix ensures low permeability and long term durability in service.
- Gives high grout fluidity with low water/cement ratio, thus making placement or injection of the grout easy.
- No metallic iron content to corrode and cause staining or deterioration due to rust expansion in the grout.
- Composition allows high early strength development in grouts, without the use of chlorides.

## Standards compliance

**Hydratac 500** is a suitable pre-stressing grout admixture when complying with BS 8110 Part 1, 1985, section 8.9.4.6.

## Description

**Hydratac 500** is supplied as a powder admixture. The material is a combination of a plasticizing agent and a gas producing expansion medium. The plasticizing agent allows the use of a reduced water/cement ratio with consequent increased strengths and durability. The expansive medium counteracts the natural settlement and plastic shrinkage of the grout and aids stability and cohesion. Sufficient restrained expansion is developed to ensure a high degree of interfacial contact.

## Specification

### Performance specification

All grouting (specify details and areas of application) must be carried out with a cement based grout incorporating a plasticized, expanding powder admixture. The admixture must be iron-free and chloride-free and shall be added to the grout in the proportions 250 g of admixture per 50 kg of cement. The admixture shall provide an expansion of up to 4% in the plastic grout, by means of a gaseous system. The admixture must be stored, handled and mixed strictly in accordance with the manufacturer's instructions.

## Supplier specification

All grouting (specify details and areas of application) must be carried out using a cement based grout, incorporating Hydratac 500 manufactured by Cemkrete and applied strictly in accordance with the manufacturer's technical data sheet.

## Properties

**Chloride content** : Nil to BS 5075

**Compressive strength:**

The plasticizing action of Hydratac 500 allows reduction of the water/ cement ratio of cementitious grouts whilst maintaining flow properties. This gives improvement in strength and long term durability when cured under restraint.

**Setting times:**

**Hydratac 500** does not significantly affect the setting times of cement based grouts.

**Expansion characteristics:**

The controlled positive expansion in unset grouts incorporating Hydratac 500 overcomes plastic settlement when measured in accordance with ASTM C827 an unrestrained expansion of up to 4% is typical.

**Time for expansion** : 15 minutes - 2 hours.

Temperatures above 20°C may slightly reduce these times.

**Compatibility:**

**Hydratac 500** is compatible with all types of Portland cement. Hydratac 500 may be used in mixes containing certain other Cemkrete admixtures. Consult Cemkrete for further information.

## Instructions for use

### Mixing

For best results grout mixer must be used. For quantities up to 50 kg a slow speed drill fitted with a high shear paddle is suitable. Larger quantities will require a high shear vane mixer. It is essential that machine mixing capacity and labor availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity. The selected water content should be accurately measured into the mixer. Slowly add the cement (and sand if required) and Hydratac 500. Mix continuously for 5 minutes, making sure that a smooth even consistency is obtained.

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## Application

Areas to be grouted should be prepared to ensure substrates are clean, sound, and then pre-wetted. The unrestrained surface area of the grout must be kept to a minimum. Place the grout within 20 minutes of mixing to gain the full benefit of the expansion process. Adopt usual placing or pumping procedures ensuring a continuous operation.

## Curing

On completion of the grouting operation, any exposed areas which are not to be cut back should be thoroughly cured by means of water application, Cemkure S or Cemkure E curing membrane or wet Hessian.

## Cleaning

Grouts mixed with Hydratac 500 should be removed from tools and equipment with clean water immediately after use. Remove cured material mechanically or with acid etch.

## Limitations

Hydratac 500 is not compatible with High Alumina Cement.

## Estimating

## Supply

Hydratac 500 : 25 kg. bag & 250 g. bag

## Dosage

OPC	Concreting sand	Water	Cemkroust 250	Approx yield
50 kg	-	20-22 liters	250 g	36 liters
50 kg	50 kg	22-24 liters	250 g	57 liters

**Note:** For grout, mortar or concrete mixes with an aggregate/ cement ratio more than 1, use 4x250 g units or 1,000 g of Hydratac 500 per 100 kg of cement.

## Effects of overdosing

Overdosing of Hydratac 500 increases expansion and may cause frothing

## Storage

Hydratac 500 has a shelf life of 12 months if kept in a dry store in its original packaging. High temperature and humidity storage may reduce this period.

## Precautions

### Health and safety

Hydratac 500 is of low hazard. Contact with the skin and eyes, or inhalation of dust should be avoided. Wear suitable protective clothing, gloves, eye/face protection and dust mask. After contact with skin, wash off with clean water. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.

## Additional Information

Cemkcrete manufactures a wide range of those complementary products which include:

- Waterproofing membranes & waterstops
- Joint sealants & filler boards
- Cementitious & epoxy grouts
- Specialized flooring materials
- Fireproof coating and systems
- Concrete admixture
- Repairing material

For further information on any of the above, please consult your local Cemkcrete office - as below.

**Important Note:** Cemkcrete warrants its materials free of manufacturing defects and produced as per standard specifications and sold under the terms and conditions of usages, whilst Cemkcrete endeavors to ensure that any advice, recommendation, or information, given through its products literatures are reflects of the R&D in-house lab test and practical sites experience and knowledge based feed backs, however, the products are being used under various conditions and applied beyond its control where or how either directly or indirectly at various locations and places at a different stages that of an intended purposes and uses. Therefore, Cemkcrete cannot hold warranty or responsible for resultant consequences, such as damages to the property or assets but the product itself.