



ISO 9001:2000

# CICO GROUT V1

## Pre-mixed High Strength Non-shrink Cementitious Grout

**DESCRIPTION** : **CICO GROUT V1** is a chloride free cement based free flowing non metallic grout that develops very early high compressive strength **CICO GROUT V1** was developed in answer to the disadvantages of existing grout mixtures.

Its wide acceptance and extensive testing programs indicate that **CICO GROUT V1** is proven and established product of excellent quality.

Testing & Quality assurance of **CICO GROUT V1** has been an integral step in its development. The series of test include:

- (1) Compressive strength(testing upto 28 days).
- (2) Bending strength
- (3) Free expansion test
- (4) Duration of setting time
- (5) Adhesive strength(pull-out)
- (6) Compressive stress-strain curve. Young Modulus & Poissons ratio.
- (7) Compressive strength test subjected to vibratory and dynamic loads.
- (8) Density
- (9) Fluidity test

These tests illustrate versatility and many advantages of **CICO GROUT V1** and are available upon request.

**CICO GROUT V1** is used and specified by major utilities like steel projects, paper mills, highway departments and machinery and turbine manufacturers far and wide. **CICO GROUT V1** is a proven international non-metallic grout.

**TECHNICAL ADVANTAGES** : **CICO GROUT V1** develops extraordinary high compressive strength, typically  
250 kg/cm<sup>2</sup> in 24 hours  
350 kg/cm<sup>2</sup> in 3 days  
450 kg/cm<sup>2</sup> in 7 days  
615 kg/cm<sup>2</sup> in 28 days

**CICO GROUT V1** is chloride free and non-metallic, thereby overcoming the disadvantages of metallic grouts. Grouting mixtures containing metallic additives will oxidize and rust when exposed to moisture thus weakening the cohesive bond of the grout.

Has controlled expansion and is guaranteed not to shrink.

Limited expansion is necessary to ensure a rigid monolithic bond between machinery and foundation.

**CICO GROUT V1** has a measured, volumetric expansion, within 24 hours it is completely stable, neither shrinking nor expanding.

Is formulated on a straight cement base, but contains no alumina cement or aluminium oxide material.

Provides a full bonding strength and is resistant to high impact and vibration without shattering.

**CICO GROUT V1** is water and oil resistant and non-corrosive.

Has an extremely high adhesive and pull-out strength.

An anchor bolt(diameter 25mm) grouted 20cm deep, has a pull out resistance of 144 kg/cm<sup>2</sup>.

Withstands great fluctuations of moisture, dryness, heat and cold.

Reduces about 60-80% of bearing failures on machinery of rolling mills.

**INSTALLATION ADVANTAGES** : **CICO GROUT V1** is guaranteed a constant continually controlled mixture. Pre-mixing at the factory under strict quality control that requires no complicated job-site mixing or skill, other than the addition of water.

Facilitates easy handling and storage. **CICO GROUT V1** is protected in a vapour barrier bag that prevents exposure to the elements.

Eliminates shrinkage, has flowable consistency, good workability and excellent void filling action(self-leveling)

Is ready to use and allows ample time for finishing work  
Can be poured, poked, pumped, dry-packed and rammed. **CICO GROUT V1** is poured or vibrated into place there is no segregation.  
Is cement coloured and non straining.  
Gives increased yield. You need about 2200-2300 kg for 1m<sup>3</sup> of **CICO GROUT V1**  
Can be installed in all temperatures. At freezing temperatures, our Service Dept. should be consulted before grouting is carried out.  
Can be pumped through small nozzles over great distances.  
Contains no harmful chemicals.

**ECONOMIC ADVANTAGES**

: **CICO GROUT V1** is competitively priced with all existing pre-mixed grouts.  
No complex preparation for on-site mixing are required resulting in labour cost saving of upto 50%  
Reduces costly down-time due to:  
(1) Its quickly developing high compressive strength, eliminating long waiting periods until final loads can be applied.  
(2) Its wide temperature workability range, thus climatic factors become less important.  
**CICO GROUT V1** is available in vapour barrier bags of 50 kg ensuring easy handling and extended shelf life.  
With its technical advantages eliminates the need of purchase and stock of various special types of grouting materials.

**EXAMPLES OF APPLICATION**

: **CICO GROUT V1** has proven itself and found wide application in the following fields:

- \* Precision grouting of machinery requiring high strength and vibration dampening
- \* Grouting of anchor bolts, sole plates, bridge bearings.
- \* Grouting of turbines, generators, compressors, diesel engines and other equipment involving high vibratory conditions.
- \* Grouting of paper, rubber and chemical processing machinery.
- \* Grouting of structural steel columns, bridge beams and seats, crane way rails, posts, transmission towers, power stations and many others.

**PREPARTIONS**

: **CICO GROUT V1** is ready for use, requiring only the addition of water. Before placement the surface should be thoroughly cleaned and wet. Care must be taken to ensure that grease and oil are removed.

In order to reach the required consistency 5-8 liters of water to 1 bag/40 kg **CICO GROUT V1** are needed. First add 2/3 of the total needed water. Mix for a short time, then add the balance of water. Proceed to mix for about 4-6 minutes. In order to prevent voids apply grout from one side or corner only.

**GENERAL INFORMATION**

: **CICO GROUT V1** will reach a compressive strength of 250 kg/cm<sup>2</sup> within 24 hours and will increase to approximately 350 kg/cm<sup>2</sup> within 3 days.  
A medium temperature of 27°C is supposed . Higher temperatures accelerate the setting time whereas lower temperatures will retard the time of reaching its compressive strength.  
For example when having a temperature of +4°C there would be a delay of 24 hours before the initial compressive strengths are reached.  
Where grouting area and flow space are of sufficient depth upto 50% by weight of washed gravel ranging in size from 5-8mm must be added to the dry-pre-mixed grout.  
Even by adding 50% of such gravel the compressive strength is reduced only slightly.  
Open areas are to be protected against premature water evaporation.  
Retains its decisive advantage not to shrink and to have high adhesive bond even in such an extreme mixture.

**PACKING**

: Available in 40 Kg bag.

**IMPORTANT:** Though the product may change with some code as suffix or addendum to the principal or original name out of some minor adjustment and fine tuning in the formulation due to our continuous research and development but shall exhibit the stated properties with more improvement.

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