

# MARKFLOW GROUT 2

(ULTRA HIGH STRENGTH, FREE FLOW, NON SHRINK CEMENTITIOUS PRECISION GROUT )



## DESCRIPTION

MARKFLOW GROUT 2 is a specially formulated cementitious grout which has excellent shrinkage resistance and free flowing properties suitable for heavy machine foundations & other applications. The high strength properties of grout ensure a stable and permanent support to the equipment, machines which transfer both static and dynamic loads on to it. MARKFLOW GROUT 2 supplied as a ready to use dry powder requiring only addition of clean water as per guideline of water powder ratio

## FEATURES / ADVANTAGES

- It has good pour ability and flowability
- It is non-shrink and has got positive expansion
- Rapid development of very high initial and final strengths makes the right system to support equipment that transfer very high static and dynamic loads
- It is free from harmful chlorides and other aggressive chemicals which attack steel and hence ensure non-corrosive supporting system
- It is easy to mix and apply as only water of a definite quantity has to be added as site to the readymade grout
- It has special additives and graded aggregates which are compatible with concrete substrates
- Pre-packed grout overcomes potentials on site batch variations
- Promotes rapid installations & early operation of plant

## TYPICAL APPLICATIONS

- Heavy duty machine foundations
- Base plates and bolt-pockets of turbo generators
- Columns in precast contractions
- Diesel generator sets
- Cement, textile and paper mill machinery
- Steel rolling mill beds
- Crane and transporter rails
- Concrete anchors
- Cavities, gaps and recesses

## TYPICAL PROPERTIES

### Compressive Strength (BS 1881: PART 116, 1983)

Compressive strength (N/mm <sup>2</sup> )		
AGE IN DAYS	POURABLE W/P = 0.16	FLOWABLE W/P = 0.18
1	29	26
3	56	47
7	68	57
28	80	68

7.07 cm X 7.07 cm size restrained cubes were tested

### Flexural strength (BS4551, 1998)

AGE IN DAYS	Flexural strength (N/mm <sup>2</sup> ) W/P = 0.18
1	2.8
3	7.2
7	9.3
28	10.2

### Pullout bond strength (W/P - 0.18)

DAYS	Flexural strength (N/mm <sup>2</sup> ) W/P = 0.18
7	17 N/mm <sup>2</sup>
28	20 N/mm <sup>2</sup>

### Bonding strength (ASTM C-882 modified)

To Concrete	>2.3 N/mm <sup>2</sup>
To Steel	>2.3 N/mm <sup>2</sup>

**Tensile strength** : 3.6N/mm<sup>2</sup> @ 28days (W/P - 0.18)

**Fresh wet density** : Approximately 2220kg/m<sup>3</sup> depending on actual consistency used

# MARKFLOW GROUT 2

(ULTRA HIGH STRENGTH, FREE FLOW, NON SHRINK CEMENTITIOUS PRECISION GROUT )



<b>Unrestrained Expansion</b>	: 2% to 4%
<b>Flow</b>	: 18 to 24 cm on flow table. Flow Tested as per BS 4551 Part-12, 1980
<b>Pot Life</b>	: 45 minutes
<b>Young Modulus</b>	: 28 N/mm <sup>2</sup>

## DIRECTIONS FOR USE

**SURFACE PREPARATION:** Before grouting clean all surfaces coming in contact with **MARKFLOW GROUT 2**. All types of contaminations such as fat, oils, Dust and cement slurry must be removed. The concrete substrate should be thoroughly wetted and saturated with water. The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water jetting, breakers, blast cleaning, scrabbles, etc. The concrete substrates should be pre-soaked with clean water continuously for 2 - 6 hours to ensure a saturated surface dry condition throughout the operation.

Immediately before pouring remove all excess or standing water from within any formwork.

**MIXING:** The quantity of clean water required to be added to a 25kg bag to achieve the desired consistency is given below:

Pourable	:	4.125 litres
Flowable	:	4.500 litres

The selected water content should be accurately measured into the mixer. The total content should be slowly added and continuous mixing should take place for 5 minutes. This will ensure that the grout has a smooth even consistency.

Add enough water into a clean mixing bucket by using a proper water gauge. Add the powder into the bucket slowly and continuously. Mix the fresh mortar with a proper electrical mixer (300-600 rpm) for 4 minutes until having a homogenous consistency. Let the mortar have rest for 4 minutes and re-mix for 30 seconds

**Bolt Pockets:** Depending on the size of the bolt pockets, 50-100% clean 10mm sound aggregates by weight of grout consumption should be incorporated to economise on grout and also to keep the heat of hydration low. When the thickness exceeds 100mm-150mm our technical department may be contacted for advice. There must be at least 12 hours gap between bolt pocket and under base plate grouting sequence

**Under Base Plate:** Leak proof strong formwork must be provided to withstand operational stresses while grouting and all edges must be sealed with MARKFLOW GROUT 2 of trowelling consistency to arrest the grout from flowing out of formwork. The sealed edges must be strong enough to resist fluid grout (at-least 1-2 hours after sealing). Hydrostatic head 150-250mm must be provided to enable the free flowing of grout under base plate. Grouting must be continuous until the cavity is completely filled to the desired level. The exposed areas must be kept to a minimum of 100-150mm on the grouting side and 50mm on the opposite side. All exposed areas must be restricted by covering with wooden planks or polythene sheets with sand sprinkled on top of the sheet to avoid cracks on the grouted surface.

**CURING:** On completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the use of MARKCURE WB curing membrane, continuous application of water and/or wet hessian

## WORKING TEMPERATURE

For Low Temperature – When the air or contact surface temperature is 10°C or below warm water between (30°C – 40°C) is recommended to accelerate the strength. Normal precautions should be adopted with cementitious materials in winters. For temperature below 10°C the formwork should be kept in place for at-least 37 hours

For High Temperature – For temperature above 40°C, cool water below 15°C should be used for mixing the grout before placement

# MARKFLOW GROUT 2

(ULTRA HIGH STRENGTH, FREE FLOW, NON SHRINK CEMENTITIOUS PRECISION GROUT )



## YIELD (CONSUMPTION)

Allowance should be made for wastage when estimating quantities required. The approximate yield per 25 kg bag for different consistency is:

Consistency	Pourable	Flowable
Yield (litres)	12.6	13.4

Immediately before pouring remove all excess or standing water from within any formwork.

## PACKING

25 Kg Bag Packing

## STORAGE AND SHELF LIFE

It has a shelf life of 6 months. Bag should be kept in sealed condition to prevent any reduction in shelf life. Store the material below 35°C temperature. Freezing and exposure to heat & direct sunlight should be avoided.

## PRECAUTIONS

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

## DISCLAIMER

The above information and details herein are based on the tests conducted & experience on application and usage. The user is advised to carry out the test and take trials to satisfy on the suitability of the products and meeting his requirement considering the prevailing conditions prior to apply/ using it on larger area. As the conditions under which the products are used or transported are beyond our control. We would not hold ourselves responsible on its consequential nonperformance.



## MR MARK OVERSEAS

### REGISTERED OFFICE

VIJAY NAGAR, NEAR NAMASTAY CHOWK, GT ROAD  
KARNAL - 132001 (HARYANA) INDIA  
MOB : +91 8860760000, 9215703333  
WEBSITE : WWW.MARKCHEMCONSTRUCTION.COM  
EMAIL : INFO@MARKCHEMCONSTRUCTION.COM