Chem Coats (Pvt) Ltd.

ChemGrout

Non-Shrink Cementitious grout

DESCRIPTION

ChemGrout is a ready-for-use (merely add water) Portland cement-based grouting compound. It contains graded siliceous aggregate and chemical reagents which prevent shrinkage during curing.

USES

BEDDING: column base plates, machinery base plates, bearing plates, crane rails.
GROUTING: anchor bolts, cables, starter bars, top steel.
REPAIRING: cavities in concrete.
RAM GROUTING: cavities in confined spaces.

FEATURES & BENEFITS

- Quickly develops place able consistency.
- Remains cohesive and does not segregate.
- Does not shrink.

SURFACE PREPARATION

A minimum clearance of 50 mm is required between bed and base. For smaller areas where the flow will not be restricted, a limited minimum thickness of 25 mm is recommended. When grouting anchor bolts, three times the bolt diameter is necessary. Smaller clearances should be grouted with one of the **ChemDermix** range of epoxy compounds.
Provision for the escape of entrapped air must always be made. Contact surfaces must be clean, sound, free from dust and shutter release oils. Concrete surfaces must be thoroughly pre-wetted but excess surface water (free water) must be removed prior to placing the grout. Surface temperatures should not be less than 5° C. Always ensure that the shutters are watertight and sealed to prevent suction of water from the product.
Ensure that the grout delivery head is of adequate height in order to accommodate the distance the grout must flow. Always pour from one side thus ensuring that the grout fills the void without entrapping air.

PROPERTIES OF WET MATERIAL	
Bulk density	2 kg/liter
Color	Cementitious Grey
Volume of 1 kg fresh mortar	± 0.424 Liter
Workability time @ 25ºC	30 minutes
Physiological effect	As Cement

MIXING

All water contents apply to 25 kg packets of **ChemGrout**. Water quantities must be adjusted to match size of mix. Mixes must always use complete bag, but more than one packet may be used. Mixing of grout may be carried out in a pan mixer, drum mixer or by using a slow-speed electric drill fitted with a suitable paddle. Using the standard 25 kg packet of grout, add 3.5 liters of clean water to the mixing vessel. While stirring continuously, add the dry powder until the mixture is free from lumps. Then add further water (500 ml to 1 l), continue mixing until a smooth, creamy consistency is obtained. Total mixing time should be approximately three minutes.

COVERAGE

One bag of **ChemGrout** will yield ±12.5 l of mortar.

APPLICATION

Mixed grout should be poured into the cavity at one point only to avoid entrapping air. For best results, mixed grout should be poured within 10 minutes of mixing and definitely within 30 minutes.
If grout is not placed immediately after mixing, keep the material agitated. Grouting mixture more than 30 minutes old must be discarded. **ChemGrout** can be compacted by gentle rodding or punning. It may also be applied by means of standard low pressure grouting pumps**. Do not retemper the grout should the consistency drop due to time lapse.**

CLEANING

Tools, brushes and mixing equipment should be cleaned immediately after use and before material has set with **Chem Coats super brush cleaner** followed by washing with soap and water.

PROTECTION ON COMPLETION

Grout surfaces should be protected from wind or high temperature, which can cause rapid drying. Cover the surface with damp sacks. Do not allow the sacks to dry out; alternatively apply **ChemCure WBC** curing compound.

TEMPERATURE AND RELATIVE HUMIDITY

Do not apply if surface temperature is below 5° C.

MODEL SPECIFICATION

General-purpose, non-shrink cementitious grout for precision grouting.

The grout will be **ChemGrout**, a pre packed, one component, non-shrink, precision grout applied in accordance with the recommendations of **Chem Coats Construction Chemicals**, including curing with **ChemCure WBC**. The grout will have a minimum one-day compressive strength of 13 MPa.

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PACKAGING

ChemGrout is supplied in 25 kg polyethylene lined paper bags.

HANDLING AND STORAGE

The product has a shelf life of six months if kept in a dry cool place in the original packaging. In more extreme conditions this period might be shortened.

HEALTH & SAFETY

ChemGrout is alkaline and should not be allowed contact with skin and eyes. Avoid inhalation of dust during mixing by wearing dust masks. The use of gloves, eye protection and dust masks is advised. Splashes into eyes should be washed immediately with plenty of clean water and medical advice sought. Cured **ChemGrout** is inert and harmless.

IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **Chem Coats Construction Chemicals** endeavors to ensure that any advice, recommendation, specification or information is accurate and correct, the company cannot - because **Chem Coats** has no direct or continuous control over where and how **Chem Coats** products are applied - accept any liability either directly or indirectly arising from the use of **Chem Coats** products, whether or not in accordance with any advice, specification, recommendation, or information given by the company.

RANGE OF PRODUCTS

WATERPROOFING SYSTEMS INDUSTRIAL FLOOR SURFACES PROTECTIVE COATINGS	PREPACKED REPAIR MORTARS CEMENTITIOUS & EPOXY GROUTS CONCRETE ADMIXTURES	SEALANTS CRACK INJECTION CONCRETE ADHESIVE

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PHYSICAL PROPERTIES

SETTING TIME @ 20° C

WATER CONTENT	FLOW CONE	INITIAL SET	FINAL SET
4 l /25 kg	50 sec	1 hr 55 min	2 hr 55 min
4.5 l /25 kg	25 sec	2 hr 30 min	3 hr 55 min

COMPRESSIVE STRENGTH using 100 mm cubes – MPa

WATER CONTENT	1 day	3 days	7 days	28 days
4 l /25 kg	20	45	55	67
4.5 l /25 kg	13	35	45	60

TENSILE STRENGTH by splitting 70 mm diameter specimens – MPa

WATER CONTENT	7 days	28 days
4 l /25 kg	5.4	5.9
4.5 l /25 kg	4.5	5.2

FLEXURAL STRENGTH on specimens 100x100x500 mm – MPa

WATER CONTENT	7 days	28 days
4 l /25 kg	8.3	10.7
4.5 l/25 kg	6.7	8.4

ADHESIVE BOND STRENGTH on 12.5 mm diameter deformed bars grouted into 50 mm diameter steel pipes with 150 mm embedment

At seven days, bond strength between rod / grout / pipe exceeded the characteristic yield stress of the steel.

VOLUME CHANGE

Expansion of grout after
- 1 hour 0.05%
- 3 days 0.30%
- 7 days 0.40%
- There after constant

ABRASION RESISTANCE by Bohm test

Actual 1.15 mm wear
Permissible 3 mm wear

ChemGrout used as a ram consistency

Note : If the thickness of grout exceed from 50mm, then use 50% pan in 25 Kg ChemGrout bag.

Powder Mass - 25 kg
Water Demand - 3 litres
Wet density - 2.327 kg/litre
Yield - ± 12 litres

Typical Compressive Strengths

1 day - 44 MPa
3 days - 58 MPa
7 days - 62 MPa
28 days - > 70 MPa

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