

Dr. Grout 05

High Performance, Shrinkage-Compensated, High Flow Micro Concrete and Thick Section Grout

Description

Dr.Grout 05 is a high flow micro-concrete used for pile treatment, column jacketing, and concrete structural repair where high flow micro concrete needed for gaps up to 220 mm. It is a pre blended powder composed of cement, aggregates and special additives

Applications

- Structural reinstatement of new and old reinforced concrete elements such as beams and columns.
- Repair and re-profiling of piles
- Grouting of pre cast concrete elements
- Grouting of machine and turbine baseplates, bridge bearings and crane rails.
- Filling of rigid joints (e.g. between base and column, cracks in floors, joints between walls, etc.)
- Vertical and horizontal application
- Grouting tie-rod holes and core holes

Characteristics

- Easy to mix, apply and finish, reduce costs.
- High flow
- Designed to be shrinkage compensated
- High flexural and compressive strength
- Low water permeability
- High bond strength to old and new concrete

Application Procedure

Surface Preparation

- Remove deteriorated and loose concrete until the substrate solid
- Where necessary clean the concrete and reinforcing steel by sweep blasting or other approved mechanical methods, to until they are free of dirt, rust, cement laitance, grease, oil, varnish or old paint. Metal surfaces should be free from rust, oil and grease.
- Make sure that the form is watertight to prevent any loss of grout during placement.
- Pre-Soak the substrate with clean potable water by filling the formwork then drain the excessive water to provide saturated surface dry condition.

Preparation of the Mix

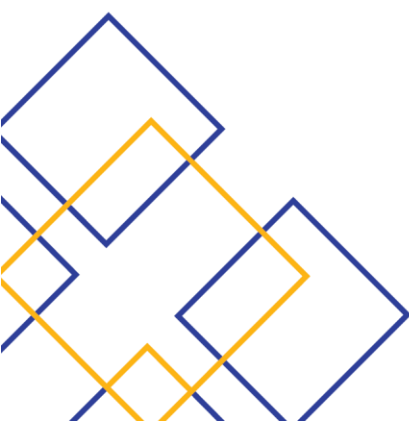
Pour 3.1-3.3 liters of clean potable water into a forced action concrete mixer then slowly add the grout powder while mixing, mix for 2 minutes then re-mix for further 1 minute until the mix is fluid and free from any lumps. Excessive mixing should be avoided as this can cause air entrapment.

Application

Pour or pump **Dr.Grout 05** into the prepared watertight shuttered area from one side only to the lowest part of the prepared formwork., ensuring adequate venting has been provided to prevent air entrapment. The formwork should be grout-tight. It does not need vibrating. However, it is recommended to use steel rode to or tap the formwork to ensure all areas of formwork have been filled.

Recommendations & Precautions

- Roughen the surface before the application of **Dr.Grout 05**
- Do not add water more than recommended
- Do not use **Dr.Grout 05** on vertical surface without formwork
- Use cool water for mixing
- Store material in shaded area
- Avoid application in high temperatures
- Cure with water or curing compound **Dr.Cure WB** after application



Cleaning

Clean tools and equipment immediately before hardening

Yield

12.7 liters/ 25 kg

Packaging

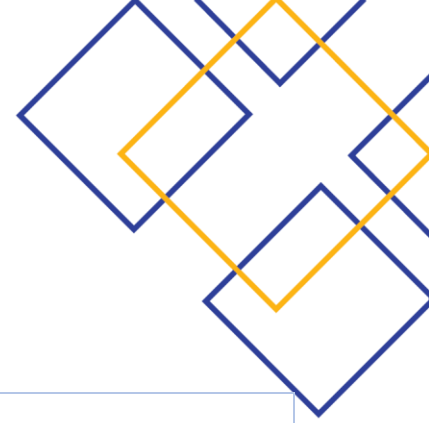
25 Kg Bag

Storage and Handling

When stored in dry conditions in the original unopened bags **Dr.GROUT 05** has a shelf life of 12 months. If stored at high temperature and or high humidity conditions, the shelf life may be reduced.

Health and Safety

Contains Portland Cement Cause skin irritation & serious eyes damage. May cause an allergic skin reaction. May cause reparatory irritation.



Technical Data

PRODUCT IDENTITY	
Class according to EN 1504-3:	R4
Type:	CC
Consistency:	Powder
Color:	Grey
Maximum size of aggregate (mm):	4
Density (kg/m³):	1650
Dry solids content (%):	100
APPLICATION DATA OF PRODUCT (at +20°C - 50% R.H.)	
Color of mix:	Grey
Mixing Ratio:	25 kg bag of Dr.GROUT 05 with 3.1-3.3 liters of water
Consistency of mix:	Fluid
Density of mix (kg/m³):	2200
pH of mix:	12.5
Application temperature range:	from +5°C to +35°C
Pot life of mix:	approximately 1 hour
Application Thickness (mm)	15 – 220
FINAL PERFORMANCE (at +20°C – mixing water at 13%)	
Mechanical Characteristics (According to EN- 196-1)	
Compressive Strength N/mm² :	
- 1 day	> 30
- 7 days	> 55
- 28 days	> 65 Minium
Flexural strength (According to EN-196) (N/mm²)	
- 1 day	> 6
- 7 days	> 9
- 28 days	> 10
Drying Shrinkage according to ASTM C157-93:	< 500 Microstrain

