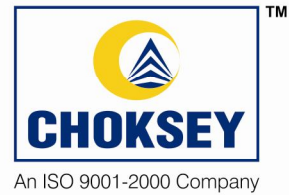


▣ MASTERGROUT CNS 250

General Purpose, cementitious micro concrete



DESCRIPTION

Mastergrout CNS 250 is a non-shrink cementitious micro concrete, supplied as a ready to use dry powder which requires only the addition of clean water to produce a free flowing non-shrink micro concrete. The material is based on Portland cements, graded aggregates, fillers and additives.

Mastergrout CNS-250 is a ready to use repair mortar. When mixed with water, it gives a non-segregating mortar with high strengths.

FEATURES/ADVANTAGES

- In built expansion system compensates for shrinkage and settlement in plastic state.
- It can be pumped or poured into restricted locations.
- Free flowing material hence no vibrations required while placing.
- High early and high ultimate strength.
- Contains no chlorides, hence no corrosion.
- It gives improved impermeability.
- It gives an economical and highly durable repair mortar.

TYPICAL APPLICATIONS

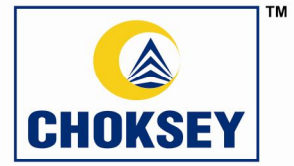
- Maintenance and repair works
- Repair of damaged structural concrete members, reinforced & pre-stressed beams etc.
- It is used to repair damaged concrete elements especially where access is restricted and where vibration of the placed material is difficult.
- It is suitable for encasement, build ups of structural elements.

TYPICAL CHARACTERISTICS

- | | | |
|-----------------------|---|-------------------------|
| • Nature | - | Single component powder |
| • Colour | - | Grey |
| • Storage temperature | - | Moderate |
| • Toxicity | - | non-toxic. |

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ENGINEERING DATA

The following results were obtained at a water : powder ratio of 0.16 @ 30°C.

Test	Typical result at 30°C
Compressive Strength (N/mm ²)	
1 Day	10
3 Days	30
7 Days	40
28 Days	55
Tensile strength at 28 days	2.1 N/mm ²
Flexural strength at 28 days	5.1N/mm ²
Young's Modulus	25.2 N/mm ²
Expansion characteristics	unrestrained expansion- 1 to 4% Pressure to restrain Plastic expansion Approx 0.004 N/mm ²
Coefficient of thermal expansion	10 to 12 x 10 ⁻⁶ per degree centigrade
Thermal Conductivity	1.50W/m°C
Fresh wet density	2100 to 2300 kg/m ³

DIRECTIONS FOR USE

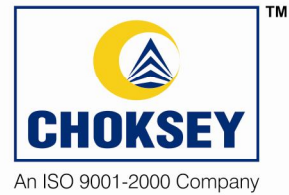
Mastergrout CNS 250 can be applied in sections upto 100 mm deep. If the sections exceed this thickness Mastergrout CNS 250 can be mixed with 5 to 12mm clear, graded saturated surface dry aggregates and applied.

SURFACE PREPARATION

Concrete surface to be repaired with Mastergrout CNS 250 has to be sound, clear and dry. It has to be free from cement Laitance, oil & grease etc. using mechanical methods like sand blasting or grit blasting to remove loose material. MASTERKLEAN range of cleaning agents may be applied to remove oil, grease etc.

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The formwork encasing the "area of repair" should be rigid and water tight to prevent loss of material. The formwork should include drainage outlets for soaking and if it is beneath a soffit there should be provided for air venting. Proper arrangement has to make to pump or pour the mixed Mastergrout CNS 250. After cleaning the reinforcement bars, have to be coated with Zinc rich epoxy primer. All prepared concrete substrate should be coated with Master Crete M-81 before applying Mastergrout CNS 250 or saturate the substrate several hours before the application of Mastergrout CNS 250.

MIXING

Water @ 0.16 w/p ratio has to be used i.e. about 4.8 liters per bag of 30 kg has to be mixed by a mechanical mixer with speed of 400-450 rpm for about 4 to 5 minutes. Until a consistent uniform mix is obtained. The water/powder ratio can be varied from 0.14 to 0.18 if required to suit to the placing conditions.

NOTE

For repair sections more than 100mm, the Mastergrout CNS 250 can be mixed with properly graded 5mm to 12mm slit free aggregate.

The quantity of aggregate may vary depending on the nature and configuration of repair location and application techniques.

Typical values :

For the mixture of Mastergrout CNS 250	-	1 part and
Graded 12mm down aggregate	-	0.60 parts
@ water/powder ratio	-	0.16

The compressive strength in N/mm ² are	1d – 16
	3d – 36
	7d – 46
	28d- 56

PLACING

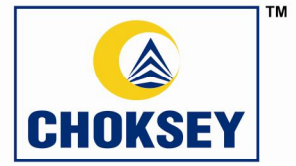
Mastergrout CNS 250 has to be poured continuously without vibration. It should be poured at a super fluid consistency only from one side to avoid air entrapment. When pumping it, standard concrete pumping practice has to be followed.

CURING

If the mortar has been poured into forms, the demoulding should be done at least after 24 hours after pouring operations is completed. In case of horizontal repair the formwork should not be disturbed for at least 2 days in hot weather conditions. Curing has to be done for about 7 days minimum

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PRECAUTIONS

Mastergrout CNS 250 has to be handled with gloves. When falls into eyes, it has to be washed with plenty of water.