



MICROCONE RGL 75

General purpose, non-shrink, cementitious micro-concrete

Description

MICROCONE RGL 75 is supplied as a ready to use blend of dry powders which requires only the site addition of clean water to produce a free-flowing non-shrink repair micro concrete. The material is based on Portland cements, graded aggregates and fillers, and additives which impart controlled expansion characteristics in the plastic state, while minimising water demand. The low water requirement ensures high early strength and long-term durability.

Advantages

- Gaseous expansion system compensates for shrinkage and settlement in the plastic state.
- Can be pumped or poured into restricted locations.
- Fluidity to allow for placement without vibration.
- Pre-bagged to overcome site-batched variations.
- Rapid strength gain to facilitate early reinstatement.
- High ultimate strengths and low permeability of cured repair.
- Contains no chloride admixture.
- Ensures piletop integrity as part of a waterproofing system

Uses

- For repairs to damaged reinforced concrete elements, particularly where access is restricted and where vibration of the placed material is difficult or impossible.
- It is suitable for various structural strengthening measures such as encasement build-ups, jacketing, piletop encapsulation resin system, etc
- Quay stealth and pillar, bridge column, concrete pillar, dams concrete repair
- Repair of RCC structure on the shore of a harbour or bank of a river, canal where ships may dock

Compliance standard:

- DIN 1048 part-5
- BS 6319 pt. 3
- BS 1881 pt.1161 & pt. 122

Technical Information

PROPERTIES	RESULTS
Appearance	Powder
Color	Grey
wet density	2300 - 2400 kg/m ³
Thermal conductivity	1.5 W/m ⁰ C
Coefficient of thermal expansion	10 - 12 x 10 ⁻⁶ / °C.
Expansion characteristics	Unrestrained expansion of 1 to 4%. Plastic expansion - Approx. 0.004N/mm ²
Young's Modulus	25 kN/mm ²
Flexural strength	8N/mm ² @ 28 days
Tensile Strength	2N/mm ² @ 28 days
Compressive strength (N/mm ²)	1 Day 30 7 Days 60 28 Days 75

Application Instruction

- Defective concrete surfaces must be cut back to a sound base than smooth surfaces should be mechanically roughened.
 - Corroded reinforcing steel should be exposed around its full circumference and cleaned to remove all loose scale and corrosion deposits. It is important to clean the steel to a bright condition. Grit-blasting is recommended.
 - Immediately prior to placing, any free water should be removed.
- Care should be taken to ensure that MICROCONE RGL 75 is thoroughly mixed in a forced-action mixer of adequate capacity. The quantity water required will generally be between 3.50 to 3.75 liters per 25 kg bag of MICROCONE RGL 75. With the mixer running, slowly empty MICROCONE RGL 75 bag into the mixer. Mix continuously for 5 minutes, ensuring a smooth even consistency of the mix. Where the addition of graded coarse aggregate has been specified it should be added after the water and MICROCONE RGL 75 are properly mixed. Mixing should then continue for a further 1 minute to

FORM WORK

- Slurry tight form work that will not deform or leak when subjected to hydraulic pressure imposed by the micro concrete will be fabricated and erected where the material is gravity fed, provision in the form work will be made for a suitable feed hopper at the highest point. Where necessary, provision will be made for air vents to prevent air entrapment. Form work will be coated with REMOL mould releasing agent prior to fixing.

Placing

- The mixed material should be placed immediately. If placed by pump, standard concrete pumping practice should be followed. The pump and pipeline must be primed with cement slurry. Pumping should be commenced immediately after priming. If poured in the form work, avoid air entrapment by pouring from one side only.

Low temperature working

- In cold conditions down to 15°C, the use of warm water (up to 30°C) is advisable to accelerate strength development. Normal precautions for working with cementitious materials in winter should be adopted.

High temperature working

- At ambient temperature above 35°C the material should be stored in the shade and cold water used for mixing.

Curing:

- As MICROCONE RGL 75 is a cement-based repair material, it must be cured immediately after stripping the formwork in accordance with good concrete practice.

Packaging:

- MICROCONE RGL 75 is supplied in 25 kg bags.

Shelf life:

- MICROCONE RGL 75 has a shelf life of 06 months if kept in a dry store in the original, unopened bags. If stored at high temperatures or high humidity conditions the shelf life may be reduced.

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