

Non-shrink fluid micro concrete

PRODUCT

webertec 311 MC is a ready-to-use micro concrete made of selected sand and aggregates, special cement and additives. It can be used where high compressive strength is required.

webertec 311 MC is specially formulated to produce a shrinkage compensating micro concrete with high performance.

webertec 311 MC can be applied in thicknesses ranging from 50 mm to 300 mm per layer although greater thickness up to 500 mm can be practiced depending on the design of the repair job and level of steel reinforcement.

SCOPE OF USE

- Assembly of pre-cast parts made of reinforced or pre-stressed concrete
- General void filling such as coring in concrete, jointing.
- Casting foundations for industrial equipment and heavy machinery
- Pile cap repair
- Concrete jacketing
- Deep repair of structural concrete elements such as slabs, beams, columns and footings

ADVANTAGES

- Non-shrinking
- High strength
- Easy to apply
- Resistant to sea water and sulfates (Sulfate resistant **webertec 311 MC** is available on request)
- Excellent resistant to vibration and shock loads

CHARACTERISTICS

Appearance	Grey powder + aggregates
Free from chlorides and metallic particles	
Grain size	up to 10 mm
Compressive strength at 22°C ± 1 (BS 1881-part 116)	>20 N/mm ² at 1 day 50 N/mm ² at 7 days 60 N/mm ² at 28 days
Flexural strength at 22°C ± 1 (BS 1881 P118)	3 N/mm ² at 1 day 4.5 N/mm ² at 7 days 5 N/mm ² at 28 days
Water absorption (BS 1881 P122)	Less than 2% at 32 days
Chloride permeability (ASTM C 1202-05)	Low
Fresh density ASTM C 185- 02 section 5.5	2.45 ± 0.05
VOC and formaldehyde content ISO/FDIS 11890-2/GC-MS	None (<10µg/l)



PACKAGING

Leb	Syria	Jordan	UAE	Qatar	Kuwait	KSA	Oman
39 kg	39 kg	39 kg	78 kg	39 kg	38 kg	39 kg	39 kg

* 78 kg kit: 50 kg powder + 28 kg aggregates.
39 kg kit: 25 kg powder + 14 kg aggregates.
38 kg kit: 25 kg powder + 13 kg aggregates.

Results obtained at 22°C by mixing one kit of 78 Kg with 5.7 liters of clean water.

*Properties listed above are only based on controlled laboratory samples and tests: Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

APPLICABLE STANDARDS

BS 6920: Part 1:2001
BS 1881: Part 116:1983
BS 1881: Part 118
BS 1881: Part 122:1983
ASTM C 403/403 M-05
ASTM C 1202-05
ASTM C 185-02 section 5.2

INSTRUCTIONS FOR USE

SUBSTRATE PREPARATION

webertec 311 MC may be applied on sound concrete, masonry, rock or similar materials.

Remove damaged concrete and laitance by chipping with a pick or cold-chiselling to get a rough surface.

The surface must also be free from any trace of grease or oil.

Saturate the surface with water by copiously spraying just

before application, and if possible, 6 hours before application as well.

PRODUCT PREPARATION

The micro concrete is obtained by mixing **webertec 311 MC** with clean water at the following dosage:

- 78 kg kit with 5.5 to 6.5 liters of clean water.
- 39 kg kit with 2.85 to 3.25 liters of clean water.
- 38 kg kit with 2.9 to 3.4 liters of clean water.

The amount of water used depending on the workability required. Add the powder or/and aggregates to the required amount of water and mix for 3 minutes. Mixing should be carried out in a suitably sized mixing vessel, using a slow speed, heavy duty drill, and applied promptly after. Do not mix with other hydraulic binders. The use of additives is prohibited.

STRUCTURAL STRENGTHENING

webertec 311 MC can be used when additional "bonded" reinforced or non-reinforced micro-concrete to an existing structural member in the form of an overlay or a jacket is required. In structural strengthening of columns, beams, slabs and walls, their respective sections can be enlarged to increase its load bearing capacity and stiffness. A typical enlargement is approximately 5 to 7.5 cm for slabs and 7.5 to 13 cm for beams and columns.

Existent surface needs to be roughened and cleaned.

Ensure dampening the surface with water before the application. Higher thicknesses could be achieved provided the existing structure to be strengthened is reinforced with anchoring dowels using pure epoxy anchoring resin "**weberanc 405 BFX**". In such case, top steel reinforcement is then recommended as per the appropriate structural design.

After application, as soon as surface water disappears, cure the exposed surface by spraying cool water for 3 days, by using a curing compound like **weberad cure WH** or **weberad cure Y 40** or by covering with properly secured plastic Sheeting.

Ideal application temperature is between + 5°C and + 35°C. If the application temperature is higher than 35°C, make sure to use cold water to keep the temperature of the freshly mixed micro concrete below 30°C.

CONSUMPTION

78 kg kit + 6 liters of water give a volume of around 34.5 liters.

STORAGE

12 months after manufacturing date in original and non-open packaging, under cover, in dry condition, away from humidity, protected from extreme temperatures and direct sunlight.

SAFETY PRECAUTIONS

The product contains cement powders which, when mixed with water, release alkalis that could be harmful to the skin. It is preferable that the application be done in a ventilated area, and to wear protective gear for hands, eyes and respiratory system and to avoid breathing of the dust. Splashes on the skin should be washed away by cleaning with soap and water. In case of contact with eyes, wash thoroughly with clean water. If swallowed, do not induce vomiting, in both cases seek medical attention. The product is non-flammable.

DISCLAIMER

While the company guarantees its products against defective materials, the use and application of these products are made without guarantee since the conditions of their application are beyond its control. It is recommended to verify with the company that the product is suitable for the intended use, and that this Data Sheet version is the latest one. The company may modify it without prior notice. Technical characteristics are listed for guidance only. For more information, please contact the company's office in your location.

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