MYMIX Building Materials

TECHNICAL DATA SHEET

MCR

Microconcrete

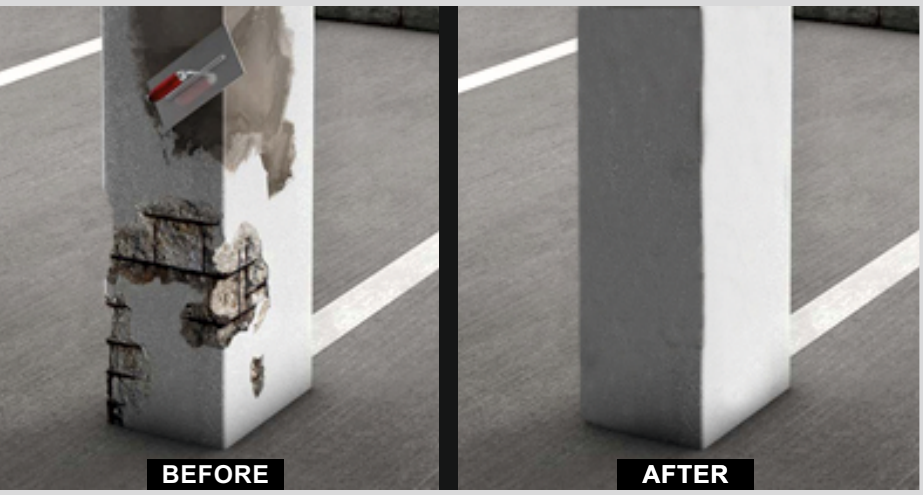
(Ref. MBPL / TDS / MCR / 0524)

Product Description

MCR (Microconcrete) is cementitious, non-shrink, pourable, high strength for structure repair with high precision concrete. It is specially designed for restoring horizontal concrete surfaces damaged through concrete spalling and mechanical causes. It is recommended for thickness from 20 to 100 mm. It is suitable for various structural strengthening measures such as encasement build-ups, jacketing etc.

Special Features

- Cementitious, non-shrink, flowable, high strength micro concrete
- **ASTM C 109** and **ASTM C 230**
- Suitable for structural repair with high precision concrete
- Flowable mortar eliminates Honeycombing
- Develops high initial and final strength
- No compaction required



MYMIX BUILDPRO PRIVATE LIMITED
(ISO 9001:2015 CERTIFIED COMPANY)

B-102, Safal Solitaire, Next Divya Bhaskar, S. G. Highway,
Makarba, Ahmedabad, Gujarat - 380 051 India

MEMBER

www.mymixgroup.com helpdesk@mymixgroup.com (079) - 4009 2030 +91 75748 40651

Applications

- Suitable for repairing of damaged reinforced concrete elements like slabs, beams & columns
- Suitable for repairs of concrete wall
- Can be repaired such concrete elements where access is restricted and compaction not possible
- Can be used for jacketing of RCC columns to increase load bearing capacity
- Suitable for pumping & pouring at restricted areas also

Advantages

- Develop high early strength and final strength
- Gaseous expansion system compensates for shrinkage & settlement in the plastic state
- Pourable mortar eliminates Honeycombing
- Excellent resistance to moisture ingress
- Easy to clean and can be pumped in restricted areas
- Flowable, no compaction required
- Contain no chloride

Suitable Substrates

- Any kind of internal and external concrete repairs
- Concrete structures like columns, beams, floors, walls and other repairs

Coverage

- Approx. 5.0 - 5.5 sq. ft. / 25 kg bag mix at 20 mm bed thickness
- Coverage results are as per standard laboratory conditions
- Coverage may vary depending upon the site condition and substrate absorption

Packing

- Available in **25 kg.**

Shelf Life

- Factory sealed packs are best before 12 months from the date of manufacturing in unopened condition and stored in cool & dry area

How to Apply

Surface Preparation

- Remove oil and grease from application surfaces and clean entire area with oil free compressed air.
- All the damaged concrete fragments or other contaminants and loose bound particles should be properly removed by mechanical preparation.
- Exposed reinforcing steel should be cleaned to remove all residual rust and corrosion deposits etc. by shot blasting method.
- Use Zinc-rich Primer as primer for steel reinforcement in concrete.
- The prepared substrate should be pre soaked with water for at least 2-3 hours before application of MCR
- Remove excess free-standing water from the surface.
- Ensure the surface should be damp but without standing water prior to application of MCR
- Foam Work : Ensure leak proof shuttering placed before starting work.
- Ensure no gaps or holes around the shuttering or form work.

Mixing

- Add **3.5 to 4.0 litre** of water for 25kg of MCR. The approx. ratio of 14 to 16 % by weight
- If concrete thickness more than 100 mm, mix 5 to 10 mm pre-washed coarse aggregates
- For larger repairs surface aggregates can be added to MCR. Addition of 6 to 10 mm clean, graded aggregates may be used to modify MCR at site to the extent of 30% (maximum limit)
- Add required water in a clean bowl or container, slowly add powder in to pre measured amount of water under constant mixing with a heavy duty electric drill / paddle (approx. 500 rpm) for 5 minutes
- Ensure smooth consistency of mix is obtained
- If coarser graded aggregates to be added based on application requirement, add only after the water and MCR is properly mixed together. Mix should be continued for another 2 minutes for proper dispersion in the mix

Application

- Pour or pump MCR in to watertight shuttering in the repaired area
- The mixed material should be poured immediately for better results. Do not allow the mixed material to strand for more than 10 minutes
- Ensure that constant pour is achieved without time gaps
- Frequently mix the material with hand trowel while pouring
- Do not use vibrators for compaction of the materials when the material is wet or plastic state.
- Cure the surface for at least a week period (7 days)
- If required, any approved curing compound can be applied after final set on all exposed areas

Notes on Application / Limitations

- Always add powder into water and never add water into powder
- Do not add excess water that recommended

Technical Data

Application Properties

(Temperature : 23-27 °C & Relative Humidity : 55%)

Testing Parameters	Result
Mixing Ratio (25 kg bag)	3.5 - 4.0 ltr. of water (14-16%)
Colour	GREY (Powder)
Pot Life	15 to 20 minutes

Testing Parameters	Result
Density of Mixture	2.4 gm/cc
Recommended Thickness	20 - 100 mm
Final Setting Time	6 to 8 hours

Physical Properties

Testing Parameters	Test Method	Typical Results
Compressive Strength		
After 1 day	ASTM C 109	> 20 Mpa
After 3 days		> 30 Mpa
After 7 days		> 45 Mpa
After 28 days		> 55 Mpa
Flexural Strength (28 days)	EN 196 -1	≥ 7 Mpa
Tensile Strength (28 days)	ASTM 307	≥ 2 Mpa
Adhesion (Bond) Strength (28 days)	EN 1542	≥ 2 Mpa
Expansion (%)	ASTM 1107 / 1090	< 4%
Flow distance in mm	ASTM C 230	> 200 mm
Chloride Content	In-house Test	NIL

Standards Followed

- **ASTM C 109**
- **ASTM C 230**

Precautions

- Keep out of reach of children
- Wear suitable protective cloths, respirator and gloves
- In case of contact with skin / eyes, wash immediately with plenty of water & seek medical help

Follow us on:

Disclaimer