

Kem Microconcrete N

High Strength Microconcrete

Description

Kem Microconcrete N is a general purpose non-shrink, cementitious, flowable, high strength mortar for repairs with high strength precision concrete. It is free flowing and suited for thickness up to 40 mm to 100 mm. It is apt for various structural strengthening measures such as encasement build-ups, jacketing, etc.

Uses

- General repair and renovation of decayed, defective or damaged concrete structures like beams, columns, walls, and honey combed concrete where access is required and compaction is not available.
- Jacketing of RCC columns, strengthening of vertical members.

Advantages

- Can be pumped or poured into restricted locations.
- Flowable mortar eliminates honey Combination.
- Develops high initial and ultimate final strength.
- Gaseous expansion system compensates for shrinking and settles in the plastic state.
- Excellent resistance to moisture Ingress.
- Can be applied at 100mm thick at one stroke.
- Self compacting with guaranteed Performance.
- Easy to use by adding water on site.
- Contains no chloride hence there is no reinforcement corrosion.

Standards

Kem Microconcrete N is tested using the relevant sections of:
 ASTM C -1107 Grade C ;BS – 1881;BS – 4550;CRDC - 821 - 82 A;BS – 6319
 EN1504-3 - Class R4, type CC , ASTM C 387:77A
 Din1048 & DIN 1045 Class B

Typical Properties

Nature : Cementitious grey powder

Chloride Content : Nil

Depth of Carbonation: Nil

Compressive strength: ASTM C-109 cubes casted under restraint in N/mm² at 25°C and water powder ratio 0.130 for flowable consistency and 0.10 for mortar consistency.

Age (Days)	Mortar Consistency	Flowable Consistency
1	30	18
7	58	46
28	80	60

Wet Density : BS 1881 – 2250 kg/m³ giving a yield of 13- 15l/30 kgs bag at flowable consistency

Consistency : Fluid

Density - > 1.7 Kg/M³

Flexural Strength : @28 days 25°C 10 N/mm²

Application Temp : 5 to 35 °C

Compressive modulus to elasticity: 28Gpa @ 28days.

Setting Time : BS 4550 at 20°C and 0.130 water to powder ratio (flowable consistency).

Initial set : 6 hours 00 minutes

Final set : 8 hours 15 minutes

Pot life of mix: 45 min to 1 Hrs. Approx.

Crack resistance (O ring test): No

Alkali content : The presence of non-alkali reactive aggregates ensures its resistance to future expansive reactions and deterioration.

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Bond Strength : The typical shear bond strength when tested as per BS-6319 at water powder ratio of 0.130 at 20°C without any bonding agent is 60N/mm² at 28 days.

Expansion characteristics: An initial expansion of about 1 % when measured according to ASTM C 827 overcomes plastic settlement in the unset material. Expansion in the hardened state when measured according to ASTM C 1090-88 compensates for drying shrinkage. Pressure to restrain plastic

Expansion : Approximately 0.004 N/mm².

Direction for use

Expose the sound base of defective concrete surfaces. For better adhesion, roughen the prepared surface.

Several hours in advance, water the surface well. Excess water should be removed before application of fresh concrete. The formwork should include drainage outlets for pre-soaking and allow for air venting.

There should be access points to pour or pump in Kem Microconcrete N.

Mix Kem Microconcrete N in a concrete mixer to get a homogeneous mix and pour into the form work. Allow it to cure for 24 hours.

Yield: Approx. 13-15 Lit./25 kg bag. Actual yield depends on the consistency required .

Pack Size

25 kg in moisture-resistant bags.

Storage and Shelf life

6 months from manufacture in original unopened bags if stored in dry conditions.

Technical Service

Chembond has established itself in various fields on the basis of its dependable technical service. For this purpose, we maintain a well equipped laboratory for research & quality assurance of all products. Our experienced personnel are always on call and would always be available for product demonstrations and product performance monitoring.

Safety precautions

Kem Microconcrete N is a cementitious alkaline product. Care should be taken to avoid contact with eyes, skin, mouth and food stuff. Any splashes on the human body must be washed with plenty of water.

Limitation of Liability:

This information is based on our current level of knowledge. It is given in a good faith but it is not intended to guarantee any particular properties. The users must satisfy themselves that there are no circumstances requiring additional information or precautions or the verification of details given herein.

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