

YASH MICRO CONCRETE



Yash Micro Concrete

Non-shrink general purpose high strength repair mortar

Description

Yash Micro Concrete is a single component repair mortar. Yash Micro Concrete is composed of a blend of dry powders, and selected aggregates which when mixed with water produce a shrinkage compensated, self compacting and free flowing micro-concrete suitable for small volume concrete repairs.

Applications

Repair of all types of structural concrete elements such as walls, columns, beams and floors.

Advantages

- + High initial and ultimate strength development.
- + Very high flow, suitable for repair of steel congested areas.
- + Shrinkage controlled cementations repair mortar eliminates cracking.
- + Easy to apply, single component, requires only addition of water.
- + Extremely low permeability to water, providing excellent protection to steel reinforcements and host concrete.
- + Can be used in mortar consistency for small repairs.
- + Suitable for internal and external applications.
- + Water vapour permeable.
- + Does not contain corrosive substrates.

Method of Use

Substrate Preparation

All damaged and weak concrete should be cut back to reach sound concrete or to a minimum depth of application.

Corroded steel reinforcement should be grit blasted to remove all rust traces. In case of significant loss in the steel reinforcement cross section, the steel should be replaced. Remove all concrete form around exposed steel reinforcements by 20 mm thickness.

The perimeters of the repair area should be saw cut to a minimum depth of 10 mm. The prepared area should be cleaned thoroughly by brush and/or compressed air. A water tight form work should be used to avoid any grout loss.

Technical Properties:

	w/p: 0.15 Mortar consistency	w/p: 0.17 Fluid Consistency
Compressive strength: ASTM C109/109M-11 @ 1 day @ 3 days @ 7 days @ 28 days	≥ 25 MPa ≥ 40 MPa ≥ 50 MPa ≥ 65 MPa	≥ 23 MPa ≥ 37 MPa ≥ 47 MPa ≥ 58 MPa
Working Time	20 – 25 min @ 20°C 10 – 15 min @ 40°C	
Expansion characteristics: ASTM C827/C827M-10	0.5 - 1%	
Flexural strength: BS6319, Part 3:1990	≥ 2 MPa @ 1 day ≥ 6 MPa @ 7 days ≥ 8 MPa @ 28 days	
Colour	Grey	
Setting Time: BS4550 Initial Final	6 – 7 hr @ 25°C 9 – 10 hr @ 25°C	
Water penetration: DIN1048	≤ 10 mm	
Fresh wet density:	Mortar consistency 2.3 g/cm ³	Fluid consistency 1.9 g/cm ³
Minimum application Temperature:	5°C	
<i>Compressive strength and flexural strength @ 1 day are under restraint. after that under wet cure.</i>		

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Priming

All grit blasted steel reinforcements should be primed within 2 to 4 hours with one or two coats of zinc rich epoxy coating Yash Epo Coat 174 or one coat of reinforced protective coating (Yash Poly Coat AC).

Areas to be repaired with Yash Micro Concrete should be soaked with clean water for several hours before applying the repair mortar.

All excess water should be removed. Provided that the substrate has been thoroughly soaked with clean water, and is damp on application of product a primer is not normally required.

For concrete highly contaminated with soluble salts, it is recommended to use Yash Epoxy Bond 801, an epoxy bonding agent, which prevents migration of salts such as chloride ions and sulphates to the repair patch, as well as providing bond for Yash Micro Concrete to host concrete.

Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.

Clean water should be added to clean container as follows:

- + Trowellable consistency: 3.75 litre/bag.
- + Fluid consistency: 4.25 litre/bag.

The powder is then added slowly to the water while mixing continuously with low speed mixer/drill (400 600 rpm). Mixing should be continued for 3 minutes until a uniform consistency is obtained.

Placing and Finishing

Yash Micro Concrete should be applied in a single continuous operation, within 20 minutes of mixing. The mixed materials should be poured slowly to prevent air entrapment.

Curing

As Yash Micro Concrete is a cementitious based material, it should be cured in a similar method to concrete. Curing can be conducted by using a good concrete curing compound such as YASH BOND SB , Yash Cure-8, by curing wet hessian sheets covered with polyethylene sheets.

Cleaning

All tools should be cleaned immediately after application using fresh water. Hardened materials must be cleaned mechanically.

Packaging

Yash Micro Concrete is available in 25 kg bags.

Thicknesses and Size Limitations

Yash Micro Concrete can be applied in a single application for large repair voids at thicknesses between 10 mm and 100 mm. For greater thicknesses, 5 mm - 12 mm washed aggregate should be added at a percentage up to 60% from weight of Yash Micro Concrete. YASH Technical Office should be consulted.

Yield

Approximately 15.4 litre/25 kg bag (65 bags/m³) for fluid consistency and 12.5/25 kg bag (80 bags/m³) for mortar consistency.

Storage

Yash Micro Concrete has a shelf life of 12 months from date of manufacture if stored at temperatures between 5 °C and 45 °C in original unopened bags.

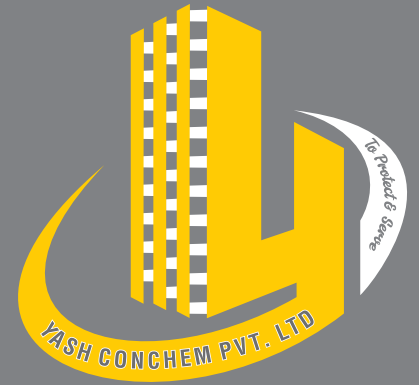
If these conditions are exceeded, YASH Technical Department should be contacted for advise.

Cautions

Health and Safety

Yash Micro Concrete may cause irritation to skin or eyes. In case of accidental contact with eyes, immediately flush with plenty of water and seek medical advice is necessary.

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Fire

Yash Micro Concrete is non flammable.

More from YASH COCNHEM Products

A wide range of construction chemical products are manufactured by YASH which include:

- Concrete admixtures.
- Surface treatments
- Grouts and anchors.
- Concrete repair.
- Flooring systems.
- Protective coatings.
- Sealants.
- Waterproofing.
- Adhesives.
- Tile adhesives and grouts.
- Building products.
- Structural strengthening.

Note : We endeavor to ensure that any advice, recommendation or information we may give in product literature is accurate and correct. However, due to the fact that we have no direct or continuous control over where or how the products are applied, Yash cannot accept any liability either directly or indirectly arising from the use of Yash products, whether or not in accordance with any advice, specification, recommendation or information given by us.