

SmartCare Microconcrete HS



PRODUCT DESCRIPTION

Asian Paints SmartCare Microconcrete HS is a high strength dual shrinkage compensated, flowable micro-concrete. It is used for the repair and restoration of damaged RCC structures like beams, columns, slabs etc.

PRODUCT FEATURES

Shrinkage compensation: Dual shrinkage compensated and hence crack resistant

Flow: Self compacting flowable concrete which can be poured/pumped

Strength: Develops high initial and ultimate compressive strength

Moisture resistant: Resistant to moisture ingress

Durable: Provides a durable and strong structural repair

Easy to use: Single component ready to use powder which only requires addition of water

RECOMMENDED USAGE

SmartCare Microconcrete can applied in section up to 100 mm depth. For 100 mm - 200 mm thickness, add 25% of 5 - 10 mm aggregates

The product can be used for:

- Repair of damaged beams, columns and other structural elements
- Jacketing of RCC columns, beams and other structural elements for strengthening

PRODUCT INFORMATION

APPEARANCE

Free flowing grainy grey powder

PACK SIZE

25 kg

STORAGE CONDITIONS/ SHELF-LIFE

Shelf life is 6 months from the date of manufacturing. Store at cool and dry place in unopened condition

YIELD

12.9 litres at w/p ratio of 0.17 for 25 kg bag

TECHNICAL DETAILS

Properties	Specification	Results
Water to Powder Ratio	-	0.17+/-0.01
Workability Time @30°C	ASTM C 1437	180 mm, after 20 minutes 30 MPa at 1 day
Compressive Strength @ 30°C	ASTM C 109 : 99	50 MPa at 7 days 70 MPa at 28 days
Flexural Strength @ 30°C	ASTM C 580	12 MPa at 28 days
Tensile Strength @ 30°C	ASTM C 307	3.9 MPa at 28 days
Fresh Wet Density	ASTM C 138	2255 kg/m ³
Application Temperature	-	+5°C to + 40°C
Bleeding, %	ASTM C 940	0.0

Repair Range



APPLICATION PROCESS

SURFACE PREPARATION

- › Clean the substrate surface and remove loose concrete, dust, oil, paint, grease, waterproof coating etc.
- › If the concrete surface is defective or has laitance, it must be cut back to a sound base.
- › The old concrete substrate should be saturated with clean potable water for several hours.
- › Make sure before SmartCare Microconcrete HS is poured, free water from the surface and the formwork must be removed.
- › Apply bonding agent if required.

MIXING

- › A pan mixer should be used so that a homogeneous concrete mix is obtained.
- › Charge approx. 80% of the total required water i.e. 3.2 - 3.6 litres to pan mixer, start addition of powder slowly under continuous mixing.
- › After complete addition of powder, check the flow and add remaining 20% water i.e. 0.8-0.9 litres (Note – Check for bleeding, if bleeding occurs over all water content has to be reduced) and mix for 2-3 minutes to get a homogeneous free flowing, uniform & lump free mix.
- › Total water required: 4 to 4.5 litres per 25 kg bag i.e., 17+/-1% of the weight of powder.
- › Make sure that for a 25 Kg bag volume of water should not exceed 4.5 Litres.
- › Water that is added should be clean and potable.

PLACING

- › Pour the homogeneous mixture of SmartCare Microconcrete HS into a watertight shuttering.
- › Post removal of the formwork, cure the repaired concrete for minimum 7 days by sprinkling water regularly.

PRECAUTIONS & LIMITATIONS

- › For a 25 kg bag volume of water should not exceed 4.5 litres.
- › Shuttering must be fully watertight.
- › For thickness more than 100 mm, add 25% of 5 - 10 mm aggregates. Consult technical team for more details.
- › Corroded reinforcing steel should be exposed around its full circumference. In case the diameter has reduced by more than 20% due to corrosion consult structural engineer.