

## SmartCare Microconcrete



### PRODUCT DESCRIPTION

Asian Paints SmartCare Microconcrete is a 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 & 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** 12.2 litres at w/p ratio of 0.14 for 25 kg bag

### TECHNICAL DETAILS

Properties	Specification	Results
Water to Powder Ratio	-	0.14+/-0.01
Workability Time @30°C	ASTM C 1437	180mm, after 20 minutes
Compressive Strength @ 30°C	ASTM C 109 : 99	20 MPa at 1 day
		40 MPa at 7 days 50 MPa at 28 days
Flexural Strength @ 30°C	ASTM C 580	9.5 MPa at 28 days
Tensile Strength @ 30°C	ASTM C 307	3.1 MPa at 28 days
Fresh Wet Density	ASTM C 138	2297 kg/m <sup>3</sup>
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 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. 2.6 - 3 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. 0.65-0.75 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: 3.25 to 3.75 litres per 25 kg bag i.e., 14+/-1% of the weight of powder.
- › Make sure that for a 25 kg bag volume of water should not exceed 3.75 litres.
- › Water that is added should be clean and potable.

### PLACING

- › Pour the homogeneous mixture of SmartCare Microconcrete 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 3.75 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.