

UltraTech
MICROKRETE

Engineered Micro Concrete

HS2



Series: MKHS20012
Month: September 2019
Supersedes all earlier TDS

MICROKRETE HS2

ULTRATECH

Description

UltraTech **MICROKRETE HS2** is a polymer enriched, cement based, high performance, high strength, non-shrink high quality micro concrete for micro concreting and jacketing applications. Ideal for fast and durable repairs. UltraTech **MICROKRETE HS2** is developed by using special polymers, additives and selected fillers. Addition of coarse aggregates of up to 8 mm size is possible for higher volume applications.

Variants

Microcrete HS1 (For designed strength upto 80 MPa)

Microcrete HS2 (For designed strength upto 60 MPa)

Microcrete HS3 (For designed strength upto 40 MPa)

Specification

Technical Parameters complies with **ASTM D109, C580, IS 5816 - 1999, IS1237 - 2012.**

Features & Benefits

- Single component, no hassles of mixing the ingredients
- Consistent in quality
- No curing required
- Excellent bond strength
- Non shrink
- Economical
- Nil wastages
- High compressive strength

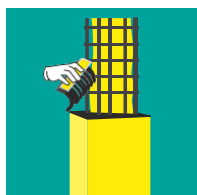
Areas of Application

UltraTech **MICROKRETE HS2** is recommended for repairs of concrete areas as micro concrete. Jacketing works of columns, beams, and concrete slab repairs.

Highly recommended for strengthening of columns and beams as per the structural repair specifications of bridges, dams, port areas, etc.

METHOD OF APPLICATION

Surface Preparation



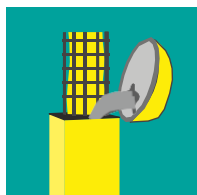
- Prepare the surfaces before the application of UltraTech **MICROKRETE HS2** by removing oil, bond inhibiting agents, dirt, dust and laitance. The cleaning can be carried out with suitable methods like by using wire brush, water jetting, mopping, etc.
- Proper reinforcement repairs and additions need to be carried out as per the structural requirements before placing UltraTech **MICROKRETE HS2**. The shuttering has to be proper without any gaps or loose materials to ensure nil leakages during the UltraTech **MICROKRETE HS2** usages
- Appropriate anti corrosion agents to be applied over the old and renewed reinforcement bars before micro concreting

Mixing



- UltraTech **MICROKRETE HS2** requires 15 % of water by weight of material
- Add UltraTech **MICROKRETE HS2** to the measured quantity of water with constant stirring using a mechanical mixing device
- Mix to a thick lump free consistency. Allow to stand for 2 minutes for the mix to mature and then remix to use
- Do not add any extra water to alter the mix consistency or to extend the pot life
- Further water additions will hamper the strength and adhesion properties of UltraTech **MICROKRETE HS2** to old surfaces

Application



- Use the mixed UltraTech **MICROKRETE HS2** to the prepared substrate using the appropriate pouring funnels and chutes
- UltraTech **MICROKRETE HS2** should not be vibrated with any mechanical vibrator as it is self-compacting by itself and any external vibrations will segregate the mix and there are chances of changes in the product performance from the designed properties
- Addition of coarse aggregates upto 8 mm sizes is recommended upto 1:0.5 (1 part of UltraTech **MICROKRETE HS2** and ½ part of coarse aggregates)

TECHNICAL DATA AS PER RELEVANT IS AND ASTM STANDARDS

Bulk density	1500-1650 Kg/m ³
Wet density	2250-2350 Kg/m ³
Max size of aggregates suggested along with UltraTech MICROKRETE HS2	Well graded fine or coarse aggregates up to 8 mm
Flowable consistency water ratio	15 % by weight of MICROKRETE HS2 without coarse aggregates 6-8 % combined weight MICROKRETE HS2 & coarse aggregates
Size of the cubes to test UltraTech MICROKRETE HS2	70.6 mm
Size of the cubes to test UltraTech MICROKRETE HS2 with aggregates	150 mm
Percentage of coarse aggregates which can be blended	1 part of UltraTech MICROKRETE HS2 and 1/2 part of 8mm well graded aggregate
Type of mixing	Mechanical mixer
Restrained expansion	Nil
Abrasion resistance mm (IS 1237)	0.35
Rapid chloride penetration value (ASTM 1202-03)	Moderate
Bleeding % (ASTM C 940)	Nil
Chloride content	Nil
Pot life	60 minutes
Usage time post application	24 hours
Compressive strength 28 days @ 11% w/p ratio	Up to 60 N/sq. mm
Yield per 40 Kg bag	22-23 litres @ 15% water powder ratio
Flexural strength (28 days)	10 N/sq. mm
Tensile strength (28 days)	5 N/sq. mm
Split tensile strength (28 days)	3 N/sq. mm

Note

- Allow a minimum of 24 hours for the subsequent usage. Do not use if temperature is likely to drop to below 5°C or exceed 50°C. For temperature below 20°C allow UltraTech MICROKRETE HS2 to cure for an extended period of time
- The technical data provided in this technical data sheet is as per our internal lab testing and may vary as per the actual method of application at sites

Safety Directions

- UltraTech MICROKRETE HS2 is non-toxic. Use of gloves and goggles recommended. Any splashes to the skin or eyes should be washed off with clean water. In case of prolonged irritation, medical advice should be sought. UltraTech MICROKRETE HS2 is non-flammable

Packaging

40 Kg

Shelf Life

- UltraTech MICROKRETE HS2 has a shelf life of 6 months from the date of manufacture. Store at a cool and dry place

Other Product Categories available with UltraTech Building Products Division

- Tile Adhesives
- Repair Mortar
- Industrial/Precision Grout and Anchors
- Waterproofing and Injection Grouting Material
- Plasters and Jointing Mortar
- Floor Screeds & Masonry
- Autoclaved Aerated Lightweight Concrete Blocks

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DISCLAIMER

Information provided on this data sheet is the guideline for usage. Users are advised to undertake a trial for product suitability prior to its full scale usage. There is no implied guaranty/warranty for the results and the company is not liable for any consequential damages.

