



PRODUCT DESCRIPTION:

Flexcrete® is an advanced acrylic co-polymer dispersion which, when used as an admixture for sand and cement mixes, produces a high strength patching mortar, screed, render or waterproofing coating. It can also be mixed with cement to produce a slurry for sealing porous and absorbent substrates. Once applied the mortar has excellent resistance to wash out and cures rapidly to form dense impermeable matrix with high diffusing resistance to oxygen, acid gases and chloride ion.

Flexcrete® is also suited for production of Guniting with enhanced properties for application by wet or dry process allowing high build application with low rebound losses at low water-cement ratios.

The enhanced properties ensure high adhesion, low shrinkage, and excellent resistance to freeze - thaw attack and high flexural and compressive strengths.

USES:

Flexcrete® is a unique polymer ideally suited for modification of sand and cements mortars, producing hard and spray applied mortars and renders with enhanced polymeric properties. The Mortars prepared from **Flexcrete®** can also be used for pointing of stones, where waterproofing is required. When mixed with cement, the products can be used as a coating for waterproofing of Basement, Terrace, Toilet Blocks, Water Tanks, Podium and any structure that requires protection from water leakage. Product is also well suited as an anti-corrosion coating/ primer for steel reinforcement and a bonding agent for polymer mortar, renders, concrete and screeds.

ADVANTAGE:

Flexcrete® enhances cementitious mixes to give the following properties.

- ❖ Excellent adhesion in dry, damp or permanently wet conditions to both concrete and steel.
- ❖ Higher compressive and tensile strength.
- ❖ High abrasion resistance.
- ❖ Low water permeability.
- ❖ Enhanced resistance to freeze - thaw cycles, alkalis and dilute acids.
- ❖ Low shrinkage.
- ❖ Non Corrosive to steel with high inherent alkalinity,
- ❖ Allows easy application to achieve high application thickness in both vertical and horizontal situations. Resulting spray applied mortar have low rebound losses.

**TECHNICAL DATA:**

Description	Results
Product	Modified Special Resin in Water
Typical Drying Time	2 hours depending on Temperature and substrate
Elongation, with Flexcrete® :cement= 1:1	200%
Coverage	50-60 m ² /Kg (two coats)
Packaging	200 gm, 1Kg, 10 Kg, 20 Kg
Storage	Store above 5 °C and below 30 °C
Shelf Life	24 months in above conditions

APPLICATION DATA:**Surface Preparation**

Of all works surface preparation remains the prime step toward getting successful results. Mechanically remove all damaged concrete back to a sound core. Whenever possible, the full circumference of the steel reinforcement should be exposed to at least 25mm behind the bars and 50mm beyond the point at which corrosion is visible. On cutting back, feather edges must be avoided. The perimeter of the repair area should be stepped to a depth of 10 mm by means of saw or disc cutting or preferably using a power chisel. The areas to be repaired/coated must be free from all unsound materials i.e. dust, oil, grease, corrosions by-products and organic growth. Smooth cut surfaces should be roughened, all loose materials and surface laitence removed and reinforcement cleaned to bright steel. Shot blasting or grit water jetting is recommended, but for some smaller areas needs gunning or bush hammering is effective. The strength of the concrete sub-base should be a minimum of 20 N/mm sq.

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water.

Priming / Bonding

Where necessary, two coats of MULTIBOND S (steel reinforcement protector) should be applied to the prepared steel, by brush, as described in the individual data sheet. Where the substrate exhibits high porosity or is absorbent, the pre dampened surface should be primed with a thin slurry consisting of one part of **Flexcrete®**, 1 part water and 2 part ordinary Portland cement mixed to give a thin emulsion consistency

Allow to become dull before continuing with application and remove any excess material lying in rough, broken or irregular surfaces. The subsequent rendering, screeds, etc. should be applied on wet basis.

**Mixing**

Mortar and screed, made with **Flexcrete®**, should be mechanically mixed, using a forced action pan mixer. For preparation of waterproofing slurry, mix **Flexcrete®** and cement in a clean drum, using a drill and paddle. A normal concrete mixture is not suitable for preparation of mortar and screed. Shake **Flexcrete®** before use and then pour the required quantity into the mixing container and add equal volume of water. Slowly add the required amount of sand and cement, and if necessary, coarse aggregates as determined from the mix design guide and mix until homogeneous. Continue to mix and add the minimum of extra water required to give the desired workability, to enable correct working and compaction. A water cement ratio of less than 0.4 is advised. Normal mixing time depends upon the type of mixer used 2-3 minutes is an average. Mix so as to entrain as little air as possible. Use without delay.

Placing

Mortar or screed should be applied so as to remove entrapped air, in layer, not exceeding 50mm thickening.

If necessary, support with shuttering to allow for compaction. For repairs, which require multi-layers application, it is important to ensure that previous layers are well keyed and hardened but not fully cured prior to the application of subsequent layers. Final profiling should be carried out with wooden float or steel trowel. **Flexcrete®** + cement slurry for waterproofing/priming, should be applied by brush in two coats to get protective layer.

Curing

Normal concreting procedures should be strictly adhered to. It is important that the surface of the mortar or screed coating is protected from strong sunlight and drying winds with polythene sheets, damp hessian or similar. Alternatively, for flooring applications, a 300-600 micron silica sand can be cast liberally onto the surface (approximately 2kg/sqmt) taking care to ensure that the sand does not penetrate the full depth of the coating. This provides effective curing, whilst also providing a hard wearing, non-slip finish. Allow a minimum of 72 hours curing of the material and ensure the moisture content of the surface is less than 20%.

Cleaning

All tools should be cleaned with water after the use.

**RECOMMENDED DESIGN MIX:**

The following are suggested trial mix ratios by weight based on saturated, surface dry sand and aggregates complying with BS 882: 1994. Trial mixes should be carried out to determine optimum consistency and physical properties for a particular application.

FLOOR SCREEDS / TOPPING

CLASS	THICKNESS (mm)	AGGREGATE CEMENT RATIO	DRY SAND (Kg)	DRY AGGREGATE		POLYMER ADMIXTURE FLEXCRETE , Kg	MAX. EXTRA WATER (ltr.)
				SIZE (mm)	WEIGHT (kg)		
LIGHT DUTY	8-15	1:4	200	----	-----	12	4
MEDIUM/HEAVY DUTY	10-15	1:4	100	3	100	12	8
MEDIUM HEAVY DUTY	15-30	1:4	112.5	6	87.5	10	8.5
MEDIUM HEAVY DUTY	25-40	1:5	125	10	100	11	7.3

NOTES

Mix proportions are based on 50kg of cement.

It is assumed that damp aggregates are used with 5% water in the sand and 1% water in the single sized aggregates. Maximum water additions assume damp aggregates are used and give a maximum water: cement ratio of W:C (0:40).

REPAIR MORTAR

Recommended mixes:

Description	Rendering Mortar	Patching Mortar	Heavy Duty Mortar
Portland Cement	50kg.	50 kg.	50 kg.
Medium Grade Sand	150 kg.	150 kg.	75 kg.
Granite Aggregate 6mm	-	-	75 kg.
Flexcrete, Kg	8	10	8
Water	15 ltr.	15 ltr.	11.5 ltr.
Typical Yield	105 ltr.	105ltr.	95 ltr.
Compressive Strength (28 days Typical)	40N/mmsq.	50N/mmsq	69N/mmsq

NOTES

Always use sharp sand. All sand and aggregate must be cleaned and washed. Add the minimum amount of water to give the desired workability, to enable correct working and compaction.

Maximum dilution 1:3 (Flexcrete® : water)



Flexcrete®

Cement Mixes Modifier & Waterproofer

WATERPROOFING COATINGS

Recommended mixes:

Description	Flexible Coating	Hard Coating	Crack Repair Mortar
Portland Cement (Gray/White) Fine Sand Powder(<0.3mm) Quartz Sand(< 1mm) Flexcrete Water Typical Coverage	50kg 0.0 0.0 50 kg 0.00 kg 50 to 60 ft ² per kg of Flexcrete® used	50-100 kg 50 kg 0.0 50 kg 50 kg 80 to 100 ft ² per kg of Flexcrete® used	50 kg 75 kg 75 kg 10 kg As required As per crack width

WARRANTY

Multichem warrants **Flexcrete** to be free from manufacturing defects as defined in this warranty. Manufacturing defects are considered to be those defects that occur due to the quality of the ingredients or from the manufacturing process itself. This warranty does not include labor costs and other costs or expenses associated with the removal or installation of **Flexcrete**.

Because the Multichem does not perform the actual installation, it cannot be held responsible for the results of the application. Multichem specifically disclaims problems that occur due to weather conditions, structural movement, structural design flaws and application techniques.

This warranty is in lieu of all other warranties expressed or implied including the warranty of merchantability and fitness of purpose and of all other obligations or liabilities on Multichem part. Multichem neither assumes nor authorizes any person to assume for Multichem any liability in connection with the sale and installation of **Flexcrete**.

Because of constant improvement of manufacturing techniques and formulations, Company reserves rights to change this datasheet and its contents without prior notice.



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