

DATA SHEET

Description ultraCLEAR™ is water dilutable Potassium Methyl Siliconate used for imparting a colourless water-repellent surface finish to mineral building material without significantly reducing water vapour permeability. It is also used to provide a barrier against rising damp and the treatment remains effective for 10 to 20 years.

Uses

- Surface treatment for concrete
- Making manufactured and natural stones water repellent
- Making aerated concrete water repellent
- Making low-fired clay products water repellent e.g. Roof tiles, bricks, floor tiles, flower pots
- Injection into buildings just above ground level to form a damp course
- Additive for days, ceramics, starches latex paints
- Primer for emulsion paints and plasters
- Mixed with sodium silicate for use as a binder in pigmented paints
- Making plastered surface water repellent

Features & Benefits Siliconate are the most widely used water repellents because of the following advantages over other impregnating agents:

- Good penetration depth
- The pores and capillaries are not sealed and hence water vapour permeability is not reduced
- There is no change in appearance of the substrate; the treated surface does not become glossy
- Track free, durable finish
- No separation of binder
- No formation of harmful by-products

ultraCLEAR™ is also used to provide a barrier against rising damp where there is no damp proof course or where the existing damp proof course has failed. After removing the plastering to a height of 30 cm above the rising damp 10-16mm holes are drilled at intervals of 15-17cm along the selected course to a depth of at least half but no more than 2/3rd of the thickness of the wall horizontally or at an angle of depression (25°- 45°). Diluted ultraCLEAR™ is then injected into the masonry under the action of gravity.

Replastering should be done at least 14 days after application of ultraCLEAR™ with a sand-cement mixture containing a salt retardant additive. The conventional gypsum plaster should not be used here.

General Characteristics

Appearance	Straw coloured clear liquid
Colour (Hazen)	Max. 100
Odour	Characteristic
Specific gravity (25C)	1.25
Solid content (w/w)	35%
Silica content (w/w)	18%
KOH content (w/w)	20%

These values are not intended for preparing specifications. Specification writers may please contact WPS before writing specifications.

Application

Dilution

ultraCLEAR™ should be diluted with ordinary tap water before use. If the water is hard it should be softened with a commercial water softener like EDTA (sodium salt of ethylene diamine tetra acetic acid). One pinch of EDTA in a bucket of water should be sufficient for most cases. If the water is very hard, precipitation will take place when diluting the ultraCLEAR™ with water.

The quantity of diluted ultraCLEAR™ usually required for different substrates are:

Substrate	Coverage	Dilution
Unpainted plastered surface	Two liberal applications: 0.5 - 0.8 L/m ²	1:6 to 1:20
Glazed tiles		1:10
Strongly absorbent bricks	2-3 L/m ²	1:50 to 1:100
Concrete	0.1 - 0.5 L/m ²	1:10

Overpainting

Impregnated surfaces can be over painted at any time with most emulsion paints and cement paints. The resultant coatings show good adhesion but preliminary tests are recommended.

In case of mineral paint coatings, impregnation should take place only after painting. The same applies also to exterior walls to which mineral plasters are subsequently to be applied.

Method of use

ultraCLEAR™ is diluted 10 times and is applied to the cleaned surface by brushing and spraying. The silicone may be applied on moist wall surfaces (but not wet). It can be further added to the mortar mixed for the top-smoothing layer (half of the mixing water can be replaced by ultraCLEAR).

One kg of ultraCLEAR™ as supplied by us (35% solid) is usually sufficient for making 60-120m² rendered surfaces hydrophobic. Surface coated with it becomes hydrophobic in 3-14 days depending upon weather conditions.

Cement plaster, cement based paint containing lime, or cement for new construction (highly alkaline) should be allowed to age properly (3-4 weeks) before silicone is applied.

During painting with cement paint, 4-5% (wt/wt) of ultraCLEAR™ by the cement paint can be added in the final coat.

It is not possible to impregnate a masonry surface already treated with silicone as it can no longer absorb the aqueous solution of impregnating agent and this can cause formation of white spots. For this reason, particularly with facade or other objects of large surface area, the impregnation work should be carried out without any work breaks to prevent the described phenomenon at overlapped points.

Reasonably good water repellent develops after 24 hours under room temperature.

Dipping process is ideal for impregnating bricks, roofing tiles, clinkers etc.

The absorbency of these building materials determines how long they should remain immersed in the bath (50 to 100 times diluted with water). The time can vary between 5-60 seconds. Immediately after impregnation the material should not be stacked.

Packaging ultraCLEAR™ is available in 250 net in 210 – litre container.

Storage and Shelf Life

- Should be stored in iron drums, plastic or glass containers. Tinsplate, aluminium, galvanized or lacquered containers are not suitable.
- Can be stored for a period of at least 12 months both in its concentrated and diluted form.
- When stored in original unopened container at 25°C.

Precautions

Health & Safety:

- The product is strongly alkaline and is corrosive, due to the presence of KOH. Appropriate safety measures must be taken while handling the product. Protective glasses and gloves should be worn while using the product. Any splashes on the skin should be washed off with plenty of water.
- Spraying should be done with an airless spray. While spraying, the solution should not be atomised and inhalation of the spray mist should be avoided.
- To protect third party from contact with the alkaline fluid, the working area should be screened off from public during treatment.

Toxicological Information:

ultraCLEAR™ possess a high order of toxicity, however poses no hazard incidental to industrial handling if reasonable care and cleanliness are observed. The acute oral toxicity is not determined.

Contact Details

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