Surtard B401

High performance brushable surface retarder for exposed aggregate effect

Innovative products for your success

Uses

To produce an exposed aggregate concrete finish in either face down or face up concrete manufacture, and to produce a mechanically sound construction joint. Typical uses include :

- Precast concrete panels.
- Insitu construction joints.
- Surface preparation of fresh concrete prior to rendering.

Advantages

- Excellent results with high temperature concreting.
- Suitable across a wide variety of job-site conditions and mould surfaces, including steel, fiberglass, concrete and timber.
- Available in a range of etch depths, colour coded for ease of identification.
- Suitable for large units where hydration heat is high.
- Economical in application.
- Mould release agent not required.

Description

Surtard B401 chemical retarder is directly applied to formwork to provide a simple, economic method of exposing aggregates in freshly poured face down concrete, or sprayed on the concrete surface for face up panels or slabs. The action of Surtard range products is to retard the hydration of cement at the surface matrix of concrete. Surtard B401 is available in two etch depths, it is color coded to particular depths of exposure as follows:

Lilac Light etch (1-2 mm)

Green Medium etch (2-4 mm)

The above depths are a guide which is based on grade C30 concrete, with a maximum aggregate size of 20 mm. Site trials are required to confirm the correct grade of Surtard B401.

Technical support

Cemkrete provides a technical advisory service for on-site assistance and advice on product selection, evaluation trials and dispensing equipment. Technical data and guidance can be provided for the selection of surface retarders for various uses conditions, and admixtures or other products for use with fresh and hardened concrete.

Specification clauses

Surface retarder

The surface retarder shall be a water soluble a gel-type composition chemical, brushable and non-flammable coating for application on wood or metal forms which be used to obtain and exposed aggregate surface on freshly poured concrete.

Instructions for use

Surface preparation

All formwork must be non-porous, clean and dry. Porous timber or concrete moulds should be coated with suitable polyurethane sealer.

Application and coverage rate

Surtard B401 should be well-mixed before use. The use of a mechanical mixer is recommended to ensure that any settled material is re-dispersed. Surtard B401 should be applied in a thin, uniform manner by brush, spray or roller, at a rate of 5.0 to 8.0 m2/liter (0.20 to 0.125 liters/m2). This coverage can normally be obtained in a single application.
For face down applications, the surface retarder should be completely dry prior to placing concrete; this typically takes 15 to 20 minutes depending upon ambient conditions.
For face up applications, Surtard B401 should be spray applied to concrete immediately following final placing and finishing, whilst the concrete is still wet.

Procedure

- Clean forms and remove form oil. Apply Surtard B401 to wood by brush or low power spray or to metal forms by brush only without thinning in a continuous unbroken film, free from pinholes or other surface breaks. The forms can be coated up to three weeks prior to using them.

- When necessary concrete can be poured against coated forms after only three hours drying time under normal weather conditions (25 ° and 50% R.H.) Remove forms in accordance with the architects' instructions usually not longer than 3-6 days. A stiff brush or stream of water from a garden hose will remove the retarded surface concrete exposing clean aggregate

- Removal of retarded mortar as soon as the shuttering or moulds are struck. The surface of the concrete which has been retarded should be removed with a high power water jet or by the use of a stiff brush.

- Cleaning of moulds after using Surtard B401 only a soft residue is left on the faces of the moulds and formwork which is easily removed by light brushing or washing.

- Re-use of moulds. A new application of Surtard B401 is required for each casting. Absorbent moulds, e.g. untreated wood surfaces should be thoroughly washed to remove traces of retarder before subsequent casting of fair-faced concrete.

Telephone: Office + 66 2 578 4101-5
Fax: Office + 66 2 578 4100
Email : info@cemkrete.com

Surtard B401

High performance brushable surface retarder for exposed aggregate effect

Innovative products for your success

Concrete placing

Once applied Surtard B401 must be protected from rain and any dust buildup. Surtard B401 may be applied up to 24 hours in advance of a concrete pour. Once vibration is complete the section should not be disturbed to avoid interference with the retarder penetration of the surface layer.

Removal of retarded layer

Once the bulk concrete has hardened sufficiently the shutters or moulds can be removed. The retarded portion of the concrete matrix is easily removed by wire brush or water-washing. Delay in removal of the retarded matrix will result in a lighter and less uniform depth of etch.

Trial procedures

Trials and samples duplicating actual production conditions are essential in determining the effects of the various parameters and in developing a standard procedure. Trials are best carried out by personnel who will be involved in the full project. Contact the local Cemkrete office for advice on trial procedures.

Compatibility

Surtard B401 is compatible with Cemkrete admixtures in the same concrete mix. Admixtures which affect the setting rate of concrete may have a slight effect on the depth of etch obtained but this will be minimal. If this aspect is of particular importance then trials to assess any effect should be carried out before the main project.
Surtard B401 is suitable for use with all types of Portland cements and cement replacement materials such as PFA, GGBFS and silica fume.

Limitations

Surfaces coated with Surtard B401 must be protected from water, including rain and condensation, at all times before placement of concrete. Whilst effective on mixes incorporating GGBFS or silica fume, tests should be conducted to determine performance.

Estimating

Supply

Surtard B401 : 20 liter pails

Coverage

Surtard B401 : 5.0 to 8.0 m2/liter

Storage

Store in a dry area under normal warehouse storage conditions. Surtard B401 should be protected from frost, if the material becomes frozen, it should be completely thawed and then thoroughly mixed prior to use. Surtard B401 has a minimum shelf life of 6 month provided the temperature is kept within the range of 5ºC - 30ºC. Should the temperature of the product fall outside this range then the Cemkrete Technical Service Department should be contacted.

Precautions

Health and safety

Surtard B401 is non-toxic unless ingested in large quantities. Skin and eye contamination can be removed by washing with clean water. If eye contact is severe, or significant ingestion occurs medical advice should be sought. For further information consult the Safety Data Sheet available for this product.

Fire

Surtard B401 is non-flammable.

Cleaning and disposal

Spillages of Surtard B401 should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. The disposal of excess or waste material and empty containers should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.

Additional Information

Cemkrete manufactures and supplies a wide range of those complementary products which includes:

- Waterproofing membranes & waterstops
- Joint sealants & filler boards
- Cementitious & epoxy grouts
- Specialized flooring materials
- Fireproof coating and systems
- Concrete admixture
- Repairing material

For further information on any of the above, please consult your local Cemkrete office - as below.

Telephone: Office
+ 66 2 578 4101-5

Fax: Office
+ 66 2 578 4100

Email :
info@cemkrete.com