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SURECOTE 500AR CHEMICAL RESISTANT EPOXY RESIN

PRODUCT DESCRIPTION

Surecote 500AR has been specifically formulated as a multi-purpose coating for the prevention of corrosion on concrete surfaces in strong acid, chemical & heat environments.

Surecote 500AR can be used in roller or trowel aggregate filled applications onto concrete surfaces. May be *coloured*.

TYPICAL USES

For use on concrete where a tough, hardwearing chemical and slip resistant coating is required. Typical applications may include the following:

- Mining – mineral processing
- Battery manufacturing
- Electroplating shops
- Chemical containment bunds
- Acid resistant floors
- Wine cellars
- Kitchens: Bakeries, Hot frier floors
- Older resin floor renovation

FEATURES AND BENEFITS

- Seamless – no joints other than existing in the concrete.
- Excellent mechanical properties.
- Chemical & heat resistant (up to 100°c. intermittent)
- Versatile application – Trowel
- Non-slip finish – fine to coarse textures.
- Colours – available in a limited colour range in factory batch quantities. On site colouring by tints or oxides.

CHEMICAL RESISTANCE

(Splash & Spillage)

- Sulphuric acid 98%
- Hydrochloric acid 37%
- Nitric acid 30%
- Sulphuric acid 10%
- Phosphoric acid 30%
- Acetic Acid 10%
- Lactic acid 5%
- Caustic soda 50%
- Sodium Hypochlorite 25%
- Potassium Hydroxide 45%
- Ethanol
- Toluene
- Brine 20%

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SURECOTE 500AR (cont'd)

No loss of hardness after 6 months of exposure to splash and spillage on 7 day cycles.

PRIMING:

Supascreed Primer – one or more coats as necessary.

MIX RATIO:

Surecote 500AR Part A (Resin) : Part B (Hardener)
3 : 1 parts by weight. Eg 8kg mix= 6kg Resin + 2Kg Hardener

LIMITATIONS

Surecote 500AR is susceptible to chalking and colour change in extended environments. Exposure to some concentrated acids may cause surface staining. Vertical surfaces will need the addition of Aerosil 200 to prevent slumping.

SPECIFICATION

How to Specify

“The flooring system shall be Surecote 500AR as supplied by Nuplex Building Products and as applied to the specific application by Slurry and broadcast technique described in the manufacturers written instructions.”

“The colour will be” (state whether “natural” or from the pigment range).

“The degree of non slip and colour are to be similar to the sample submitted and approved prior to the installation commencing.”

Concrete Specifications

New Concrete

Shall have a surface which has been mechanically trowelled to AS3610:1995 U3/NZ/3114:1987U3 finish or better then lightly broomed after compaction and screeding to assist with mechanical bond. Brooming is not required where preparation is achieved by captive shot blasting or other coarse abrasive methods.

A minimum compressive strength of 25 MPA at 28 days cure.

A minimum cure time of 28 days.

A moisture content less than 18% or 75% RH.

All falls and level surfaces to be accurately laid in the concrete. Falls should be of a minimum 1:100 or as required by the customer.

A surface free of cement latence or other contaminants and any roughly screeded or floated patches or areas.

No traces of cure membranes or release agents.

A suitable DPC membrane.

IMPORTANT:

Falls cannot be laid in Surecote 500AR since the thickness is controlled to between 4-6mm. It follows that if basic faults are present in the slab, they may be reflected in the Surecote 500AR finish.

Falls can be formed prior to the installation of the Surecote 500AR by using Nuplex Supascreed Prefill.

SURECOTE 500AR (cont'd)

Old Concrete

Surecote 500AR can be readily applied to old but sound concrete floors, especially those which are pitted due to acid attack – preparation methods may include mechanical scarifying, caustic washing, acid etching and captive shotblasting.

NOTE:

Repairs using cement mortar are not satisfactory. They do not provide sufficient adhesion and the layer is too thin and weak.

INSTALLATION

Floors

Ensure the substrate is properly prepared and is suitable to receive the Surecote 500AR finish.

Neatly mask out all areas not covered by the proposed work.

Very porous surfaces may require priming using Supascreed Primer. Allow to tack free.

Accurately weigh and mix Surecote 500AR and Hardener in the correct proportions in a separate container.

Slurry mix for floor:

Mixed Surecote 500 AR Resin (as above)	8.0 Kgs
STZ Flooring sand	25 Kgs

Slurry & broadcast application: Evenly distribute the mixed resin across the area to be laid using a standard trowel. Maximum spread rate for the mix is 3m².

As soon as the material has levelled sufficiently (care must be taken on ramps etc not to leave too long), a uniform blend of aggregate Walton Park 18/36 (coarse) or J61 sand (fine/smooth) is to be evenly distributed into the wet resin to excess. Spread rate of sand blend is approximately 4 - 5 Kgs per m².

As the resin begins to show on top of the aggregate, additional aggregate is evenly broadcast until no more resin surfaces.

SURECOTE 500AR (cont'd)

Suitable methods of distributing the aggregate are:

- Hand (like feeding the chooks)
- Hopper gun
- Vacuum cleaner reversed to blow with hopper mounted on hose handle
- Sand blaster unit or suitable venturi type system

A wet edge should be kept across the work face to allow the next section of resin to be worked in without showing a ridge. Further aggregate is then added. This process is repeated until the area is complete.

As soon as the resin has hardened sufficiently (to allow walking across) all excess aggregate is to be removed by sweeping followed by vacuuming to remove dust etc.

Apply one full coat of Surecote 500 AR Resin topcoat at a maximum spread rate of 4m²/litre.

Coves, Drains, Upstands etc

As Surecote 500 AR is a textured finish we do not recommend this be used to treat coves, drains upstands etc.

Coves, drains and upstand etc are to be completed prior to the installation of the Surecote 500 AR. Install trowel applied Supascreed or Surecote 500 AR coves and drains.

Coves, drains and upstands must be masked or protected prior to the installation of the Surecote 500 AR. This is to avoid grit from Surecote 500 AR application sticking to the finished surfaces.

It is recommended that drains and coves be topcoated Using Surecote 500 AR resin.

CONSTRUCTION JOINTS

Joints to a normal width of between 5-7mm dependant on site structural requirements are provided in the Surecote 500AR system to correspond with those in the existing slab. These joints are treated using K130 epoxy sealant.