

Technical Data Sheet



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SURECOTE SYSTEM 500 - EPOXY GENERAL PURPOSE SLURRY or TROWEL FLOOR TOPPING SYSTEM

DESCRIPTION: Nuplex Surecote SYSTEM 500 is a resin used to make seamless, textured slip resistant, medium to heavy duty flooring system incorporating various resins and aggregate options to suit environmental and slip resistant requirements. Surecote 500 is applied to prepared and primed floors using a resin / aggregate slurry followed by a broadcast of aggregate method or by full trowel-on application.

**TYPICAL
PROPERTIES:**

- Resin – durable epoxy
 - Thick film
 - Colour choice
 - Textured surface
 - Single system
 - Low odour
 - Granule finish or smooth
 - Tough
 - UV durable options, Exterior suitable
 - Slip resistant
 - Film thickness 5-6mm
 - Adhesion to the substrate 1.5Mpa minimum
- Refer to individual product data sheets for specific technical information.

**SYSTEM
OVERVIEW:**

The system consists of a clear or coloured resin base which is blended to a trowelling consistency with aggregates and applied by trowel to a primed substrate. The large aggregate in the trowel mix is used to gauge the film thickness during installation. Aggregates are applied using a broadcast technique into the wet resin slurry to excess. Once the resin has hardened/cured the excess aggregate is removed and the bound aggregate is topcoated. Degree of surface texture is determined by the type and grade of aggregate selected and the amount and number of topcoats applied. Decorative coloured effects can be achieved by incorporating coloured sands into a clear resin binder/topcoat system.

Applications

- | | |
|---------------------------------------|---|
| • Industrial heavy Duty floors | • Resurfacing existing resin flooring |
| • Food and beverage plants | • Workshops |
| • Abattoirs and butchery shops | • Garages |
| • Bakery floors | • Ramps |
| • Chemical plants | • Swimming pool surrounds |
| • Pharmaceutical manufacturing floors | • Sports changing facilities |
| • Commercial kitchens and bar floors | • Wet areas |
| • Non-slip areas | • Tie- coat epoxy; new concrete to old. |

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RESIN/AGGREGATE CHOICE:

Epoxy

Low odour moisture tolerant during installation, slower curing, good chemical resistance particularly alkalis. Good UV resistance (exterior use) if topcoated with Revathane Glaze

Hard Chemical Resistant Aggregates

Nuplex STZ floor aggregate, Rounded graded Silicas, quartz, granite, alumium oxide, silicon carbide.

Decorative Coloured Aggregates

Decorative Quartzzite sand natural coloured sands. Colour to be selected.

(Refer to Nuplex Quartzzite colour chart).

**NOT RECOMMENDED/
LIMITATIONS:**

- ULTRA Intense chemical attack heavy duty industrial use.
- Application to unsound substrates.
- Installation below 5°C or Applications over 70c
- Application to incorrectly or inadequately prepared substrates.
- Application to green uncured concrete should be carefully considered and advice sought..
- Over concrete cracks without adequate treatment, could result in future cracking or white stress line.
- Check system compatibility if overcoating existing floor topping (consult Nuplex Construction Products for advice).
- Will not correct inadequate falls (without a cost consideration) in the substrate – refer to Nuplex “ STZ Prefill” systems.

**SURFACE
PREPARATION**

NEW CONCRETE

Shall have a surface which has been heavily towelled to compact . Preparation must be done eg: **shot blasting** , grinding etc as appropriate. A surface free of cement laitence or other contaminants and any roughly screeded or floated patches or areas.

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

A minimum cure time of 28 days and although epoxies will bonded to hardened concrete that is surface dry. All falls and levels to be accurately laid into the concrete.No traces of cure membranes.

A suitable vapour resistant membrane beneath the concrete slab is required ; a dry floor.

OLD CONCRETE REQUIREMENTS

Remove all contaminants including cement laitence, dirt, grease, oil, existing coatings/toppings, unsound substrate etc by **shot blasting** or grinding.

To create falls to the existing floor or to repair deep depressions, defects, hollows etc use Nuplex Prefill system as required. It is recommended that a sample is applied to the prepared floor for client approval and adhesion testing. Have suitable vapour resistant membranes beneath the concrete .Have a surface dry. Must be sound and stable.

WOODEN FLOORS AND OTHERS

Refer to Nuplex Construction Products Division for advice.

**CONTROL JOINTS
CRACKS ETC:**

All expansion/control joints in the substrate are to be continued through the Nuplex Traxite. Install Nuplex K130 epoxy based control joint sealant to all expressed joints.

Non-movement cracks may be treated using Nuplex fibreglass reinforced bandage system incorporating a slip or bond breaker tape.

MIXING

The mix ratio is 2:1 by weight or volume. No exceptions to this ratio are acceptable. Only this ratio functions and performs as specified.. Nuplex recommend weighing of resins. Mix with a power stirrer prior to adding aggregates.

APPLICATION:

Surecote may only be installed by experienced contractors. If any doubt exists it is the responsibility of the contractor or client to contact Nuplex Construction Products Division for advice.

STAGE 1 Primer

Apply by brush or roller a minimum of 1 coat of Supascreed primer. at a maximum spread rate of 6 m²/litre/coat. Porous surfaces may require additional coats until porosity is eliminated.

Allow coats to harden before overcoating. But overcoat within 36 hours.

Note: In some situations Surecote 500 may be applied without primers. Nuplex Construction Products should be consulted for further advice.

STAGE 2 Coves, Drains, Up-stands and Floors

Coves, drains, upstands etc are installed by trowel using selected flooring sand incorporated into resin (as appropriate ie Cove mix; Use a 5 Kg + 30-35 kg mix as below). Maximum recommended cove radius is 25 - 50mm. Upstands may be finished into Nuplex 9.2mm rebated aluminium cove flashing. Coves, drains upstands etc must be suitably masked or protected when installed the Surecote.

STAGE 3 Mixing and Laying the 5mm thick Floor

Slurry Mix(s) for the Floor suggestions only

1.0 Coarse, fluid Slurry

7 kgs selected Surecote 500 mixed.

25 kg STZ flooring Sand. This mix covers 3.7m² (mixed resin coverage 1.9kg/m²)

2.0 Paste, Trowellable mix

5 kgs Mixed Surecote resin

25 Kgs STZ flooring sand. This mix covers 3.3m² (mixed resin coverage 1.5kg/m²)

(STZ flooring sand is a blend of dry aggregates; all silica, all rounded, ratio 40/40/20 of coarse medium and fine sand).

The basecoat of Surecote 500 resin system may be **tinted** to better match the aggregate colour.

The slurry mix is spread uniformly with the edge of a steel trowel. Mixes should follow at regular, short intervals to ensure resin drainage from each placed mix is not excessive.

A dry non-slip silica aggregate (0.6mm or 18/36) depending on the degree of slip required, is now broadcast evenly, lightly and continuously over the wet mixes on the floor so that the broadcast sand can slowly settle into the wet resin. Do not load the surface with too much aggregate at one time. Ensure the slurry mix is fully obliterated and no wet resin patches remain.

Coverage: BROADCAST aggregates are spread at 3-4 kgs / m². Broadcasts of fine aggregate only will produce a fine effect. A blend of 2:1 Fine: coarse will produce a coarser, more non-slip effect.

Always keep a wet edge, free from broadcast sand when working across the work area.

Resin rich areas of floor that appear after the broadcast is cured are to be avoided. Any areas will have to be repaired during the topcoat/sealing procedure.

Continually check minimum thickness is being achieved.

Note well: all aggregate ratios and the broadcast aggregate types must be trialled by the contactor and the final finish sampled and the effect approved by the client. Once set or hardened remove excess aggregate by sweeping and vacuuming clean.

STAGE 4 Topcoat

Apply two topcoats of Surecote 500 mixed resins. (First coat spread rate of 2-3m²/litre and a second coat @ 6m²/ Lt). **Note:** Additional topcoats will reduce surface texture and slip resistant properties. Allow topcoats to set/harden.

STAGE 5 Control Joint Sealant

Install Nuplex K130 epoxy based control joint sealant to Nuplex specifications.

CURING:

Surecote achieves sufficient hardness in 8-12hrs. take care for 48 hours.

Refer to individual product data sheets for cure and max/min recoat periods.

Cured film should be kept dry for 12 hours after sealing. Water and condensation on the surface within this time may cause blooming (whitening). A drop in temperature to dew point may also cause blooming.

Concrete

Tie Coat

For bonding new concrete to old. Prepare the concrete as above. Apply mixed Surecote 500 at a rate of approx 2m²/ Lt. Apply the new concrete whilst the resin is still soft / sticky-tacky. Usually this is within less than 2 hours.

Cleaning Materials:

Most conventional floor cleaning material are suitable for use with Nuplex Traxite finishes. For specific advise on cleaners / systems please consult Nuplex cleaning specification.

Cleaning

Textured/Slip

Resistant Finishes:

Textured finishes will require more attention to remove heavy soiling etc from the base of the textured surface. Textured surfaces will require manual scrubbing using a tiff bristled brush/broom or mechanically scrubbed using a suitable machine fitted with firm bristled pads. Alternatively heavy soiling etc can be removed using low – medium pressure water jet or suitable foam detergent applicator system. The recommendations or instructions of the selected cleaner/detergent manufacturer is to be followed. Please refer to Nuplex cleaning document.

Maintenance:

Ease of repair is a major advantage with Nuplex Surecote 500 flooring. Damaged areas are cut out and patched level using new materials quickly and with little disruption. Any damage should be reported to the Contractor for necessary repair as soon as is practical.