

# Technical Data Sheet



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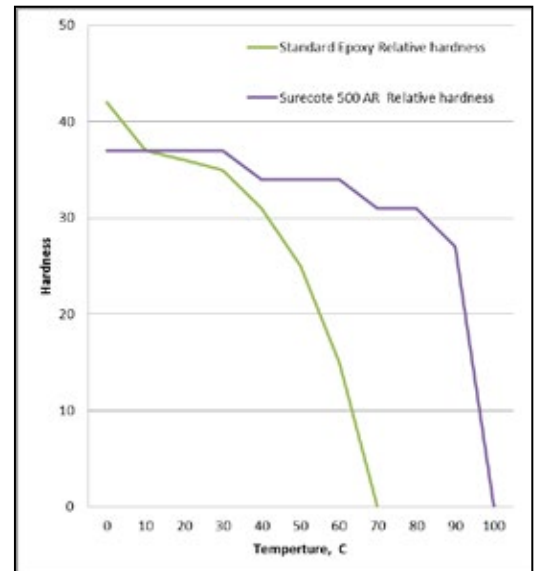
## SURECOTE SYSTEM 500AR AR - EPOXY HEAT & CHEMICAL RESISTANT FLOOR TOPPING SYSTEM

**DESCRIPTION:** Nuplex Surecote SYSTEM 500AR 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 500AR 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 – Heavy duty durable epoxy

- Enhanced heat resistance up to 90C and enhanced chemical resistance. (and to 100c intermittently.) see graph,
  - Thick film
  - Colour choice
  - Textured surface
  - Single system
  - Low odour
  - Granule finish or smooth
  - Tough
  - UV durable options, Exterior suitable
  - Slip resistant
  - Film thickness 6mm
  - Adhesion to the substrate 1.5Mpa minimum
- \*Compared to Supascreed / Surecote 500. Refer to individual product

data sheets for specific technical information.



**SYSTEM OVERVIEW:** The enhanced performance allows Surecote 500AR to be used

in areas where standard epoxies cannot due to their low heat resistance. The temperature ratings should be used as guides rather than exact levels. This is because durability is determined by a number of factors: eg Time, concentration highest temperature, constant rated temperature and time at a temperature.

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. Alternatively 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 / walls coves, laminates linings and coatings.
- Food and beverage plants
- Abattoirs and butchery shops
- Bakery floors
- Chemical plants / tanks
- Pharmaceutical manufacturing floors
- Commercial kitchens and bar floors
- Non-slip areas Resurfacing existing resin flooring
- Workshops
- Garages Ramps
- Swimming pool surrounds; Sports changing facilities; Wet areas

**Australia** A Division of Nuplex Industries Limited  
www.nuplexconstruction.com.au

**New Zealand**  
Auckland

**A Division of Nuplex Industries (NZ) Limited**  
T: +64 9 5836544 F: +64 9 5253709

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[www.nuplexconstruction.co.nz](http://www.nuplexconstruction.co.nz)  
FreePhone 0508-882288

[ncpsales@nuplex.com](mailto:ncpsales@nuplex.com)  
FreeFax 0508553344

## RESIN/AGGREGATE CHOICE:

### Epoxy

Low odour moisture tolerant during installation, slower curing, good chemical resistance particularly alkalis.

### **Hard Chemical Resistant Aggregates**

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

### **Decorative Coloured Aggregates**

Decorative Quartzite sand natural coloured sands. Colour to be selected.  
(Refer to Nuplex Quartzite colour chart).

## NOT RECOMMENDED/ LIMITATIONS:

- ULTRA Intense chemical attack heavy duty industrial use.
- **No other mix ratio permitted (ie must be 4:1). Digital weighing must be used. This means 4.00 : 1.00 accuracy. Implied properties are not achieved with incorrect mix ratios.**  
incorrect mix ratios will give products with lesser performance properties.
- Application to unsound substrates.
- Installation below 5°C or Applications over 100c
- 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 trowelled 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 **heavy 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

### APPLICATION:

The mix ratio is 4:1 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.

Surecote 500AR 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 m<sup>2</sup>/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 500AR 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.

