

# Technical Data Sheet

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## NUPLEX SUPASCREED LA Industrial Epoxy Resin Floor Topping

### Description

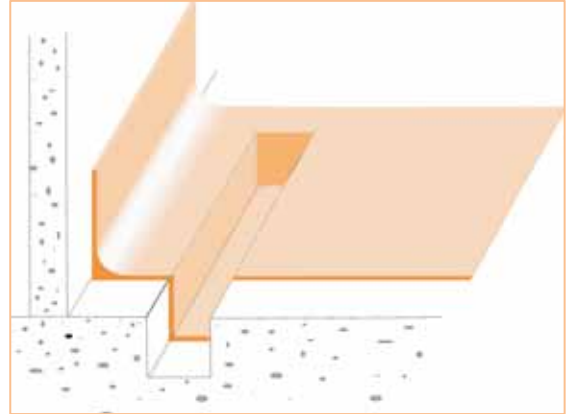
Supascreed is a heavy duty and hardwearing low allergenic, 100% Reactive epoxy resin 6mm thick floor topping. It is very:

- Low odour,
- Non-flammable and may be used in food-safe areas.

Nuplex Supascreed LA is a high performance in-situ trowel applied, industrial floor finish. Once applied and cured it becomes an integral part of the building structure. It is hard-wearing, durable and chemical resistant.

Nuplex Supascreed LA is a virtually seamless, trowel applied floor topping system. Drains, coves and upstands may all be formed with this product to provide positive falls.

Nuplex Supascreed LA is available as Light Gold colour. A range of tinted colours are also available on request.



### TYPICAL USES:

- Industrial, Commercial and Residential flooring Interior/Exterior.
- Areas subject to impact, abrasion, thermal shock and chemicals.
- Food and chemical production areas, where appearance, durability and low maintenance are important.
- Concrete repair.
- Approved for use in food manufacturing plants by regulatory authorities.
- Food, Brewing, Canning and general manufacturing areas.
- Dairy Industry – Manufacturing, packing areas.
- Meat Industry – Freezers, chillers and processing areas.
- Pharmaceutical manufacturing.
- Confectionery and chocolate manufacturing.
- Restaurant & hotel kitchens / laundries / bars
- Supermarkets - Meat preparation deli areas
- Prisons – Kitchens and ablutions
- Hospitals, Ablution facilities in schools, shower bases for the disabled.
- Kitchens: commercial
- Freezers & Chillers

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**TYPICAL PROPERTIES:**

**Solvent free** - Very low odour during installation. Odour will not taint food products.  
**Low allergen** - Less problems for staff sensitive to epoxy systems during application.  
**Natural Silica Quartz aggregate** - Hard wearing, will not fade.  
**Tough & impact & scratch resistant.**  
**May be formed to create smooth coves and laid to falls and into drains .**

**Smooth or slip resistant options**

**Seamless**

**Chemical resistant**

**Impermeable and non-porous** - Resistant to cracking, crazing and abrasion.

- Easily cleaned/safe slip resistant finish options, complies with NZS3661 co-efficient of friction WET.
- Low in-service maintenance cost.
- Refer to separate chemical resistance chart.
- Does not support bacteria or fungal growth.

**Co-efficient of thermal expansion 10-5/mm/m/°C** - 2.23

**Mix ratios:**

**Std resin : hardener** 3:1 parts by weight. Also Slow & fast hardeners.

**Versatile** - Use on new and refurbished projects

**Tolerant of damp surfaces** - Minimal down time; ( not running wet surfaces).

**Lightweight** - Approximately 12kgs/m<sup>2</sup>

**Thin** - 6mm nominal thickness

**Adhesion to concrete** - 1.5mpa minimum

**Continuous in-service temp range – Wet** - -30°C to +65°C

**Compressive strength** - 93 Mpa

**Co-efficient of friction “wet”**

NZS 3661 :1993	-	Smooth finish	0.46
	-	Glass float finish	0.58
	-	Coarse “Traxite” finish	0.79

**Working time at 20°C**

-	Standard Hardener	45 minutes
-	Slow Hardener	60 minutes ( use in hot places)
-	Fast Hardener	28 minutes ( use in colder places)
-		

**Minimum cure temp (Std)** - 5°C

**LIMITATIONS:** Nuplex Supascreed LA is not recommended for use in the following areas:

- Hot oil areas or bakeries with floor ovens - refer to Nuplex Surecote 500 AR or Sureshield or Nuthane
- Application to unstable or defective substrates without approved remedial treatment prior to installation.
- For application in the range 10 - 4°C use **Supascreed Low Temp Cure hardener system** or below dew point – may cause surface bloom. Refer Nuplex, 2:1 system.
- Over ceramic tiles without specific written Nuplex design specification.

**SURFACE FINISH AND FLATNESS TOLERANCES:** The finished Nuplex Supascreed LA floor shall not vary more than plus or minus 3mm (gradual deviation) over a 3 meter span (U3).

Often a perfectly acceptable Nuplex Supascreed LA floor in a large area with one or more window walls will appear to have variations greater than the above tolerances. The optical illusion is further magnified if the floor has a smooth finish.

It must be noted that Nuplex Supascreed LA is hand applied and will tend to follow the contours of existing substrates. For this reason it is important that the sub floor have the same surface tolerances as the Nuplex Supascreed LA to achieve the specified flatness. Non-conforming floors must be Prefilled or levelled.

**COMPLIANCE WITH NZ BUILDING CODE:** The products, systems and application of Nuplex Supascreed LA comply with the requirements of the N.Z. Building Industry Authority and related acts. In particular items of key importance are complied with. These are slip resistance, internal water and durability. The warranties implied by the “Durability” code are accepted and complied with. The factors required by the slip resistance code are also complied with subject to selection of compliant surface finish.

- Floors above work spaces: Supascreed forms a watertight barrier and is compliant with E3 Internal water 3.1.1e. (use full fibreglass laminated floor and Joint safe tape in these situations).

**CHEMICAL RESISTANCE CHART 2009**

Test procedure involves total immersion of the polymerized sample in a test medium at 25 Deg C.

The sample were observed for chemical attack and hardness throughout the testing period.  
The results below were taken after 3 weeks exposure:

<b>Test Media</b>	<b>conc.</b>	<b>Supascreed</b>
<b>ACIDS</b>		
Hydrochloric Acid	10%	M
Sulphuric Acid	10%	M
	25%	M
Acetic Acid	10%	U
	50%	D
Nitric Acid	10%	M
Citric Acid	10%	U
Lactic Acid	90%	A
Phosphoric Acid	30%	U
<b>ALKALIS</b>		
Potassium Hydroxide	30%	U
Caustic Soda	50%	U
<b>SOLVENTS</b>		
Ethanol		M
Toluene		M
Acetone		A
Isopropanol		U
<b>PETROCHEMICALS</b>		
Kerosene		M
<b>DISINFECTANTS &amp; CLEANERS</b>		
Detergent (DET 18)	100%	U
Bleach (2.5% Sod Hyd Cl)		M
MEKP - M50		M
<b>SALT SOLUTION</b>		
Brine	20%	M
<b>OTHERS</b>		
Sugar Syrup	30%	U
Distilled Water		U

#### **LEGEND**

- U = Unaffected (i.e. after 3 week exposure the samples have not changed)  
M = Marked (Short term exposure, the test media will leave a mark on the sample)  
A = Attacked (Short or long term exposure, the mechanical properties will deteriorate)  
D = Destroy (Short or long term exposure, damage will occur).

**SUBSTRATES:** \_\_\_ Shall be stable and solid.

**Note:** Ability of new or existing floors to take the loads as a result of the Nuplex Supascreed LA must be checked prior to installing.

All control joints junction cracks in the substrate etc are to be properly treated – refer control joints below.

Nuplex Industries should be consulted when installing Nuplex Supascreed LA on any suspended floor slabs.

#### **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.

Always ensure concrete preparation is achieved by captive shot blasting, coarse diamond grinding or other coarse abrasive methods.

**Old resin Floors:** Always ensure concrete preparation is achieved by captive shot blasting, coarse diamond grinding or other coarse abrasive methods.

**NUPLEX SUPASCREED LA** (cont'd)**SUBSTRATES:**

(cont'd)

A minimum compressive strength of 25 MPA at 28 days cure and a standard cure time of 28 days. Supascreed can be laid on new concrete after 14 days as long as the conditions outlined in our Technical Bulletin "Resin Floors on wet concrete" are complied with. (see [.nuplexconstruction.co.nz/bulletins](http://.nuplexconstruction.co.nz/bulletins)).

The recommended moisture content is less than 18% WME or 75% RH. However **Supascreed will bond to a wet substrate** as long as:

- The concrete has cured to the appropriate strength (i.e. greater than 28 days since laying).
- Surface preparation (as below) is still carried out.

All falls and levels to be accurately laid into the concrete. No traces of cure membranes or release agents.

Remove all contaminants including cement laitance, dirt, grease, oil, existing coatings/toppings, unsound substrate etc by shot blasting, diamond grinding, scabbling.

- Deep depressions, defects, hollows etc to be repaired or filled using Nuplex Prefill system.
- All cracks and floor to wall junctions that are different materials should be laminated with Supascreed resin and 450gsm fiberglass cloth. (see full details on the website).

**WOOD AND OTHER FLOORING**

Consult Nuplex Construction Products Division for advice.

**INSTALLATION OF SUPASCREED****LA:**

All materials shall be installed using best trade practice and in accordance with the manufacturers recommendations or instructions. If any doubt exists it is the responsibility of the contractor or client to contact Nuplex for advice.

Prime the properly prepared floor areas with minimum one coat of Supascreed Primer. Coverage rate and number of coats will vary depending on the porosity of the substrate, Maximum coverage 8m<sup>2</sup>/litre/coat. Supascreed Primer Resin and Hardener are to be thoroughly mixed in the correct proportions (Part A 2.4 kgs: Part B 4kgs) then diluted using 2.4 litres of clean potable water and remixed. Apply using brush or roller.

Wait until Supascreed Primer has turned clear before over coating. Prime again if the surface is still porous. Porous substrates may lead to blisters forming in the Supascreed LA topping due to air escape.

NB: Do not prime any floors with Supascreed low temp system; this includes Supascreed low temp installations themselves.

**E3 compliance:** If the floor is suspended over other working spaces, it must be tanked to provide a continuous membrane.. Use Joint safe tape, 450gsm fibreglass cloth and Supascreed system to form a waterproof layer prior to the topping.

**INSTALLATION OF SUPASCREED LA:**

Nuplex Supascreed LA must be applied in such a manner to achieve 6mm thickness. Use screed box, bars or metal as a guide.

Accurately weigh and power mix until homogeneous Nuplex Supascreed LA Resin and Hardener in the correct proportions.

**NB:** the 3:1 ratio must be exact and not change under any circumstances. Adding more or less hardener will result in a weaker, softer and less resistant topping.

**MIX RATIO: resin : hardener** 3:1 parts by weight.

Then mix with STZ flooring sand in a ratio of 7:1 STZ flooring sand : Mixed Resin.

(eg a standard mix may be: Resin 6.0kg, hardener 2.0kg plus 56 kgs STZ flooring sand).

(or 8:1 for a dry mix; eg coving.)

**Kit**

20 kg resin plus 6.7 kg hardener plus 200 kg STZ flooring sand (8 x 25 kg bags)

Approximate m<sup>2</sup> coverage @ 6mm of this kit is 18m<sup>2</sup>.

All aggregates are to be box blended to ensure continuity of colour.

Resin, hardener are preblended and then mixed with the sand and blended in an efficient mixer to ensure all ingredients are homogeneously blended.

Apply Nuplex Supascreed LA flooring to correctly prepared and sealed substrate using a spreader box and/or hand trowel and/or power float. Ensure the matrix is well compacted and free of ridges or unevenness. Successive mixes must be homogeneously blended together into wet Nuplex Supascreed LA mixes. Access to repair wet floor areas during installation can be achieved using crampons or special spiked shoes.

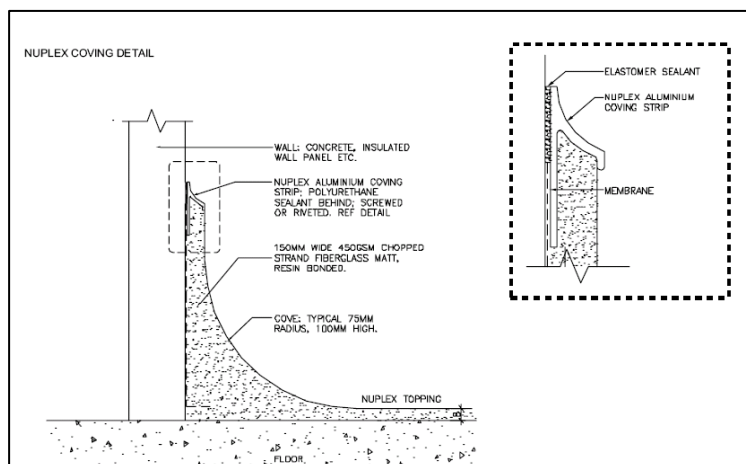
Ensure all finished edges of the Nuplex Supascreed LA are ramped or supported to avoid damage.

Nuplex Supascreed LA may be applied to skirtings, coves and upstands, plinths etc using specially formed trowels. Coves etc can be installed at the same time as the main body of the floor or alternatively before, or placed on top of the floor after completion. Floors must be protected during cove/skirting installation if applied over completed work.

(see Cove and install details tech data)

**NON-SLIP floor definitions:**

1. Smooth –steel trowel floated.
2. Non-slip & Hardwearing – glass float.
3. Heavy duty non-slip – glass float and the broadcast 18/36 non-slip aggregate into the wet surface. Follow this with roller applied topcoat.
4. Very sharp non-slip: glass float and the broadcast 18/36 mixed 50/50 with Silicon carbide non-slip aggregate into the wet surface. Follow this with roller applied topcoat.
5. Ensure the contractor supplies info on the above. and a cured sample showing the surface finish.



See full details at  
[www.nuplexconstruction.co.nz](http://www.nuplexconstruction.co.nz) /  
 Resin flooring /  
 Industrial toppings/  
 Resin flooring details

### **TOPCOAT / Sealer**

Once finished and hardened apply a minimum of 1 coat of Nuplex Supascreed LA as a Topcoat at 6m<sup>2</sup>/litre/coat. Apply a thin, even coat. Do not build-up a glassy, slippery layer.

**CONTROL AND OTHER JOINTS:** All control and other movement joints are to be bought through the Nuplex Supascreed LA finish.  
Joints are to be filled using Nuplex K130 epoxy sealant .  
Non-movement joints/cracks can be fibreglass bandaged using 450gsm glass mat and Nuplex Supascreed LA.  
Junctions etc are to be sealed using polyurethane sealant

**QUALITY ASSURANCE:** A log shall be kept by the licensed Nuplex contractor and made available to Nuplex Industries Ltd at their request. Information to be recorded daily is:

- Material batch numbers used.
- Sequence of mixing, ratios and quantities and formula.
- Substrate moisture content.
- Substrate temperature.
- Ambient temperature.
- Ambient relative humidity.

### **Maintenance and Cleaning**

*Repairs can be undertaken with further new Supascreed applied directly after cleaning, cutting out and square edging.*

**Cleaning:** A Supascreed floor is cleaned with stiff bristled brushes and detergents. The stiff bristle brushes and commercial detergents will remove dirt from the non-slip surface that a soft mop will not. The product may attract dirt during the early life of the product. Pay careful attention to cleaning at this stage.

Refer to the Cleaning document on our website.

### **Producer Statement**

Nuplex Industries Ltd state that Supascreed is compliant with E3 (internal water) and D1 (Access routes / slip resistance wet & dry).

### ***How to select Nuplex Floor toppings***

#### **High performance Resin Flooring Choice Guide**

Nuplex manufacture in NZ a range of resin floorings. Some are more suitable than others depending on the installation parameters and the performance required within its applied environment.

	Original Construction	Internal work or reconfiguration. Isolated environment	Internal work or reconfiguration. Sensitive or Exposed Public area
General small commercial kitchen	Sureshield *2	Sureshield	Supascreed
Supermarket - Deli	Sureshield	Sureshield	Supascreed
Supermarket - Fish	Sureshield	Sureshield	Supascreed
Supermarket - Butchery	Sureshield	Sureshield	Supascreed
Supermarket - Bakery	Sureshield	Sureshield	Nuthane
Laundry	Sureshield	Sureshield	Supascreed
Hot cook – heat, oils fats	Sureshield	Sureshield	Nuthane

High impact processing	Sureshield	Sureshield	Sureshield*
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- \* Protect area to enable use of this system for maximum durability.
- \* Industrial Terrazzite and Sureshield are interchangeable. Trowel-on systems such as Sureshield offer:

- One-pass rapid installed flooring
- Integrated floors, coves, drains, nibs and upstands
- Carefully managed falls to drains to help prevent ponding water
- Highest impact and abrasion resistance combined with high heat and chemical resistance
- Best value for money on a dollars per mm thickness basis

