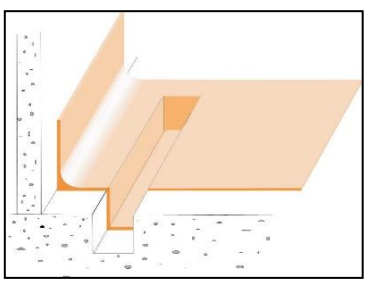
Technical Data Sheet

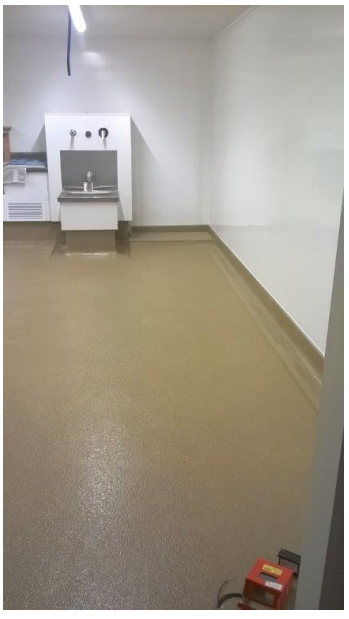
Supascreed Heavy Duty Floor Topping System

DESCRIPTION:
Supascreed is an industrial grade floor topping system specifically designed for the food industry. Supascreed resin is blended with specially graded silica quartz aggregates to produce a floor system that is hard and durable, Non-slip, resistant to impact, abrasion, thermal shock and chemicals/food acids, yet is non porous, seamless, hygienic and easily cleaned. Supascreed is fully bonded to the concrete to prevent water creep.

TYPICAL FEATURES | BENEFITS:



- Supascreed is a heavy duty monolithic, hardwearing, low allergenic 6mm minimum thick floor topping, often with coving.
- Low Odour.
- Non –flammable.
- May be used in food safe areas.
- Excellent chemical resistance. See chart.
- Excellent abrasion resistance.
- Excellent impact resistance:
- Excellent adhesion to properly prepared substrates.
- Easily cleaned. See comments at end. Waterblast resistant.
- Excellent slip resistance. Specification is needed of the degree required
  * Note* please read detail within
- Able to be formed into coving, plinths sumps etc.
- Will not support bacteria or fungal growth. Contains inhibitors to retard microbial growth.
- Cured Film is non-toxic
- HACCP approved manufacturing process
- Not moisture permeable
- Colour: Natural Gold; ***or*** other colours dependant on aggregate selection.
- The system may be pigmented for full thru-colour permanence
- Will form coves to any required height or radius.
- Suitable for use in dry or wet situations including ramps.
- One-pass, installed flooring
- Integrated floors, coves, drains, nibs and upstands
- Carefully managed falls to drains to help prevent ponding water



PERFORMANCE DATA

Minimum Thickness	6mm
Minimum Application Temperature: Air	$^{+}5°C$
Maximum Application Relative Humidity: Air	85%
In-service temperatures - wet : on fully cured system	6mm $^{-}30$ to $^{+}65^{o}C$
Chemical Resistance	Resistant to chemical spillage –cured 7 days at $^{+}25^{0}C$. Refer Chemical resistance chart
Adhesion to correctly prepared substrate	1.5MPa minimum – Concrete Failure
Co-efficient of expansion 10-/mm/m/^{0}C	-2.23
Compressive Strength	Nom. 93MPa
Flexural strength	25Mpa
Tensile strength	6N/mm²
Heat resistant	65°C
Moisture absorption: ASTM D570-63	0.04%
Weight per m²	6mm - 12.88kgs 8mm - 17.18kgs
Slip resistance	R10 to R13. (when used with sharp aggregate)

RECOMMENDED USES:

- Food process floors where a high degree of hygiene is required. Approved by regulatory authorities.
- Ablution blocks: Kitchens | Laundries |Toilets
- Beverage Processing: Bottling Plants | Breweries |Fruit Juice |Wine etc.
- Cool Stores: - Freezers |Chillers etc.
- Commercial Kitchens: Main Kitchen |Freezers | Chillers |Cool Stores etc.
- Dairy Factory Floors. Main Process Halls/Rooms etc.
- Meat Processing: Abattoirs |Butchery floors |Poultry |Freezers | Chillers |Cool Stores etc.
- Seafood Processing: Wet Fish | Shellfish | Freezers | Chillers |Cool Stores etc.
- Sports facilities: Changing Rooms | Showers | Toilets for hard-wearability.
- Supermarkets: Deli |Fish |Meat | Freezers | Chillers |Cool Stores etc.
- Floors where a high degree of chemical, mechanical and slip resistance is of prime importance.
- Interior/exterior use. Concrete repair and protection – resurfacing damaged or broken concrete with a more physical and chemical resistant surface.
- Can be applied to new or existing sound concrete and also over old resin floors
- Suitable for use in dry or wet situations including ramps.
- To provide excellent underfoot slip resistance in commercial applications.
- Floors, walls, upstands, plinths etc. where a high degree of chemical, mechanical and slip resistance is of prime importance
- Interior/exterior use.
- Concrete repair and protection – resurfacing damaged or broken concrete with a more physical and chemical resistant surface.
- Can be applied to new or existing sound concrete, timber or other surfaces.
- 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.

LIMITATIONS:

- Application to uncured concrete (minimum recommended cure 28 days). Tolerant of damp surfaces. (Refer to allnex Bulletin on application options on wet or uncured concrete).
- Application to unstable or defective substrates without approved remedial treatment prior to installation.
- Application below $^{+}5C$.
- Application to unstable or defective substrates without approved remedial treatment prior to installation.
- Application over existing coatings/toppings (refer to allnex) or over concrete cure or release agents without allnex approval or over ceramic tiles without specific written allnex design specification.
- Areas where hot oil is used or bakeries with floor ovens: - Refer allnex Surecote 500AR |Nuthane |Sureshield | Surechem VE
- Refer to allnex chemical resistance data.
- Cracking in adjacent walls and concrete substrate will likely telegraph through the Supascreed.

CHEMICAL RESISTANCE CHART: 2009

Test procedure – Total immersion

Observation - Checked for chemical attack and hardness throughout the testing period

Results- Taken after 3 weeks exposure

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

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)

SUBSTRATE: – Preparation

All substrates shall be stable and solid.

******Note******

The ability of new or existing floors to take the loads as a result of the allnex Supascreed must be checked prior to installing. All control joints junction cracks in the substrate etc. are to be properly treated.

CONCRETE:

Shall have a surface which has been mechanically trowelled to AS3610:1995 U3/NZ/3114:1987U3 finish.

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

A minimum of 28 days prior to the installation of Supascreed. The moisture content shall be less than 75% RH. (Refer allnex Bulletin on application options on wet or uncured concrete).

****Note****

Supsacreed can be installed on 14 day old concrete providing conditions outlined in our Technical Bulletin 'Resin Floors on Wet Concrete' are complied with.

Prepare concrete by mechanical abrasion method to CSP7-8.

Remove all concrete curing agents, contaminants and any other material likely to affect the adhesion of the Supascreed.

****Note****

If the substrate is an above grade slab and waterproofing is required to comply with NZBC E3, then tank the floor and cove upstands with a layer of 450gsm CSM fibreglass. This will provide a seamless waterproofing layer. Ensure the floor is clean, dry and prepared as above.

allnex Construction Products should be consulted when installing allnex Supascreed on any suspended floor slabs.

PLYWOOD | TIMBER:
Consult allnex for information

COVE TOPS: - http://www.allnexconstruction.com/pdf/Details_resin-floor-toppings.pdf
Install allnex cove upper termination metal strips: **5.2mm or 9.2mm rebated strip**.
Use a rebated wall cut if the coving strip cannot be used.
Install fibreglass CSM cloth in floor wall internal junctions.

STZ PREFILL: (for adding falls, slope modification and floor angles)
STZ prefill system types: see STZ technical literature.
The falls must be specified pre-tender. (Supascreed is 6mm thick and prefill may involve significant extra materials).
The quantities of materials required to raise the floor height at wall perimeters is often underestimated. To do this may involve significant extra costs and should be discussed and agreed. It is a very common for STZ prefill system to be used under Supascreed to create falls to drains and other filling applications. Normally for new work falls are laid in the concrete and fall to drains. However in refurbishment the drains and falls are incorrect. Sometimes new drains are installed. The Prefill create falls of at least 1: 50 to ensure no ponding water. (1:100 will fall but will have standing water in places).

QUALITY ASSURANCE:
The allnex Licensed Contractor shall ensure all QA checks have been undertaken prior to the installation process and subsequently during the installation process. The completed documentation must be made available to allnex and the client/clients authorised personnel.
The product is to be installed within the required control range to ensure a fully cured hard wearing monolithic floor topping system.
Information to be recorded daily is:

- Concrete sub-base or prefill mix.
- Material batch numbers used.
- Sequence of mixing, ratios and quantities and formula.
- Substrate moisture content & Substrate temperature.
- Ambient temperature | Ambient relative humidity.
- Daily detail of licenced contractors on-site.

PREPARATION: - Installation
Prime the correctly 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 6m²/litre/coat. Supascreed Primer Resin and Hardener are to be thoroughly mixed in the correct proportions and then diluted with clean potable water and remixed.
Wait until Supascreed Primer has turned clear before over-coating.

****Note****
Porous substrates may lead to blisters forming in the Supascreed topping due to air escape from the substrate.

Supascreed must be applied in such a manner to achieve a minimum 6mm thickness. Use screed box, bars or install angle strips as a guide. Accurately weigh and power mix until homogeneous Supascreed Resin |Supascreed Hardener and STZ Flooring aggregates in the correct proportions:

SUPASCREED MIXING RATIO: Flooring			**SUPASCREED M² COVERAGE Flooring @ 6mm:**	
Supascreed Resin	3 parts by weight		Supascreed Resin	1.38kg
Supascreed Hardener	1 part by weight		Supascreed Hardener	0.460kg
STZ Flooring Sand	6 parts by weight **~ to the combined mixed weight of the Resin and Hardener.**		STZ Flooring Sand	11.04kg

******Note******
Maximum Supascreed Resin: Filler (sand) ratio 1:7 parts by weight. Resin, Hardener and Sand are to be blended in an efficient mixer to ensure all ingredients are homogenously blended. Higher aggregate rates are used for coving.

Apply allnex Supascreed flooring to the correctly prepared and sealed substrate using a spreader box and/or a suitable glass, steel trowels, power float etc. Ensure the matrix is well compacted and free of ridges or unevenness. Successive mixes must be homogeneously blended together into wet allnex Supascreed mixes. Access to repair wet floor areas during installation can be achieved using crampons or special spiked shoes. Adequate lighting is to be provided to ensure defective surface finishing can be easily identified and corrected during the installation process.
Lubricate tools and equipment used during the installation with Methylated Spirits.

Use Acetone only to clean tools and equipment.

Ensure all finished edges of the Supascreed are supported to avoid damage. Supascreed may be applied to skirting's, coves and upstands if required with the use of specially formed trowels.

Optional coves and skirting's can be completed as the main floor is installed however they are best installed following installation of the floor. Floors must be protected during cove/skirting installation.

TOPCOAT:
Once finished and hardened apply the Supascreed Topcoat.
The Topcoat must be applied only to clean and dry surfaces.
Topcoat application rates depend on the Surface Finish Texture. (See Non- Slip Floor Definitions below)

****Note****
Additional topcoats will reduce surface texture and slip resistant properties.

Optional: For greater Chemical resistance use Surecote System 500 AR topcoat applied at 3m²/litre in place of the Supascreed Topcoat.

JOINTS:
All concrete control and construction joints should be carried through the Supascreed using K130 Epoxy Gold or PU40 sealant.

THINNING:
Do not thin. Lubricate tools with methylated spirits (mixer and barrows).

NON-SLIP: - floor definitions:
The contractor shall ensure that the surface finish in all zones is agreed with the client. (Samples to be supplied and agreed prior to installation).

allnex Rating	Description	CF Rating NZ/AS3661.1:1993	Examples Completely homogeneous floor	Topcoat Requirements	
				Number of coats	Spread Rate per litre
NR1	Smooth –steel trowel floated.	0.46	Dry areas e.g. Bakeries	1	6m²
NR2	Non-slip & Hard-Wearing – glass float.	0.56	Light-Wet areas e.g. Heavy-duty bakery.	1	5m²
NR3.A	Medium duty non-slip – Glass float finish and the 18/36 non-slip aggregate is broadcast into the wet surface. Apply a Medium Sprinkle with areas of no non-slip. Follow this with roller applied topcoat. This gives a good combination of Non-slip and cleanability.	0.73 R 11	Continually Wet areas with non-slip required. e.g. Light duty Meat, fish. Wet area Bakery.	2 1st Coat 2nd Coat	 4.00m² 6.00m²
NR3.B	Heavy duty non-slip – glass float and the 18/36 non-slip aggregate is broadcast into the wet surface. This is a full spread applied heavily. Follow this with roller applied topcoat.	R12	Heavy duty e.g. Butchery, abattoirs Fish Processing	2 1st Coat 2nd Coat	 2.5m² 4.00m²
NR4	Very sharp non-slip: glass float and is broadcast with 18/36 mixed 50/50 with Silicon carbide non-slip aggregate into the wet surface. Follow this with roller applied topcoat.	R13	Heavy duty processing with extra slip hazards.	2 1st Coat 2nd Coat	 2.5m² 4.00m²
NR5	Specialised very heavy duty nonslip. Refer to allnex for a specification.				

******Note******

1. The aggregates must be broadcast into the wet Supascreed body coat; not into topcoat.
2. The First Topcoat is Supascreed Resin: Final Coat is Supascreed Resin
3. Ensure the contractor supplies information on the above non-slip ratings and provides a cured sample showing the surface finish.

PRODUCT PROPERTIES:

Pot Life	$^{+}20^{0}$C ~50%RH	Slow Hardener 60 minutes Standard Hardener 45 minutes Fast Hardener 28 minutes
Hard Dry	$^{+}20^{0}$C ~50%RH	Slow Hardener 28 hours Standard Hardener 24 hours Fast Hardener 20 hours
Light Foot Traffic	$^{+}20^{0}$C ~50%RH	24 hours
Full Chemical Resistance	$^{+}20^{0}$C ~50%RH	5 days
Recoat	Anytime within 24 hours. After 24 hours: Severe mechanical abrasion	
SG kg/litre Resin | Hardener | Aggregate	2.148	
Thinning		
Clean up	allnex acetone	
Dangerous Good Class ~ Supascreed Primer ~ Supascreed Resin ~ Supascreed Hardener	 Hazard Class 9 | Packing Group III Hazard Class 9 | Packing Group III Hazard Class 8 | Packing Group III	
Packaging ~ Supascreed Primer ~ Supascreed Resin ~ Supascreed Hardener	 6.4 kg Kit 20kg | 200 kg 6.7 kg	
Shelf life	6 months from date of manufacture (After this period consult with allnex)	

COLOUR OPTIONS: Supascreed may be:

- Natural:
  This is a gold /natural colour. Clear resin where the ochre colours of the aggregates are seen. This is a durable option with least appearance change over time.
- Fully Tinted:
  The resin is fully coloured with tinters. The floor takes on a solid colour effect. Often Grey, Dark Grey, Black, Red etc. - see colour chart online.
- Coloured Chip Aggregates (sometimes referred to as Decorative Supascreed)
  Colour granules are added in different quantities (concentrations) into clear resin.

HEALTH & SAFETY: Refer safety data sheets (SDS).

- Wear appropriate safety equipment and clothing
- The use of fans to provide positive forced air draft and/or extraction is recommended.
- Avoid skin contact.

MAINTENANCE and CLEANING:

Resurfacing:

allnex recommend two options:

- Re-aggregating with Supascreed Traxite.
- A second option is Nuthane topcoat which offers a monolithic and non-slip coloured finish with no odours.

Repairs:

Can be undertaken with further new Supascreed applied directly.

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 waxed nature of our top-coating system 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.

DETAILS:

For details see the website: resin floors /industrial toppings / “details- Industrial floors” for more options.
http://www.allnexconstruction.com/pdf/Details_resin-floor-toppings.pdf

OTHER PRODUCT USE:
SUPASCREED CRS (Concrete Repair System) - Fairing Compound:

SUPASCREED MIXING RATIO: Medium Paste

Supascreed Resin	600 grams
Supascreed Hardener	200 grams
Plus Talc 325	1.200 kg
J61 silica sand	1.200 kg

SUPASCREED MIXING RATIO: Fine Paste

Supascreed Resin	600 grams
Supascreed Hardener	200 grams
Plus Talc 325	1.600 kg

FIXING OF PLANT AND MACHINERY:
Mechanical fixings into the substrate must be resin fixed. This is to ensure that there is no water migration into the substrate. Conventional expanding plugs, screws or anchors are not an acceptable fixing method.

PRODUCER STATEMENT:
allnex Construction Products state that Supascreed is compliant with E3 (internal water) and D1 (Access routes / slip resistance wet & dry). Complies with CLEANROOM and controlled environment AS/NZS ISO 14644.4: 2002 section E.2.1.4 Floors. That the floor shall be non-porous, slip resistant, abrasion resistant and resistant to chemicals. They shall support static and dynamic loads.

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