0657 NUPLEX SEAMLESS FLOORING

1 GENERAL

1.1 RESPONSIBILITIES

General
General: Apply resin based floor finishes to substrates, as documented, that satisfy the product performance requirements for the stated warranty life.

1.2 COMPANY CONTACTS

Nuplex technical contacts
Website: www.nuplexconstruction.com.au/?q=node/41

1.3 CROSS REFERENCES

General
Requirement: Conform to the following:

- *General requirements.*

XXX
- [complete/delete]

1.4 MANUFACTURER'S DOCUMENTS

Technical manuals
Website: www.nuplexconstruction.com.au/

Information available: Technical Data Sheets, Material Safety Data Sheets and selection guidance.

1.5 INTERPRETATION

Definitions
General: For the purposes of this worksection the definitions given below apply.

- Resin based seamless floor finish: Any combination of a resin based flooring system that combines two pack resins, with or without an aggregate, to provide a continuous floor coating without joints except those that may already exist in the substrate.
- Substrate: The building element to which the finish is applied.

1.6 INSPECTION

Notice
Inspection: Give sufficient notice so that inspection may be made of the following:

- Completion of substrate preparation.
- Completion of each coat in the flooring system.
- Completed application.

1.7 SUBMISSIONS

Samples
Resin based flooring generally: Build up a sample for each finish selected, on a fibre cement base, showing the thickness of each coat, the colour and aggregate arrangement.

Size: 300 x 300 mm minimum.

Identification
Labelling: Label each sample, giving brand, product name, and manufacturer's code reference (including the code for each coat of multi-coat work).

Prototype in situ sample
Location: [complete/delete]

Size (mm): [complete/delete]

Tests

Test results: Submit the following:

- Slip resistance site test to completed surfaces to AS/NZS 4663.
- Critical radiant flux type tests to AS ISO 9239.1.

Subcontractors

General: Submit names and contact details of proposed suppliers and applicators.

Nuplex Construction Products approval of applicator requirement: [complete/delete]

Materials and components

Manufacturer's data: Submit the Nuplex Construction Products published product data for each type of finish, and recommendations for its application in the project, including the following:

- Composition, thickness, finish and time between coats for multi-coat work.
- Material Safety Data Sheets.

2 PRODUCTS

2.1 MARKING

Identification

General: Deliver materials to the site in the manufacturer's original sealed containers legibly marked to show the following:

- Manufacturer's identification.
- Product brand name.
- Product type.
- Quantity.
- Product reference code and batch number.
- Date of manufacture.
- Material composition and characteristics such as volatility, flash point, light fastness, colour and pattern.
- Handling and installation instructions.

2.2 COLOUR

Colour selection

From the colour chart: Refer to the colour charts applicable to the following products:

- Qualipur™.
- Nuthane™. (HYPERLINK REMOVED BECAUSE IT DID NOT LINK TO A COLOUR CHART)

From the Australian Standard: Select colours for all other products supplied by Nuplex Construction Products from AS 2700.

2.3 SEAMLESS FINISHES

General description

Product	Finish type	Description	Typical resins	Coats	Aggregates	Thickness
Surecote™ 200 primer/sealer	Roller or spray applied	Concrete seal, clear or coloured	Epoxy	1 or 2 1st: 10 m^2/l 2nd 12 m^2/l	None	< 150 dry μm/coat
Creteseal AP	Roller or spray applied	Concrete seal, clear	Acrylic	1 or 2 1st: 6 m^2/l 2nd 9 m^2/l	None	100 – 150 dry μm
Creteseal WB Nano	Brush or spray	Concrete seal, clear	Water based acrylic and	2 - 3 16 m^2/l each	None	???

Product	Finish type	Description	Typical resins	Coats	Aggregates	Thickness
			polyurethane			
Aquaseal	Roller or spray applied	1. Concrete sealer, clear. 2. Admixture for repair mortars, tile adhesives or grouts.	Water based epoxy	1st: 6 m^2/l 2nd 8 m^2/l	None	To suit application. Refer to product data sheet.
Surecote™ 200 Standard	Roller applied	General floor coating	Epoxy 100% solids	1st: 3.5 m^2/l 2nd 5 m^2/l	As required if non slip	300 – 500 dry μm
Surecote™ 200 HS	Roller or spray applied	Low VOC floor coating	Epoxy 85% solids	1st: 5 m^2/l 2nd 8 m^2/l	As required if non slip	200 to 400 dry μm
Surecote™ 200 HS Novalac	Roller applied.	High chemical resistance	Epoxy 85%-95% solids	1st: 5 m^2/l 2nd 8 m^2/l 3rd 8 m^2/l	As required if non slip	200 to 400 dry μm
Surecote 200 FG	Roller applied	Easy application low odour workshop finish	2 part epoxy 100% solids	1st: 4 m^2/l 2nd 5 m^2/l	As required if non slip	300 to 500 dry μm
Surecote 220 MS	Roller or spray applied	Economical workshop finish	2 part epoxy	1st: 6 m^2/l 2nd 8 m^2/	As required if non slip	200 to 300 dry μm
Qualipur™ 372	Roller or spray applied	Internal abrasion resistant /waterproof floor coating	Polyurethane internal top coat	152 primer or 252 w'proof membrane @ 0.4 l/m^2 372 top coat 0.4 l/m^2	As required if non slip	< 1000 μm
Qualipur™ 461	Roller or spray applied	External abrasion resistant /waterproof floor coating	Polyurethane external top coat	152 primer or 252 w'proof membrane @ 0.4 l/m^2 461 top coat 0.4 l/m^2	As required if non slip	1000 μm
RapidFloor	Roller applied	Rapid cure internal or external abrasion resistant /waterproof floor coating	Methyl Methacrylate polymers	RapidFloor MMA Primer ≤ 6 m^2/l RapidFloor MMA ≥ 3 mm thick RapidFloor MMA Topcoat ≤ 5 m^2/l	Mixed into the resin system	3 mm minimum
RapidShield 0007 Clear	Roller or squeege	High gloss abrasion resistant clear coat	Epoxy ??? 100% solids	1st: 6 m^2/l ??? 2nd 8 m^2/???	None	??? μm
RapidShield 0008 High Build	Roller or squeege	High gloss abrasion resistant clear coat	Epoxy ??? 100% solids	1st: 6 m^2/l ??? 2nd 8 m^2/???	None	250 μm
RapidShield	Roller or	High gloss	Epoxy ???	1st: 6 m^2/l ???	None	250 μm

Product	Finish type	Description	Typical resins	Coats	Aggregates	Thickness
Colours	squeege	abrasion resistant coating, coloured	100% solids	2nd 8 m^2/???		
Revathane	Roller applied	High gloss abrasion resistant clear coat	Aliphatic polyurethane, non-yellowing.	1st: 6 m^2/l 2nd 9 m^2/	As required if non slip	100 to 200 dry μm
Surecote™ 200 Standard	Spread and sprinkle	Non slip general floor coating, coloured	Epoxy 100% solids	1st + aggregate, 2nd + aggregate, and 3rd coat.	As required if non slip	1.0 – 1.5 mm
Surecote™ 200 HS	Spread and sprinkle	Non slip general floor coating, coloured, low VOC	Epoxy 85% solids	1st + aggregate, 2nd + aggregate, and 3rd coat	As required if non slip	1.0 – 1.5 mm
Surecote™ 500 resin	Spread and sprinkle	Non slip general floor coating, clear	Epoxy	1st + aggregate, 2nd + aggregate, and 3rd coat	Coloured glass aggregate	1.0 – 1.5 mm
Surecote 500 Kitchen Grade	Spread and sprinkle	Non slip general floor coating, clear	Epoxy	1st + aggregate, 2nd + aggregate, and 3rd coat	Coloured glass aggregate ???	4.0 – 6.0 mm ???
Surecote™ 300 SL	Self levelling (self smooth)	Smooth high gloss finish, easy to clean	Epoxy	1st SC 200 primer 2nd SC 500 resin 3rd SC 300 SL	None	2 – 4 mm
Sureshield™	Trowel applied coating	Chemical resistant coating for heavy use	Polyester with styrene solvent	1st SS primer 2nd SS body 3rd SS sealer	Mixed into the resin system	8 mm
Sureshield™ VE	Trowel applied coating	Heavy use, wider range of chemical resistance	Vinyl ester with styrene solvent	1st SS primer 2nd SS/VE body 3rd SS/VE sealer	Mixed into the resin system	6 – 8 mm
Surecote™ 500	Slurry and broadcast	Medium use, uniform non slip appearance, gloss	Epoxy	1st SC 500 slurry with additional aggregate broadcast	Mixed into the resin system	4 – 6 mm
Surecote™ 500 AR 3	Slurry and broadcast	Medium use, uniform appearance, acid resistant, gloss	Epoxy	1st SC 500 AR, additional aggregate broadcast	Mixed into the resin system	4 – 6 mm
Nuthane™ SB	Slurry and broadcast	Medium use, wider range of chemical resistance, fast cure, non slip	Polyurethane	1st Epoxy primer 2nd Nuthane™, additional aggregate broadcast 3rd top coat	Mixed into the resin system	4 – 8 mm
Architectural Terrazzite™	Synthetic terrazzo,	Internal public spaces, e.g.	Polyester	1st primer 2nd trowel	Decorative marble mixed	8 – 10 mm, 7 – 8 mm

Product	Finish type	Description	Typical resins	Coats	Aggregates	Thickness
	high colour, fast cure	Malls, Foyers		applied 3rd sealer coat 4th five polish coats	into the resin system	after grinding
Architectural Terrazzite™ Mode E	Synthetic terrazzo high colour, low VOC	Internal public spaces, e.g. Malls, Foyers	Epoxy	1st epoxy primer 2nd trowel applied 3rd sealer coat 4th five polish coats	Decorative marble mixed into the resin system	8 – 10 mm, 7 – 8 mm after grinding
Architectural Terrazzite ZV	Synthetic terrazzo high colour, zero VOC	Internal public spaces, e.g. Malls, Foyers	Solvent free resin system	1st ZV primer 2nd trowel applied 3rd sealer coat 4th five polish coats	Decorative marble mixed into the resin system	8 – 10 mm, 7 – 8 mm after grinding
Terraflake™	Seamless flake flooring, abrasion resistant	Internal spaces	Epoxy primer + Revathane polyurethane Topcoats	1st SC 200 + flakes, 4 top coats Revathane polyurethane	Decorative vinyl paint flakes. Glass beads may be added for non-slip properties.	800 – 1000 μm
Hydroflor™	Seamless flake flooring, low VOC	Internal spaces schools, hospitals	Epoxy	1st SC 200 + flakes + 2 top coats SC 200 clear non yellowing epoxy	Decorative vinyl paint flakes. Glass beads may be added for non slip properties	800 – 1000 μm

The low VOC version of the seamless flake flooring system is not suitable for direct sunlight and may slowly 'yellow' over time.

3 EXECUTION

3.1 PREPARATION

Substrates

General: Ensure substrates conform to the **Substrate tolerance table** and are clean and free of any deposit or finish which may impair adhesion or location and functioning of movement joints.

Substrate tolerance table

Property	Length of straight edge laid in any direction	Max. deviation under the straight edge
Flatness Class A	3 m	3 mm
Smoothness	150 mm	1 mm
Projections	50 mm	0.5 mm

Cleaning concrete surfaces: Mechanically remove the following surface treatments:

- Sealers and hardeners.
- Curing compounds.

Concrete substrate correction: Remove projections and fill voids and hollows with a reinforced mortar or a polymer modified cementitious self smoothing and levelling compound recommended by the finish manufacturer as compatible with the seamless flooring system.

Moisture content: Do not commence installation unless:

- Concrete: The moisture content of the concrete has been tested to AS/NZS 2455.1 Appendix B and the values in clause 2.4.2 (c) have been obtained.

Substrate preparation – new concrete

Roller or spray applied, spread and sprinkle, self levelling and flake flooring systems:

- High pressure water blasting and/or acid etching.
- Diamond grinding.

Trowel applied, slurry and broadcast and synthetic terrazzo:

- Shot blasting.
- Scarifying.
- Diamond grinding.

Fixtures: Remove door stops and other fixtures, and refix in position undamaged on completion of the installation.

Substrate preparation – over existing sound tiles

Architectural Terrazzite™: Shot blast the surface and apply a fibreglass membrane with a laminating resin.

3.2 APPLICATION

Proprietary floor systems

Standard: To the product technical data sheets at www.nuplexconstruction.com.au.

Working environment

General: Do not start work before the building is enclosed, wet work is complete and dry, and good lighting is available. Protect adjoining surfaces.

Temperature: Do not install seamless flooring if the temperature of the substrate is ≤ 8^{o} or if the air temperature is ≥ 36^{o}.

3.3 JOINTS AND ACCESSORIES

Coves

Masonry floor and wall substrates: Form a coved fillet from a resin mortar mix as follows and apply the resinous floor coating:

- Radius: [complete/delete]
- Height: [complete/delete]

Applied coving: Provide a proprietary coved skirting as follows:

- Product: [complete/delete]
- Radius: [complete/delete]
- Height: [complete/delete]

Junctions

General: Finish junctions flush with adjoining surfaces. Where changes of floor finish occur at doorways locate the joint on the centreline of the closed door leaf.

Seamless flooring junctions

Junction type: [complete/delete]

Product: [complete/delete]

Accessories

Accessory type: [complete/delete]

Product: [complete/delete]

Movement joints

Location: Provide movement joints as follows:

- Over structural (isolation, contraction, expansion) joints.
- At junctions between different substrates.

Flooring: Where possible carry the seamless finish material over the edges of the control joint in the substrate. Provide a sealant joint as follows:

- Sealant width: 6 – 25 mm.
- Sealant depth: One half the joint width, or 6 mm, whichever is the greater.

- Sealant: Two-pack self-levelling non-hardening mould resistant polyurethane sealant applied over a backing rod. Finish flush with the tile surface.
- Trafficable floors: Shore hardness > 35.
- Backing rod: Compressible closed cell polyethylene foam with a bond-breaking surface.

Product: [complete/delete]

3.4 COMPLETION

Protection
General: Keep traffic off finished work for 48 hours or as indicated by the applicator, whichever is the greater.

Reinstatement
Extent: Repair or replace faulty or damaged work. If the work cannot be repaired satisfactorily, replace the whole area affected.

Warranties
Form: Contact Nuplex Construction Products.

Product: [complete/delete]

Application: [complete/delete]

Maintenance manual
General: Submit the Nuplex Construction Products published use, care and maintenance requirements.

4 SELECTIONS

4.1 SCHEDULES

Concrete sealers
Product: [complete/delete]

Colour: [complete/delete]

Location: [complete/delete]

General floor coating – roller or spray applied
Product: [complete/delete]

Aggregate: [complete/delete]

Slip resistance: Wet pendulum to AS/NZS 4586: [complete/delete]

Colour: [complete/delete]

Critical radiant flux: [complete/delete]

Location: [complete/delete]

General floor coating – spread and sprinkle
Product: [complete/delete]

Aggregate: [complete/delete]

Slip resistance: Wet pendulum to AS/NZS 4586: [complete/delete]

Colour: [complete/delete]

Critical radiant flux: [complete/delete]

Location: [complete/delete]

Self levelling finish
Product: Surecote™ 300 SL.

Colour: [complete/delete]

Critical radiant flux: [complete/delete]

Location: [complete/delete]

Trowel applied coatings
Product: [complete/delete]

Aggregate: [complete/delete]
Slip resistance: Wet pendulum to AS/NZS 4586: [complete/delete]
Colour: [complete/delete]
Critical radiant flux: [complete/delete]
Location: [complete/delete]

Slurry and broadcast coatings
Product: [complete/delete]
Aggregate: [complete/delete]
Slip resistance: Wet pendulum to AS/NZS 4586: [complete/delete]
Colour: [complete/delete]
Critical radiant flux: [complete/delete]
Location: [complete/delete]

Synthetic terrazzo
Product: [complete/delete]
Aggregate: [complete/delete]
Proprietary sealer/polish: [complete/delete]
Slip resistance: Wet pendulum to AS/NZS 4586: [complete/delete]
Colour: [complete/delete]
Critical radiant flux: [complete/delete]
Location: [complete/delete]

Seamless flake flooring
Product: [complete/delete]
Flakes: [complete/delete]
Proprietary sealer/polish: [complete/delete]
Aggregate: [complete/delete]
Slip resistance: Wet pendulum to AS/NZS 4586: [complete/delete]
Colour: [complete/delete]
Tactile indicators: [complete/delete]
Critical radiant flux: [complete/delete]
Location: [complete/delete]