

0657 NUPLEX SEAMLESS FLOORING**Branded worksection**

This branded worksection has been developed by NATSPEC in conjunction with **NUPLEX CONSTRUCTION PRODUCTS**. As with all NATSPEC worksections, it is the responsibility of the user to ensure it is completed appropriately for the project. The user should also check its applicability for local conditions and regulations. Copyright of the branded worksection remains with NATSPEC.

Worksection application

This worksection is applicable to resin based applied flooring and includes in situ resinous terrazzo flooring.

Related material located elsewhere in NATSPEC

Related material may be found in other worksections. For example:

- *Concrete finishes* for substrates..

Worksection on which this worksection relies

The following worksections must be included, if this worksection is used, to provide a complete specification:

- *General requirements*.

NATSPEC uses generic worksection names by default, whether or not there are branded equivalents. If you use a branded worksection instead of the corresponding generic, change cross references to it (e.g. in **Associated worksections**) to include the full branded name or change the branded worksection name to the same as the generic.

Since generic and branded worksections cover the same material, use only one, not both.

Material not included in NATSPEC

Some projects may include items not covered by NATSPEC. For these you may need to create new text, or modify this text or a suitable worksection.

Worksection cross-referencing

Other worksections that cross reference this worksection are:

- None.

Documenting this and related work

You may document this and related work as follows:

- Nominate the locations of finishes, finish abutments and movement joints on drawings to your office documentation policy.
- Similar formulations are offered as surface finish to walls and joinery. Consult the applicator and import material as appropriate to *Applied wall finishes* or *Joinery*.
- Slip resistance: Refer to NATSPEC TECHnote NTN DES 001.

Nuplex Construction Products product information

Published data sheets: Visit: www.nuplexconstruction.com.au.

- Technical data sheets.
- Product manuals.
- MSDS.

Nuplex Construction Products Contact

Technical advice: 07 3271 7324.

General enquiries: 1800 007 322

1 GENERAL

NUPLEX CONSTRUCTION PRODUCTS is a subsidiary of Nuplex Industries (Aust) Pty Ltd. The core activities are the manufacturing and distribution of resin based insitu flooring systems to the commercial and industrial construction industry.

NCP has been servicing Australasia with a select range of resin based flooring solutions for over 50 years. With an experienced technical sales team NCP are able to provide specifiers, flooring and building contractors with full design, application and specification details.

NCP distribute resin based flooring products to a nationwide network of approved contractors. Products range from decorative floor coatings, concrete floor sealers, hygienic non slip floors, chemical resistant flooring, internal and external elastomeric waterproof flooring systems and decorative thin set synthetic seamless terrazzo flooring.

NCP have offices in Brisbane, Sydney and Melbourne with distribution outlets in SA and WA.

1.1 AIMS

Responsibilities

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

The design aim is to select a flooring system with performance characteristics that satisfy the anticipated usage.

1.2 CROSS REFERENCES

General

General: Conform to the *General requirements* worksection.

The *General requirements* worksection contains umbrella requirements for referenced documents, inspections, tests, samples, contractor's submissions, proprietary items, manufacturers' recommendations, warranties, record drawings, operation and maintenance manuals. They need not be specified here unless you need to relocate them, for example if this is to be the specification for a package contract. In this case make sure that the interlocking contracts leave no loopholes, such as work by non-existent 'others', and have no overlaps.

Associated worksections

Associated worksections: Conform to *Concrete finishes*.

List additional worksections cross referenced by this worksection as appropriate. (*General requirements* references the *Common requirements* worksections. Do not repeat them here.) You may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

1.3 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.

Resin systems may include epoxies, polyesters, polyurethanes, vinyl esters and methyl methacrylates (MMA's).

- Substrate: The building element to which the finish is applied.

1.4 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.

Hold points, if required, should be inserted here.

1.5 SUBMISSIONS

Samples

If the specification does not state selected properties such as colour and texture, the effect of this clause is to require the submission of samples covering the full range of those properties. The specification should define the item with enough precision, either by description, or by reference to preselected samples, or as a proprietary item, to enable the contractor to identify (and price) it. Where the covering is specified as a proprietary item use this clause as a means of confirmation.

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]

Call for prototype panels only when large areas are specified. Delete if not required.

Tests

Test results: Submit the following:

- Slip resistance site test to completed surfaces to AS/NZS 4663.

Site testing for slip resistance may be critical for industrial flooring. Delete if not appropriate. See NATSPEC TECHnote NTN DES 001 on slip resistance.

- 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]

Note yes/no. Not all product systems need approval of the applicator. The need for specialist approved applicators depends on both the product and the circumstances of the location. Contact Nuplex Construction Products for advice.

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™.

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 1 st : 10 m ² /l 2 nd : 12 m ² /l	None	< 150 dry µm/coat
Creteseal	Roller or spray	Concrete seal, clear	Acrylic	1 or 2 1 st : 6 m ² /l	None	100 – 150 dry µm

Product	Finish type	Description	Typical resins	Coats	Aggregates	Thickness
	applied			2 nd 9 m ² /l		
Surecote™ 200 Standard	Roller or spray applied	General floor coating	Epoxy 100% solids	1 st : 3.5 m ² /l 2 nd 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	1 st : 5 m ² /l 2 nd 8 m ² /l	As required if non slip	200 to 400 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
Surecote™ 200 Standard	Spread and sprinkle	Non slip general floor coating, coloured	Epoxy 100% solids	1 st + aggregate, 2 nd + aggregate, and 3 rd 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	1 st + aggregate, 2 nd + aggregate, and 3 rd coat	As required if non slip	1.0 – 1.5 mm
Surecote™ 500 resin	Spread and sprinkle	Non slip general floor coating, clear	Epoxy	1 st + aggregate, 2 nd + aggregate, and 3 rd coat	Coloured glass aggregate	1.0 – 1.5 mm
Surecote™ 300 SL	Self levelling (self smooth)	Smooth high gloss finish, easy to clean	Epoxy	1 st SC 200 primer 2 nd SC 500 resin 3 rd SC 300 SL	None	2 – 4 mm
Sureshield™	Trowel applied coating	Chemical resistant coating for heavy use	Polyester with styrene solvent	1 st SS primer 2 nd SS body 3 rd 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	1 st SS primer 2 nd SS/VE body 3 rd SS/VE sealer	Mixed into the resin system	6 – 8 mm
Surecote™ 500	Slurry and broadcast	Medium use, uniform non slip appearance, gloss	Epoxy	1 st SC 500 slurry with additional aggregate broadcast	Mixed into the resin system	4 – 6 mm
Surecote™	Slurry and	Medium use,	Epoxy	1 st SC 500 AR,	Mixed into the	4 – 6 mm

Product	Finish type	Description	Typical resins	Coats	Aggregates	Thickness
500 AR	broadcast	uniform appearance, acid resistant, gloss		additional aggregate broadcast	resin system	
Nuthane™ SB	Slurry and broadcast	Medium use, wider range of chemical resistance, fast cure, non slip	Polyurethane	1 st Epoxy primer 2 nd Nuthane™, additional aggregate broadcast 3 rd top coat	Mixed into the resin system	6 – 10 mm
Architectural Terrazite™	Synthetic terrazzo, high colour, fast cure	Internal public spaces, e.g. Malls, Foyers	Polyester	1 st primer 2 nd trowel applied 3 rd sealer coat 4 th five polish coats	Decorative marble mixed into the resin system	8 – 10 mm, 7 – 8 mm after grinding
Architectural Terrazite™ Mode E	Synthetic terrazzo high colour, low VOC	Internal public spaces, e.g. Malls, Foyers	Epoxy	1 st epoxy primer 2 nd trowel applied 3 rd sealer coat 4 th 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 public spaces	Epoxy primer + polyurethane Topcoats	1 st SC 200 + flakes, 4 top coats polyurethane	Decorative vinyl paint flakes. Glass beads may be added for non-slip properties.	700 – 900 µm
Hydroflor™	Seamless flake flooring, low VOC	Internal spaces schools, hospitals	Epoxy	1 st 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	700 – 900 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

Flatness tolerance class: Nominate Class A in *Concrete finishes* and *Cementitious toppings* to resin based flooring locations as appropriate for the project. It is assumed smoothness and projection tolerance corrections form part of substrate preparation.

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.

Refer to TECHnotes NTN DES 008 on the preparation of concrete substrates. Nuplex Construction Products epoxy coatings can be applied to a concrete substrate with a minimum moisture content of 7%, allowing a contracted building program. For further details contact [at Nuplex Construction Products](#).

Substrate preparation – new concrete

High pressure water blasting and/or acid etching is ineffective if a curing compound has been applied to the concrete surface. Contact Nuplex Construction Products for an alternative treatment.

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

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

Acid etching may be called for by the floor system supplier and care must be taken to use dilute acid over short periods. Wet the floor before applying the acid solution and to remove all traces of acid by flushing with clean water. Check with Local Authorities for environmental issues.

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.

Contact Nuplex Construction Products for the rehabilitation of public spaces. The substrate preparation may vary according to the site circumstances.

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 $\leq 8^{\circ}$ or if the air temperature is $\geq 36^{\circ}$.

3.3 JOINTS AND ACCESSORIES

At areas of heavy use, particularly with wheeled traffic, consider specifying a prototype test for the joint product installation using the anticipated wheeled equipment.

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]

Surecote™ 300 SL (self levelling coating) and Nuthane™ SB can not be applied to a vertical upstand.

Applied coving: Provide a proprietary coved skirting as follows:

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

Application: Surecote™ 300 SL flooring, form coves with S/C 500 mortar at junctions with walls.

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]

Select from the following, or refer to details:

- V-joint: Form the V-joint in the concrete base and carry the finish into the joint.
- Overlap: Carry the finish 100 mm past the junction line to be overlapped by the adjoining finish.
- Set down: Provide a set down for the applied finish (nominate depth).
- Coved skirting: Extend the seamless finish over coving formed in the substrate.

Product: [complete/delete]

Accessories

Accessory type: [complete/delete]

Select from the following, or refer to details:

- Proprietary neoprene pattern divider strips for synthetic terrazzo.
- Nosings.
- Edge trim.

For floor wastes to wet areas consult with manufacturer for special requirements e.g. fittings to finish flush, and coordinate with the **Wet area floors** clause in the *Hydraulic design and install* worksection.

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.

Refer to the manufacturer's literature and edit as appropriate.

- 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]

Contact Nuplex Construction Products for advice.

Application: [complete/delete]

Contact Nuplex Construction Products for advice.

Maintenance manual

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

4 SELECTIONS**4.1 SCHEDULES**

Delete applications not required.

Concrete sealers

Application: Warehouse floors for dust control and the prevention of ingress of oil.

Product: [complete/delete]

Select from:

- **Surecote™ 200 primer/sealer** for internal clear or grey coloured applications.
- **CreteSeal** for clear internal or external applications.

Colour: [complete/delete]

Location: [complete/delete]

General floor coating – roller or spray applied

Application: Light industrial or commercial concrete low impact floors with very limited fork lift traffic.

Product: [complete/delete]

Select from:

- **Surecote™ 200 Standard** for internal clear or coloured applications with low VOC emissions.
- **Surecote™ 200 HS** for internal clear or coloured applications.
- **Qualipur™ 372** for coloured internal applications with abrasion resistance.
- **Qualipur™ 372/waterproof** for coloured internal waterproof applications with abrasion resistance such as Plant rooms.
- **Qualipur™ 461** for coloured external applications with abrasion resistance.
- **Qualipur™ 372/waterproof** for coloured external waterproof applications with abrasion resistance.

Aggregate: [complete/delete]

Nominate a proprietary aggregate or delete if the slip resistance value is given below, in which case the aggregate is the responsibility of the contractor.

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

Colour: [complete/delete]

Select from AS 2700.

Critical radiant flux: [complete/delete]

Critical radiant flux: Refer to BCA Vol.1 Spec. C1.10a.

Location: [complete/delete]

General floor coating – spread and sprinkle

Application: Light industrial or commercial concrete low impact floors offering a more durable surface and the ability to provide enhanced slip resistance. An economical finish that is suitable for ramps and internal wet area floors such as staff amenities but not shower cubicles.

Product: [complete/delete]

Select from:

- **Surecote™ 200 Standard** for internal clear or coloured applications with low VOC emissions.

- **Surecote™ 200 HS** for internal clear or coloured applications.
- **Surecote™ 500 resin** for internal clear applications.

Aggregate: [complete/delete]

Nominate a proprietary aggregate or delete if the slip resistance value is given below, in which case the aggregate is the responsibility of the contractor.

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

Colour: [complete/delete]

Select from AS 2700.

Critical radiant flux: [complete/delete]

Critical radiant flux: Refer to BCA Vol.1 Spec. C1.10a.

Location: [complete/delete]

Self levelling finish

Application: Prisons or other areas usually cleaned by non-contract cleaners, and pharmaceutical store rooms. This finish has a high gloss level and has no non slip properties.

Product: Surecote™ 300 SL.

Colour: [complete/delete]

Select from AS 2700.

Critical radiant flux: [complete/delete]

Critical radiant flux: Refer to BCA Vol.1 Spec. C1.10a.

Location: [complete/delete]

Trowel applied coatings

Application: Heavy industrial areas that require high values for slip resistance, abrasion resistance and chemical resistance, such as abattoirs, breweries, dairy factories, chemical bunds and battery charging areas. Visit the Nuplex Construction Products website for details of chemical resistance at www.nuplexconstruction.com.au

Product: [complete/delete]

Select from:

- **Sureshield™**.
- **Sureshield™ VE** for a wider range of chemical resistance.

Aggregate: [complete/delete]

Nominate a proprietary aggregate or delete if the slip resistance value is given below, in which case the aggregate is the responsibility of the contractor.

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

Colour: [complete/delete]

Select from AS 2700 or from the FGI colour chart available from Nuplex Construction Products ph 07 3271 7324.

Critical radiant flux: [complete/delete]

Critical radiant flux: Refer to BCA Vol.1 Spec. C1.10a.

Location: [complete/delete]

Slurry and broadcast coatings

Application: Industrial areas that require high values for slip resistance, abrasion resistance and chemical resistance where a reasonably uniform appearance is desired, such as food or beverage processing areas, supermarket preparation areas and pharmaceutical wet areas. Visit the Nuplex Construction Products website for details of chemical resistance at www.nuplexconstruction.com.au.

Product: [complete/delete]

Select from:

- **Surecote™ 500**.
- **Nuthane™ SB**.
- **Surecote™ 500 AR** for enhanced acid resistance.
- **Nuthane™** for faster curing.

Aggregate: [complete/delete]

Nominate a proprietary aggregate or delete if the slip resistance value is given below, in which case the aggregate is the responsibility of the contractor.

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

Colour: [complete/delete]

Base colour range.

Critical radiant flux: [complete/delete]

Critical radiant flux: Refer to BCA Vol.1 Spec. C1.10a.

Location: [complete/delete]

Synthetic terrazzo

Application: Internal public spaces that require a decorative finish with the capacity for custom artwork and high light reflectance. A significant application is the refurbishment of shopping mall floors that utilise the following properties:

- The coating can be applied and cured overnight, eliminating commercial down time.
- No set down is required.
- The coating can be applied over existing sound surfaces such as tiles or cementitious terrazzo.

Product: [complete/delete]

Select from:

- **Architectural Terrazzite™**.
- **Architectural Terrazzite™ Mode E** for low VOC emissions.

Aggregate: [complete/delete]

Nominate the proprietary aggregate component of the approved sample.

Proprietary sealer/polish: [complete/delete]

Select a product capable of achieving the nominated slip resistance.

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

Colour: [complete/delete]

Select from AS 2700.

Critical radiant flux: [complete/delete]

Critical radiant flux: Refer to BCA Vol.1 Spec. C1.10a.

Location: [complete/delete]

Seamless flake flooring

Application: A seamless non slip decorative coating available in a wide range of colours and flake combinations. The surface is reasonably abrasion resistant and sufficiently chemical resistant for garages, teaching laboratories, amenities blocks, and covered patios.

Product: [complete/delete]

Select from:

- **Terraflake™**
- **Hydroflor™** for low VOC emissions. This formulation has been approved by the Queensland Department of Public Works and Housing for use in internal unventilated areas and for public schools in particular. (Offer No. QP82 - Standing Offer Arrangement for Seamless Flooring Products.)

Flakes: [complete/delete]

Nominate the proprietary flake component of the approved sample.

Proprietary sealer/polish: [complete/delete]

Select a product capable of achieving the nominated slip resistance.

Aggregate: [complete/delete]

Nominate a proprietary aggregate or delete if the slip resistance value is given below, in which case the aggregate is the responsibility of the contractor.

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

Colour: [complete/delete]

Select from Nuplex Construction Products Terraflake™ / Hydroflor™ colour chart.

Critical radiant flux: [complete/delete]

Critical radiant flux: Refer to BCA Vol.1 Spec. C1.10a.

Location: [complete/delete]

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS/NZS 2455		Textile floor coverings - Installation practice
AS/NZS 2455.1	1995	General
AS 2700	1996	Colour standards for general purposes
AS/NZS 4663	2004	Slip resistance measurement of existing pedestrian surfaces
AS ISO 9239.1	2003	Reaction to fire tests for floor coverings

The following documents are mentioned only in the guidance text:

BCA Spec C1.10a	2006	Fire resistance - Fire hazard properties - General
NTN DES 001	2005	Slip resistance
NTN DES 008	2006	Preparation of concrete substrates

BCA citations of the above referenced standards include:

AS ISO 9239.1	2003	Reaction to fire tests for floor coverings
---------------	------	--------------------------------------------