

## SECTION 8 CONCRETE FINISHES

### 1 GENERAL

#### 1.1 AIMS

##### Responsibilities

General: Provide finishes to formed and unformed concrete surfaces which are as follows:

- Appropriate to the importance (visual or physical) of the concrete elements.
- Compatible with following trades and finishes.

#### 1.2 CROSS REFERENCES

##### General

General: Conform to the *General Requirements* worksection.

##### Associated worksections

Associated worksections: Conform to the following:

- *Concrete Formwork*; and
- *Concrete In Situ*.

#### 1.3 STANDARDS

##### General

Formed surfaces: To AS 3610.

#### 1.4 INTERPRETATIONS

##### Definitions

General: For the purposes of this worksection, the following definition applies:

- Green concrete: Concrete which has set but not appreciably hardened.

#### 1.5 INSPECTION

##### Notice

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

- Evaluation of the finishes to formwork.

#### 1.6 SUBMISSIONS

##### Execution documentation

Shop drawings: Submit formwork shop drawings including details of proposed form linings, form bolt positions, form facings, release agents and, where applicable, reuse of formwork.

#### 1.7 TOLERANCES

##### Surface quality

Formed surfaces: Confirm conformance with the surface finish requirements of AS 3610 for the surface class nominated in the **Formed surface finishes schedule**.

##### Flatness

Unformed surfaces: Confirm conformance with the **Flatness tolerance classes table** for the class of finish nominated using a straight edge placed anywhere on the surface in any direction.

##### Flatness tolerance class table

Class	Measurement	Maximum deviation (mm)
A	3 m straight edge	3
B	3 m straight edge	6

Class	Measurement	Maximum deviation (mm)
C	600 mm straight edge	6

## 1.8 SAMPLE PANELS

### General

Conformance: Supply sample panels to AS 3610 and in conformance with the **Sample panels schedule** for the application specified.

### Manufacture

General: Cast the panels using the formwork, concrete, compaction equipment, form release agents, curing and formwork removal methods which are to be used in the final work.

### Storage

General: Once accepted, maintain the panels on site undamaged and protected from the weather, as reference prototypes for future evaluation of completed work.

## 1.9 SURFACE TREATMENT

### General

Range: Do not proceed with the related work until the acceptable range of surface treatments has been determined.

## 2 PRODUCTS

### 2.1 MATERIALS

#### Surface hardeners, sealants and protectors

Supply: If required by the project documentation, provide proprietary products.

## 3 EXECUTION

### 3.1 SURFACE MODIFIERS

#### General

Application: Apply to clean surfaces in accordance with the manufacturer's requirements.

### 3.2 FORMED SURFACES

#### General

General: Provide formed concrete finishes in conformance with the **Formed surface finishes schedule**.

Damage: Do not damage concrete works through premature removal of formwork.

#### Curing

General: If forms are stripped when concrete is at an age less than the minimum curing period, commence curing exposed faces as soon as the stripping is completed.

#### Evaluation of formed surfaces

General: If evaluation of formed surface tolerance or colour is required, complete the evaluation before surface treatment.

#### Finishing methods

General: If soffits of concrete elements or faces of concrete columns are to have a finish other than off the form, provide details of proposed procedures.

Bush hammered finish: Remove the minimum matrix using bush hammering to expose the coarse aggregate, recessing the matrix no deeper than half the aggregate size, to give a uniform texture.

Exposed aggregate finish: Remove the vertical face forms while the concrete is green. Wet the surface and scrub using stiff fibre or wire brushes, using clean water freely, until the surface film of mortar is mechanically removed, and the aggregate uniformly exposed. Do not use acid etching. Rinse the surface with clean water.

Floated finishes:

- Sand floated finish: Remove the vertical face forms while the concrete is green. Wet the surface and rub using a wood float. Rub fine sand into the surface until a uniform colour and texture are produced.
- Grout floated finish: Remove the forms while the concrete is green. Dampen the surface and spread a slurry, using hessian pads or sponge rubber floats. Remove surplus slurry and work until a uniform colour and texture are produced.

Smooth rubbed finish: Remove the vertical face forms while the concrete is green. Wet the surface and rub using a carborundum or similar abrasive brick until a uniform colour and texture are produced.

**Surface repairs**

Surface repair method: If surface repairs are required, submit proposals.

**3.3 UNFORMED SURFACES**

**General**

General: Strike off, screed and level slab surfaces to finished levels, to the tolerance class noted in the **Unformed surface finishes schedule**.

**Surface finishes**

General: Provide surface finishes in conformance with the **Unformed surface finishes schedule**.

**Surface repairs**

Surface repair method: If surface repairs are required, submit proposals.

**Finishing methods – primary finish**

Machine float finish:

- After levelling, consolidate the surface using a machine float.
- Cut and fill and refloat immediately to a uniform, smooth, granular texture.
- Hand float in locations inaccessible to the machine float.

Steel trowel finish: After machine floating finish as follows:

- Use power or handsteel trowels to produce a smooth surface relatively free from defects.
- When the surface has hardened sufficiently, retrowel to produce the final consolidated finish free of trowel marks and uniform in texture and appearance.

Burnished finish: Continue steel trowelling until the concrete surface attains a polished or glossy appearance, uniform in texture, appearance and free of trowel marks and defects.

Wood float finish: After machine floating use wood or plastic hand floats to produce the final consolidated finish free of float marks and uniform in texture and appearance.

Broom finish: After machine floating and steel trowelling draw a broom or hessian belt across the surface to produce a coarse even-textured transverse-scored surface.

Scored or scratch finish: After screeding, give the surface a coarse scored texture using a stiff brush or rake drawn across the surface before final set.

Sponge finish: After machine floating and steel trowelling, produce an even textured sand finish by wiping the surface using a damp sponge.

**4 SELECTIONS**

**Unformed surface finishes schedule**

Property	Type
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	<b>A</b>	<b>B</b>	<b>C</b>
Location			
Flatness tolerance class			
Primary finish			
Supplementary finish			
Slip resistance classification to AS/NZS 4586			
Slip resistance treatment			
Slip resistance tests to AS/NZS 4663			
Surface modifier			