



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **PMC552051C Finish green concrete products**

**Revision Number: 1**

## PMC552051C Finish green concrete products

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the process of finishing green concrete products. It involves preparing and finishing surfaces and identifying and resolving process malfunctions.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency applies to operators in a concrete plant who are responsible for finishing green manufactured concrete products before they have been cured. The unit covers all finishes applied to concrete before curing (e.g. exposed aggregate) and assumes that all manufacturing operations up to final vibration and/or screeding the top surface flat have been covered by other units of competency.</p> <p>This unit includes:</p> <ul style="list-style-type: none"><li>• operation of concrete mixers</li><li>• measuring of ingredients and additives</li><li>• interpretation of formulae/mixing specifications</li><li>• matching concrete to specification</li><li>• finishing concrete to match samples</li><li>• spraying concrete to make exposed aggregate</li><li>• applying sealers and curing compounds to wet concrete</li><li>• the operation of all ancillary equipment.</li></ul> <p>This competency is typically performed by operators working either independently or as part of a work team.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to surface finish green concrete	<ul style="list-style-type: none"><li>1.1. Check drawings and work orders for finish requirements</li><li>1.2. Check product against relevant specification</li><li>1.3. Check required condition and set state of concrete</li><li>1.4. Prepare/mix surface finish as required</li><li>1.5. Prepare finish equipment</li></ul>
2. Finish surface green concrete as required	<ul style="list-style-type: none"><li>2.1. Apply finish/spray surface in accordance with procedures</li><li>2.2. Inspect surface after initial finishing and patch/rework as required</li><li>2.3. Continue finishing/monitor finish as appropriate</li><li>2.4. Inspect final finish after appropriate time and make any changes required to meet specification</li><li>2.5. Dispose of waste to requirements</li></ul>
3. Rectify routine problems	<ul style="list-style-type: none"><li>3.1. Identify the range of faults that can occur during the operation</li><li>3.2. Determine and rectify fault causes in accordance with procedures/work instructions</li><li>3.3. Identify and rectify equipment failure causes in accordance with procedures/work instructions</li><li>3.4. Ensure appropriate records and log books of equipment operations are maintained to meet procedures/work instructions</li><li>3.5. Identify non-routine problems and report to designated person</li></ul>
4. Control hazards	<ul style="list-style-type: none"><li>4.1. Identify hazards from the job to be done</li><li>4.2. Identify other hazards in the work area</li><li>4.3. Assess the risks arising from those hazards</li><li>4.4. Implement measures to control those risks in line with procedures</li></ul>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- recognising conditions which will lead to out of specification product
- implementing the enterprise's procedures within time constraints and in a manner relevant to the conducting of operations
- conveying information relevant to the operation clearly and effectively
- reading and numeracy to interpret workplace documents and technical information

#### Required knowledge

Required knowledge includes:

- principles of concrete mixing (if mixed by operator)
- principles of veneer adhesion
- principles of concrete finishing
- distinguish between causes of faults such as:
  - material inconsistencies
  - mixing irregularities
  - application
  - finishing difficulties

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that the process be understood and that the importance of critical material properties, mixing variables and surface finishing techniques is known. Competence must be demonstrated in the ability to recognise and analyse potential situations requiring action and then in implementing appropriate corrective action.

Consistent performance should be demonstrated. In particular look to see that:

- surface finish matches specification and is consistent
- coverage is adequate and consistent
- sealer coverage is adequate and consistent.

Competence must be demonstrated in the operation of all ancillary equipment to the level required for this unit of competency.

#### Context of and specific resources for assessment

Assessment will require access to an operating plant over an extended period of time, or a suitable method of gathering evidence of operating ability over a range of situations.

Assessment will occur over a range of situations which will include disruptions to normal, smooth operation.

Simulation or case studies/scenarios may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual plant and will include 'walk-throughs' of the relevant competency components. A bank of scenarios/case studies/what ifs and questions will be required to probe the reasoning behind observable actions.

#### Method of assessment

In all plants it may be appropriate to assess this unit concurrently with relevant teamwork and communication units.

Individual enterprises may choose to add prerequisites

<b>EVIDENCE GUIDE</b>	
	and co-requisites relevant to their processes.
<b>Guidance information for assessment</b>	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

#### Procedures

All operations are performed in accordance with standard procedures and work instructions

#### Surface finishes

Surface finishes may include:

- fine wood float
- rough wood float
- hand steel float
- broomed
- helicopter steel float
- raked finish

Surface finishes may be applied before or after veneering

Surface finish after veneering may then also require further finish after curing

#### Typical problems

Typical problems may include:

- off colour batches
- bleeding between concrete mixes
- consistency of veneer and cover
- consistency of spray pattern
- adequacy and consistency of surface finish
- wet patching of surface finish

#### Occupational health and safety (OHS)

All operations are subject to stringent OHS requirements and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and OHS requirements, the OHS requirements take precedence

## Unit Sector(s)



<b>Unit sector</b>	Operational/technical
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## Competency field

<b>Competency field</b>	
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## Co-requisite units

<b>Co-requisite units</b>		