



**Australian Government**

# **MSFFL3047 Polish concrete floors using planetary machines**

**Release: 1**

# MSFFL3047 Polish concrete floors using planetary machines

## Modification History

Release 1 - New unit of competency

## Application

This unit of competency covers selecting and operating floor surfacing machines designed for wet or dry polishing of concrete floors. It applies to concrete cleaning and polishing operations in on-site commercial and residential environments and involves application of skills and knowledge at a sub-trade worker level.

Licensing, legislative or certification requirements may apply to this unit and relevant state/territory and local government agencies should be consulted to determine any necessary certification or licensing for undertaking flooring work. Access to construction sites requires certification of general induction training specified by the National Code of Practice for Induction for Construction Work (ASCC 2007).

## Pre-requisite Unit

## Competency Field

## Unit Sector

Flooring technology

## Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Select concrete polishing equipment	1.1	Planetary concrete grinding/polishing equipment and attachments are selected consistent with the needs of the job
		1.2	Hand edge and corner polishing tools are selected consistent with the needs of the job
		1.3	Equipment is checked for serviceability and safety and any faults are corrected or processed for repair

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|---|-----------------------------|-----|---|
| 2 | Clean and prepare sub-floor | 2.1 | Applicable work health and safety (WHS), legislative and organisational requirements relevant to polishing concrete floors are followed including selecting, correctly fitting and using personal protective equipment              |
|   |                             | 2.2 | Fittings, fixtures, loose debris, dirt and other items are removed from the sub-floor   |
|   |                             | 2.3 | Sub-floor is inspected to determine the need for removal of existing adhesive, paint or other contaminants  |
|   |                             | 2.4 | Planetary polishing machine, appropriate machine rotation speed, direction and diamond tools are selected for removal of contaminants   |
|   |                             | 2.5 | Machine is attached to a suitable power supply, emergency stop is released, the machine powered up and contaminants are removed in accordance with manufacturer specifications  |
| 3 | Polish the floor            | 3.1 | Machine is attached to a suitable power supply, emergency stop is released, the machine powered up, a passing pattern established and main area is polished to the required standard in accordance with manufacturer specifications |
|   |                             | 3.2 | Outer zones are overlapped and passes staggered to achieve desired finish   |
|   |                             | 3.3 | Machine operation is monitored constantly to ensure motor/motors are running within manufacturer's safe operational limits and no electrical faults are evident   |
|   |                             | 3.4 | Perimeter of the designated area is polished using edge and corner polishing equipment and appropriate attachments  |
|   |                             | 3.5 | Diamond polishing tools are examined for wear and exchanged, when required, throughout the polishing process  |
|   |                             | 3.6 | Excessive wear of polishing tools is recognised and remedial action taken as required   |
|   |                             | 3.7 | Floor area is cleaned, inspected and re-worked as required  |

- 4 Clean up work area and tools
  - 4.1 All tools and grinding/polishing equipment are cleaned, maintained and stored
  - 4.2 Equipment is cleaned, maintained and stored
  - 4.3 Work area is cleared and waste removed

## Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

## Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Range is restricted to essential operating conditions and any other variables essential to the work environment.

### Legislative requirements include:

- applicable legislation from all levels of government that affect organisational operation
- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- work health and safety (WHS)
- the environment
- equal employment opportunity (EEO)
- anti-discrimination
- relevant industry codes of practice
- duty of care and heritage

### WHS requirements include:

- Commonwealth, state or territory legislation and regulations
- organisational safety policies and procedures
- the use of personal protective equipment and clothing
- firefighting equipment
- first aid equipment
- hazard and risk control and elimination
- control of hazardous materials and substances
- manual handling, including lifting and carrying

### Organisational requirements include:

- legal, organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- WHS

- emergency and evacuation
  - ethical standards
  - recording and reporting
  - access and equity principles and practices
  - equipment use, maintenance and storage
  - environmental management (waste disposal, recycling and re-use guidelines)
- Types of concrete polishing equipment and supplies include:**
- single headed, double headed and planetary action grinders/polishers
  - dust/vacuum systems
  - diamond abrasives
- Selection of diamond tool segments includes:**
- half set (for contaminant removal e.g. glue when a flat floor finish is not required)
  - full set (for flattening)
- Diamond abrasive wear includes influence of:**
- hardness of material being ground (e.g. aggregate and sand abrasiveness)
  - the grinding/polishing pressure
  - hardness of the bond
  - diamond grit size
  - number of segments
  - presence of water
  - use of additional abrasives
- Planetary machine maintenance includes:**
- ensuring all external electrical fittings are sound, effective and dry
  - checking tightness of head locks
  - inspecting heads for slop or broken 'fingers' (spiring steel heads)
  - effectiveness of the planetary seal
  - condition of the chain ring
  - condition of the drive sprocket
  - condition of belt tensioner
  - cleanliness of machine electrical cabinet
  - current electrical safety tags fitted
- Instructions include:**
- equipment manufacturer specifications and operational procedures
  - workplace procedures relating to WHS, tool handling and operation, reporting and communication
  - work instructions, including job sheets, plans, drawings and designs
- Sources of power supply include:**
- single or three-phase

- Attachments include:**
- air cleaning/vacuum attachment
- Fault reporting includes:**
- verbal or written reporting
- Personal protective equipment includes:**
- that prescribed under legislation, regulation and enterprise policies and practices
- Fittings and fixtures include:**
- nails
  - door stops
  - gripper strips
  - metal or other material mouldings

## Unit Mapping Information

No equivalent unit

## Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>