



Australian Government

MSFFL3049 Apply densifiers and sealers to concrete surfaces

Release: 1

MSFFL3049 Apply densifiers and sealers to concrete surfaces

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers selecting densifying and sealing materials appropriate for the job, preparing for the work and applying the selected materials to concrete floors prior to polishing. It applies to a wide variety of flooring technology operations in an on-site environment and involves application of skills and knowledge at a 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	Identify and prepare for work requirements	1.1	Applicable work health and safety (WHS), legislative and organisational requirements relevant to the application of densifiers and sealers are verified and complied with
		1.2	Instructions and/or plans are read and interpreted to identify process required to complete work tasks
		1.3	Relevant densifying and sealing materials are selected with regard to job requirements, manufacturer recommendations and client expectations
		1.4	Selected materials are assessed as being compatible with the surface to be treated

- | | | | |
|---|------------------------------------|-----|--|
| | | 1.5 | Application tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition |
| | | 1.6 | Surface to be densified or sealed is inspected and assessed as being ready for application, with any minor surface imperfections corrected and signs erected to warn others of the application process |
| | | 1.7 | Work sequence is planned to ensure efficiency and quality of application |
| | | 1.8 | WHS requirements, including isolation, ventilation and other personal protection needs, are observed throughout the work |
| 2 | Apply densifying or sealing system | 2.1 | Ventilation is checked before application, and all WHS requirements are met, including use of personal protective equipment |
| | | 2.2 | Environmental protection regulations are complied with |
| | | 2.3 | Surface is wetted and densifier or sealing material is applied in accordance with manufacturer recommendations |
| | | 2.4 | Recommended drying times are observed |
| | | 2.5 | Applied material is checked when dry to ensure it meets the requirements of the job |
| 3 | Complete housekeeping | 3.1 | Unused materials are resealed and stored |
| | | 3.2 | Tools and equipment are cleaned, maintained and stored |
| | | 3.3 | Work area is cleaned and waste material is removed and disposed of safely |
| | | 3.4 | Barriers and signs are removed and stored |
| | | 3.5 | Workplace documentation/reporting is completed |

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: | <ul style="list-style-type: none">• 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: | <ul style="list-style-type: none">• 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: | <ul style="list-style-type: none">• 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)
Instructions include:	• workplace procedures relating to the use and operation of tools and equipment • workplace instructions, including job sheets, plans, drawings and designs • workplace procedures relating to reporting and communications • manufacturer recommendations for the use of equipment and materials
Densifiers and sealers include:	• reactive concrete densifiers using colloidal silica to harden and densify new or older concrete surfaces • densifiers and sealers protect concrete from stains, dust production and wear, and supports polishing
Application methods include:	• pour and brush spreading • low-pressure, airless spraying
Surface inspection includes:	• ensuring that surface is free from dust and debris, moisture content is acceptable and stable and any contaminants are adequately removed
Personal protective equipment includes:	• that prescribed under legislation, regulation and enterprise policies and practices • isolation processes, including barriers, tapes and entry access controls, breathing support and ventilation extraction systems

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFFL3049 Apply densifiers and sealers to concrete surfaces

Modification History

Release 1 - New unit of competency

Performance Evidence

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying densifiers and sealers to concrete floors
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
- Achieve a final densified and sealed finish in accordance with accepted industry practices
- Complete application of densifying and sealing products to both new and older concrete surfaces
- Modify activities to cater for variations in workplace contexts and environment
- Identify any application faults/problems and identify and carry out corrective action
- Communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- Use pre-checking and inspection techniques to anticipate concrete surface problems to avoid re-work and wastage
- Recognise and respond to circumstances outside instructions or personal competence
- Plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, work flow interruptions or wastage
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate densifier or sealer material requirements
- Maintain current knowledge of:
 - application tools and materials
 - concrete densifier and sealer application techniques
- Use the workplace technology related to the application of finishes, including tools, equipment, calculators and measuring devices
- Interpret the technical specifications of materials and analyse their properties to optimise their use

Knowledge Evidence

- State or territory WHS legislation, regulations, standards and codes of practice relevant to the application of densifiers and sealers
- Organisational and site standards, requirements, policies and procedures for densifying and sealing of concrete
- Methods of concrete floor preparation
- Characteristics of densifier and sealer products in relation to ventilation and reaction to change of temperature and relative humidity
- Type, characteristics, uses and limitation of densifier and sealer materials, including manufacturer recommendations
- Types and uses of application tools and equipment
- Workplace safety systems related to densifier and sealer uses and application processes
- Work flow in relation to the application of densifiers and sealers to concrete floors
- Environmental protection requirements
- Established communication channels and protocols
- Relevant problem identification and resolution
- Appropriate mathematical procedures for estimation and measurement
- Procedures for the recording, reporting and maintenance of workplace records and information.

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to a location relevant to the application of densifiers and sealers to concrete surfaces.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>