



Australian Government

CPCCPD3030B Apply protective paint coating systems

Release 1

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Modification History

Photovoltaic (solar) panels added to range statement
Equivalent to CPCCPD3030A

Unit Descriptor

This unit of competency specifies the outcomes required to apply specialised paint coating systems as a protective measure against atmospheric conditions, sanitation and hygiene risks and the impacts of high traffic areas.

The unit includes planning and preparation for the work, preparation of the work area and materials, application of the coating system and completion of clean-up activities.

Application of the Unit

This unit of competency supports the attainment of the understanding and skills to apply protective coatings, which may include working with others and as a member of a team.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

This unit contains employability skills.

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.

Elements and Performance Criteria

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|---|--|-----|---|
| 1 | Plan and prepare. | 1.1 | Work instructions and operational details are obtained using relevant <i>information</i> , confirmed and applied for <i>planning and preparation</i> purposes. |
| | | 1.2 | <i>Safety (OHS)</i> requirements are followed in accordance with safety plans and policies. |
| | | 1.3 | Signage and barricade requirements are identified and implemented. |
| | | 1.4 | Plant, <i>tools and equipment</i> are selected to carry out tasks, including <i>work platforms</i> where required are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement. |
| | | 1.5 | Materials quantity requirements are calculated in accordance with plans, specifications and <i>quality requirements</i> . |
| | | 1.6 | <i>Materials</i> appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use. |
| | | 1.7 | <i>Environmental requirements</i> are identified for the project in accordance with environmental plans and regulatory obligations and applied. |
| 2 | Prepare surfaces for protective coating. | 2.1 | Suitability of <i>surface</i> for protective <i>paint coating</i> is determined in accordance with manufacturer recommendations and job specifications. |
| | | 2.2 | <i>Surface preparation method</i> is correctly selected in accordance with the environment, finish and substrate |

- requirements.
- 2.3 Surface is prepared to manufacturer specifications in compliance with substrate requirements, specifications and relevant standards.
 - 2.4 Surface imperfections are repaired or stopped, filled and sanded to a smooth finish ready for the protective coating in accordance with manufacturer recommendations and job specifications.
- 3 Apply protective coating system.
 - 3.1 Job location is checked to ensure provision of adequate ventilation and precautions taken to prevent fire and explosion.
 - 3.2 **Application for paint coating** is selected consistent with the job location, type of paint, type and condition of surface and climatic conditions.
 - 3.3 Protective coating system is applied and finished in accordance with job/manufacturer specifications and relevant standards.
 - 3.4 **Measurement and dry and wet testing** are carried out in accordance with manufacturer specifications and relevant standards.
 - 4 Clean up.
 - 4.1 Waste and unwanted materials are removed and placed into job waste bins or rubbish stockpile in accordance with sound work practices and compliance with the environmental requirements.
 - 4.2 Painting tools, equipment and plant are cleaned with correct solutions and without damage, and stored safely and effectively to manufacturer specifications.
 - 4.3 Unused materials are sealed and stored/stacked in accordance with standard material handling practices and techniques and company requirements.
 - 4.4 **Paint waste, water and solvents** used in cleaning painting equipment are disposed of in an environmentally sustainable manner and in accordance with relevant legislative requirements.
 - 4.5 Work area is cleared and materials disposed of or recycled in a manner to avoid spontaneous combustion

and in accordance with legislation, regulations, codes of practice and job specification.

Required Skills and Knowledge

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

Required skills

Required skills for this unit are:

- communication skills to:
 - determine requirements
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - read and interpret:
 - documentation from a variety of sources
 - drawings and specifications
 - report faults
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- evaluating own actions and making judgments about performance and necessary improvements
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- organisational skills, including the ability to plan and set out work
- recognising procedures, following instructions, responding to change and contributing to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems
- teamwork skills to coordinate own work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
 - use a range of mobile technology, such as two-way radio and mobile phones
 - voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

- Australian Paint Approval Scheme (APAS) classifications
- hazards associated with solvent vapour, chemical fumes, gases, harmful dusts, metal chips, abrasive grit and asbestos fibres

- impact of atmospheric conditions and high traffic on new and existing structures and coatings
- job safety analysis (JSA) and safe work method statements
- material safety data sheets (MSDS)
- materials storage and environmentally sustainable waste management, including correct disposal of water-based, latex-based and solvent-based paints
- painting and decorating terminology
- plans, drawings and specifications
- processes for the calculation of material requirements
- protective paint coating application equipment and techniques and their uses and limitations
- protective surface coating technology
- quality requirements
- solid waste and paint sludge disposal techniques and relevant legislation, including Environmental Protection Authority (EPA) and local Council regulations
- types of commonly used protective paint coatings, their uses and limitations
- types of paints, including the characteristics and uses of paint materials with various volatile organic compound (VOCs) levels and alternative and natural paints
- workplace and equipment safety requirements.

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

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

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

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations
- comply with organisational policies and procedures

including quality requirements

- safely and effectively operate and use tools, plant and equipment
- communicate and work effectively and safely with others
- prepare an application of a minimum of three different protective paint coating systems of at least 1 square metre to specification
- dispose of all paint types in an environmentally sustainable way compliant with relevant local legislation and regulations
- clean and store painting equipment using environmentally sustainable methods and work practices including waste reticulation systems.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training

Package

- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

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.

Information includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions, where specified
- MSDS
- memos
- regulatory and legislative requirements pertaining to the application of protective paint coating systems
- relevant Australian standards
- safe work procedures relating to the application of protective paint coating systems
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.

Planning and preparation include:

- assessment of conditions and hazards
- determination of work requirements and safety plans and policies
- equipment defect identification
- work site inspection.

Safety (OHS) is to be in accordance with state and territory legislation and regulations and project safety plan and may include:

- emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation
- handling activities that may require the assistance of others or the use of manual or mechanical lifting devices where size, weight or other issues, such as a disability are a factor
- hazard control
- hazardous materials and substances
- organisational first aid
- PPE prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
 - earth leakage boxes
 - electrical and fire and/or explosion from combustible materials

- falling objects
- lighting
- manual handling
- photovoltaic (solar) panels
- power cables, including overhead service trays, cables and conduits
- restricted access barriers
- solvents, lead, chemicals, fumes/gases
- surrounding structures
- traffic control
- trip hazards
- work access platforms
- work site visitors and the public
- working at heights
- working in confined spaces
- working in proximity to others, work site visitors and the public
- use of firefighting equipment
- use of tools and equipment
- workplace environmental requirements and safety.

Tools and equipment include:

- brushware
- brushware accessories
- buckets
- covers
- drop sheets
- duster brushes
- hand and mechanical wire brushes
- hand sanders
- high pressure water blasters
- mechanical grinders
- mechanical sanders
- paint pots and buckets
- paint stirrers
- rags
- roller accessories
- roller frames
- scrapers
- spray equipment
- wet and dry film thickness gauges.

Work platforms include:

- aluminium mobile scaffolds
- elevated work platforms
- hop ups
- in situ scaffold erected by qualified personnel
- ladders
- planks
- scissor lifts
- stepladders
- trestles.

Quality requirements include:

- internal company quality policy and standards
- manufacturer specifications, where specified
- relevant regulations, including Australian standards
- workplace operations and procedures.

Materials include:

- cleaning aids
- cleaning chemicals
- solvents.

Environmental requirements include:

- chemical fumes
- clean-up management
- dust and noise
- low odour and emissions
- stormwater protection
- waste management.

Surface to be prepared and coated:

- may be:
 - new
 - previously coated
- includes:
 - concrete
 - fibreglass
 - metallic (iron, steel, ferrous and non-ferrous metals)
 - plastics, including polyvinyl chloride (PVC).

- Paint coating*** includes:
- polyurethane primer (two pack)
 - epoxy primer (two pack)
 - high build epoxy
 - high build chlorinated rubber.
- Surface preparation method*** includes:
- abrasive blasting
 - chemical stripping
 - grinding
 - heat gun
 - sanding
 - scraping (mechanical and hand)
 - washing down using sugar soap
 - water blasting.
- Application:***
- is to comply with relevant Australian standards.
- Paint coating*** includes:
- corrosion control
 - decoration
 - hygiene and sanitation protection
 - trafficable areas.
- Measurement and dry and wet testing*** techniques:
- are those required to confirm that wet film meets specifications.
- Paint waste, water and solvents*** disposal includes:
- use of manual and machine environmentally sustainable cleaning methods
 - cleaning water re-cycling or professional disposal
 - solid waste disposal requirements

Unit Sector(s)

Functional area

Unit sector Construction

Custom Content Section

Not applicable.