



Australian Government

Department of Education, Employment and Workplace Relations

CPCCPD3024A Apply paint by spray

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies the outcomes required to apply paint by spray onto different surfaces to form a protective paint finish.

The unit includes planning and preparation for the work, preparation of materials and application area, setting up and testing of the spray equipment, application of paint and completion of clean-up activities.

Application of the Unit

Application of the unit

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

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units

CPCCOHS2001A

Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

Employability skills 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

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare.	<p>1.1. Work instructions and operational details are obtained using relevant <i>information</i>, confirmed and applied for <i>planning and preparation</i> purposes.</p> <p>1.2. <i>Safety (OHS)</i> requirements are followed in accordance with safety plans and policies.</p> <p>1.3. Signage and barricade requirements are identified and implemented.</p> <p>1.4. Plant, <i>tools and equipment</i> selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement.</p> <p>1.5. Materials quantity requirements are calculated in accordance with plans, specifications and <i>quality requirements</i>.</p> <p>1.6. Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.</p> <p>1.7. <i>Environmental requirements</i> are identified for the project in accordance with environmental plans and regulatory obligations and applied.</p>
2. Prepare materials and application area.	<p>2.1. Area is set up for application processes to suit spray system being used.</p> <p>2.2. Adjoining surfaces to application area are protected by masking off or covering prior to application of spray paint.</p> <p>2.3. Adequate ventilation to application area is provided to maintain a safe environment.</p> <p>2.4. Measures are taken to ensure application area remains free of dust and foreign matter.</p> <p>2.5. <i>Paint</i> is mixed and viscosity adjusted to allow for application process for spray paint finishing materials, in accordance with equipment and manufacturer requirements and plans and specification.</p>
3. Set up and test spray equipment.	<p>3.1. <i>Spray equipment, accessories and lines</i> for selected <i>spray system</i> are identified, selected and set up in the operating location in accordance with manufacturer recommendations, plans and specification.</p> <p>3.2. Fittings are checked for function and security prior to use in accordance with manufacturer recommendations.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Apply paint using the spray system.	<p>3.3. Safety devices are identified and tested, and defects corrected in accordance with standard operational and manufacturer requirements.</p> <p>4.1. Spray equipment is operated to standard operating procedures in accordance with manufacturer recommendations.</p> <p>4.2. Paint is applied to surface using correct application technique to achieve an even finish with opacity and sheen level in accordance with job specification.</p> <p>4.3. Defects in coating are identified and corrective action is taken to achieve required spray paint finish in accordance with the job specification.</p>
5. Clean up and store equipment.	<p>5.1. Spray gun and associated components and equipment are dismantled, checked, cleaned and maintained in accordance with manufacturer recommendations and operator's manual.</p> <p>5.2. Spray paint materials and solvents are stored safely to manufacturer specifications and company procedures.</p> <p>5.3. <i>Paint waste, water and solvents</i> used in cleaning painting equipment are disposed of in an environmentally sustainable manner and in accordance with relevant legislative requirements</p> <p>5.4. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.</p>

Required Skills and Knowledge

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

REQUIRED SKILLS AND KNOWLEDGE

- 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
- compatibility of surface coating to substrates
- 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
- paint types, their uses and limitations
- painting and decorating terminology
- plans, drawings and specifications
- preparatory materials relevant to spray operations
- processes for the calculation of material requirements
- quality requirements
- rules, regulations, Australian standards and codes of practice of spray painting
- solid waste and paint sludge disposal techniques and relevant legislation, including Environmental Protection Authority (EPA) and local Council regulations
- spray equipment types, characteristics, uses and limitations

REQUIRED SKILLS AND KNOWLEDGE

- techniques for the application of paint by spray
- 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 including respiratory protection.

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

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
- apply by spray to specification the following (with finishes being to specification, including in terms of defects, thickness, sheen, opacity, colour and sharpness):
 - one acrylic and one alkyd or solvent paint system to at least 6 square metres
 - airless applicator of acrylic paint

EVIDENCE GUIDE

Context of and specific resources for assessment

- HVLP
- application to a door of at least 2 square metres
- 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 dispose of all paint types in an environmentally sustainable way compliant with relevant local legislation and regulations.

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

EVIDENCE GUIDE

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

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 applying paint by spray
- relevant Australian standards
- safe work procedures relating to undertaking a applying paint by spray
- 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:

RANGE STATEMENT

- earth leakage boxes
- electrical and fire and/or explosion from combustible materials
- falling objects
- lighting
- manual handling
- 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:

- brushes
- drop sheets
- masking equipment
- respirators
- sanders
- scaffold, including:
 - planks
 - trestles
 - stepladders
 - aluminium mobile
- spray equipment
- vacuum cleaners.

Quality requirements include:

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

RANGE STATEMENT

Environmental requirements include:

- workplace operations and procedures.
- clean-up management
- dust and noise
- low odour and emissions
- stormwater protection
- waste management.

Paint coatings may include:

- solvent-based (alkyd, urethane, urethane/alkyd, urethane oil or modified alkyd resins)
- two pack
- water based
- water repellents for timber
- low odour and low-VOC (Volatile Organic Compound) paint
- no-VOC paint
- non-toxic paint
- alternative and natural paint and paint materials.

Spray equipment, accessories and lines include:

- compressors
- diaphragm
- hoses
- piston airless spray unit (electrical, pneumatic and petrol)
- regulators
- spray guns
- spray tips and filters.

Spray systems:

- include:
 - airless spray units
 - conventional spray units
 - high volume, low pressure (HVLP) spray applications
- may include electrostatic spray applications.

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)

Unit sector

Construction

Functional area

Functional area