



**Australian Government**

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

# **MEA415A Paint aircraft surfaces**

**Revision Number: 2**

## **MEA415A Paint aircraft surfaces**

### **Modification History**

Minor formatting and editorial changes made. Prerequisite unit version code updated.

### **Unit Descriptor**

This unit covers the competencies required to apply paint finishes to the surfaces of aircraft and aircraft components. No licensing requirements apply to this unit at the time of publication, but compliance with legislation and regulations governing handling and disposal of hazardous materials is included in the unit. This unit is used in workplaces that operate under the airworthiness regulatory systems of the ADF and CASA.

### **Application of the Unit**

This unit requires application of skills and knowledge relating to final preparation of surfaces and application of paint finishes to aircraft and aircraft components.

Applications include fixed and rotary wing aircraft and aircraft components.

### **Licensing/Regulatory Information**

Not applicable.

## Pre-Requisites

MEA101B	Interpret occupational health and safety practices in aviation maintenance
MEA103B	Plan and organise aviation maintenance work activity
MEA105C	Apply quality standards applicable to aviation maintenance processes
MEA107B	Interpret and use aviation maintenance industry manuals and specifications
MEA108B	Complete aviation maintenance industry documentation
MEA109B	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance
AURV229749A	Prepare spray painting materials and equipment
AURV329603DA	Apply air dry and polyurethane enamel refinishing materials

## 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.
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## Elements and Performance Criteria

1. Prepare for painting
  - 1.1. The painting task is identified from maintenance documentation and enterprise procedures and ***type of substrate*** is identified
  - 1.2. Enterprise procedures and maintenance publications are used to identify ***required materials and tools*** and necessary items are assembled
  - 1.3. Aircraft or component identification is matched with relevant maintenance documentation
  - 1.4. Surfaces are prepared for application of paint in accordance with enterprise procedures and/or process specification
  - 1.5. Masking and barrier materials are applied as required by task
2. Apply primer
  - 2.1. ***OHS requirements*** are identified and complied with and PPE is checked for correct fit and function
  - 2.2. Temperature and humidity requirements are complied with
  - 2.3. Specified primer is applied in accordance with enterprise procedures and/or process specification
  - 2.4. Reject paintwork is identified and rectified in accordance with enterprise procedures and/or process specification
  - 2.5. Equipment is cleaned
3. Apply surface top coat
  - 3.1. OHS requirements are identified and complied with and PPE is checked for correct fit and function
  - 3.2. Temperature and humidity requirements are complied with
  - 3.3. The specified top coat material is prepared in accordance with manufacturer's instructions
  - 3.4. Top coat is applied in accordance with enterprise procedures and/or process specifications
  - 3.5. Reject paintwork is identified and rectified in accordance with enterprise procedures and/or process specifications
  - 3.6. Masking and barrier materials are removed and final finishing of the surface is completed, as required
  - 3.7. Documentation is completed in accordance with standard enterprise procedures
4. Clean up work area and maintain equipment
  - 4.1. Waste material is removed and disposed of or stored in accordance with ***legislative, regulatory and enterprise procedures***
  - 4.2. Equipment is cleaned in accordance with enterprise procedures or manufacturer's instructions
  - 4.3. Equipment is checked for serviceability and unserviceable items are dealt with in accordance with enterprise procedures
  - 4.4. Tools are cleaned and maintained in accordance with enterprise procedures

#### 4.5. Work area is cleaned and inspected for serviceable condition

## Required Skills and Knowledge

### Required skills

Look for evidence that confirms skills in:

- applying OHS procedures relating to paint application, including the selection and correct use of PPE
- selecting and applying masking and barrier materials
- identifying, preparing and using applicable primers and top coats
- using MSDS
- using manufacturer specifications and directions
- selecting and using applicable paint application equipment
- preparing surfaces for paint application
- correctly disposing of waste materials
- cleaning and maintaining equipment and tools

### Required knowledge

Look for evidence that confirms knowledge of:

- relevant enterprise procedures, process specifications and maintenance publications
- OHS procedures relating to the application of aerospace coatings, including PPE and fume extraction
- how to obtain MSDS
- manufacturer specifications and directions
- types of paint finishes and applicability to various substrates
- procedures for preparing surfaces for paint application
- types of masking and barrier materials
- methods used for final finishing of surfaces
- environmental legislation and regulations relating to the storage, use and disposal of hazardous materials

## 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.

<p><b>Overview of assessment</b></p>	<p>A person who demonstrates competency in this unit must be able to apply paint finishes to the surfaces of aircraft and aircraft components in accordance with specified procedures while using the correct PPE and observing all relevant safety precautions and environmental protection processes.</p>
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The underlying skills inherent in this unit should be transferable across a range of paint application tasks associated with aircraft and aircraft components. It is essential that system testing procedures, cleanliness requirements and safety precautions, including the correct use of PPE, and application of environmental protection procedures are fully observed, understood and complied with. Ability to interpret coating removal procedures and apply them in practice is critical.</p> <p>Evidence of transferability of skills and knowledge related to application of paint finishes is essential. This is to be demonstrated through application of paint finishes across a range of aircraft and component substrate types. The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.</p> <p>A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements of the unit of competency are being achieved under routine supervision on a representative range of paint finish application tasks. This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide.</p>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency should be assessed in the workplace or simulated workplace using materials, tools and equipment specified in the maintenance manuals and applicable procedures. It is also expected that general and special purpose tools and ground support equipment would be used where appropriate.</p>
<p><b>Method of assessment</b></p>	

<b>Guidance information for assessment</b>	
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## Range Statement

<p>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.</p>	
<p><b>Application</b></p>	<p>Application of this unit may relate to:</p> <ul style="list-style-type: none"> <li>• scheduled or unscheduled maintenance</li> <li>• individual or team-related activities</li> </ul>
<p><b>Procedures and requirements</b></p>	<p>Refer to industry standard procedures specified by manufacturers, regulatory authorities or the enterprise</p>
<p><b>Type of substrate</b></p>	<p>Type of substrate may be:</p> <ul style="list-style-type: none"> <li>• high strength steel</li> <li>• aluminium alloys</li> <li>• composite fibre</li> <li>• plastic</li> <li>• transparencies</li> <li>• magnesium alloy</li> <li>• fabric</li> <li>• wood</li> </ul>
<p><b>Required materials and tools</b></p>	<p>Required materials and tools may include:</p> <ul style="list-style-type: none"> <li>• epoxy primers</li> <li>• lacquer primers</li> <li>• acrylic top coats</li> <li>• polyurethane top coats</li> <li>• chemicals</li> <li>• masking and barrier materials</li> <li>• low pressure gun or touch-up gun</li> <li>• general purpose suction feed spray guns</li> <li>• airless spray units</li> <li>• electrostatic spray equipment</li> <li>• sanding/polishing equipment and materials</li> <li>• PPE</li> </ul>
<p><b>OHS requirements</b></p>	<p>OHS requirements are identified from relevant:</p> <ul style="list-style-type: none"> <li>• state/territory/Commonwealth OHS legislation, regulations and codes</li> <li>• procedures manual</li> <li>• safety manual</li> </ul>



	<ul style="list-style-type: none"> <li>• work instructions</li> <li>• maintenance organisation manual</li> <li>• MSDS</li> <li>• Defence regulations and instructions</li> <li>• standing instructions</li> </ul>
<p><b>Legislative, regulatory and enterprise procedures</b></p>	<p>Legislative, regulatory and enterprise procedures may include:</p> <ul style="list-style-type: none"> <li>• state/territory/Commonwealth environmental legislation, regulations and codes for the storage and disposal of hazardous and toxic materials</li> <li>• MSDS</li> <li>• maintenance organisation manual</li> <li>• procedures manual</li> <li>• work instructions</li> <li>• relevant Defence regulations and instructions</li> <li>• standing instructions</li> </ul>

## Unit Sector(s)

Aviation maintenance

## Competency field

## Co-requisite units

Not applicable