



**Australian Government**

# **MEA411 Remove surface coatings from aircraft or aircraft components**

**Release: 2**

# MEA411 Remove surface coatings from aircraft or aircraft components

## Modification History

Release 2. Equivalent to MEA411 Remove surface coatings from aircraft or aircraft components with amended prerequisite codes.

## Application

This unit of competency requires application of skills and knowledge relating to preparation and masking of aircraft and aircraft components for coating removal and the removal of coatings using chemical and mechanical methods during scheduled or unscheduled maintenance working either individually or as part of a team.

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 are included in the unit.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation safety Authority (CASA).

Applications include fixed and rotary wing aircraft and aircraft components.

## Pre-requisite Unit

|        |                                                                                              |
|--------|----------------------------------------------------------------------------------------------|
| MEA107 | Interpret and use aviation maintenance industry manuals and specifications                   |
| MEA154 | Apply work health and safety practices in aviation maintenance                               |
| MEA155 | Plan and organise aviation maintenance work activities                                       |
| MEA156 | Apply quality standards during aviation maintenance activities                               |
| MEA157 | Complete aviation maintenance industry documentation                                         |
| MEA158 | Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance |

## Competency Field

Aviation maintenance

## Unit Sector

### Elements and Performance Criteria

Elements describe the essential outcomes.

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

- |                                                    |                                                                                                                                                                |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Identify the appropriate coating removal method | 1.1 The coating removal task is identified from maintenance documentation and enterprise procedures                                                            |
|                                                    | 1.2 Enterprise procedures and maintenance publications are used to identify materials and tools to be used for coating removal                                 |
|                                                    | 1.3 Aircraft or component identification is matched with relevant maintenance documentation                                                                    |
| 2. Prepare for coating removal                     | 2.1 Work health and safety (WHS) requirements are identified and complied with and personal protective equipment (PPE) is checked for correct fit and function |
|                                                    | 2.2 Materials and tools required for coating removal are assembled                                                                                             |
|                                                    | 2.3 Appropriate preparation for access to the aircraft is undertaken                                                                                           |
|                                                    | 2.4 Masking requirements are determined using enterprise procedures and maintenance publications                                                               |
|                                                    | 2.5 Masking is applied to relevant areas and sensitive components                                                                                              |
|                                                    | 2.6 Environmental requirements are observed during the coating removal process                                                                                 |
| 3. Remove coating                                  | 3.1 Chemical strippers are applied in accordance with relevant procedures                                                                                      |
|                                                    | 3.2 Mechanical coating removal is performed in accordance with enterprise procedures and maintenance manuals                                                   |
|                                                    | 3.3 Surfaces are cleaned of all chemical residue and mechanical media in accordance with enterprise procedures and maintenance manuals                         |
|                                                    | 3.4 Masking materials are removed and final cleaning of surfaces is performed                                                                                  |

- |    |                                           |     |                                                                                                                          |
|----|-------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------|
| 4. | Clean up work area and maintain equipment | 4.1 | Material that can be reused is collected and correctly stored                                                            |
|    |                                           | 4.2 | Waste material is removed and disposed of or stored in accordance with legislative, regulatory and enterprise procedures |
|    |                                           | 4.3 | Equipment is cleaned in accordance with enterprise procedures or manufacturer's instructions                             |
|    |                                           | 4.4 | Equipment is checked for serviceability and unserviceable items are dealt with in accordance with enterprise procedures  |
|    |                                           | 4.5 | Tools are cleaned and maintained in accordance with enterprise procedures                                                |
|    |                                           | 4.6 | Work area is cleaned and inspected for serviceable condition                                                             |

## Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Range of Conditions

This field allows for 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.

### Procedures and requirements include:

- Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

### WHS requirements are identified from relevant:

- Commonwealth/state/territory WHS legislation, regulations and codes
- Procedures manuals
- Safety manuals
- Work instructions
- Maintenance organisation manuals
- Material safety data sheets (MSDS)
- Defence regulations and instructions
- Standing instructions

|                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Materials and tools include:</b>                               | <ul style="list-style-type: none"><li>• Masking tapes and barrier materials</li><li>• Chemicals</li><li>• Abrasives</li><li>• Grinders</li><li>• Scrapers</li><li>• Paint stripper application pumps</li><li>• Blasting equipment</li><li>• Cleaning material</li></ul>                                                                                                                                  |
| <b>Environmental requirements relate to:</b>                      | <ul style="list-style-type: none"><li>• Noise</li><li>• Dust</li><li>• Fume extraction</li><li>• Clean-up management</li></ul>                                                                                                                                                                                                                                                                           |
| <b>Legislative, regulatory and enterprise procedures include:</b> | <ul style="list-style-type: none"><li>• Commonwealth/state/territory environmental legislation, regulations and codes for the storage and disposal of hazardous and toxic materials</li><li>• MSDS</li><li>• Maintenance organisation manuals</li><li>• Procedures manuals</li><li>• Work instructions</li><li>• Relevant Defence regulations and instructions</li><li>• Standing instructions</li></ul> |

## Unit Mapping Information

Release 2. Equivalent to MEA411 Remove surface coatings from aircraft or aircraft components

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>

# **Assessment Requirements for MEA411 Remove surface coatings from aircraft or aircraft components**

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## **Performance Evidence**

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria under the specified conditions of assessment, and must include:

- applying WHS procedures relating to coating removal, including the selection and correct use of PPE
- selecting and applying masking and barrier materials
- selecting and using chemical strippers
- using MSDS
- selecting and using applicable mechanical coating removal methods
- cleaning of surfaces following coating removal
- correctly disposing of waste materials
- cleaning and maintenance of equipment and tools.

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.

Evidence of transferability of skills and knowledge related to coating removal is essential. This is to be demonstrated through application of chemical and mechanical coating removal processes across a range of aircraft and component tasks.

## **Knowledge Evidence**

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- relevant enterprise procedures and maintenance publications
- WHS procedures relating to the removal of aerospace coatings, including PPE and fume extraction
- how to obtain MSDS
- types of chemicals used for coating removal and methods of application
- mechanical methods that can be used for coating removal
- types of masking and barrier materials
- cleaning methods following coating removal

- environmental legislation and regulations relating to the storage, use and disposal of hazardous materials.

## Assessment Conditions

- 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.
- The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.
- The following conditions of assessment represent the requirements of the Regulators (ADF and CASA) and maintenance stakeholders and must be rigorously observed.
- A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements and performance criteria of the unit of competency are being achieved under routine supervision on the range of coating removal tasks that are applicable to the enterprise.
- This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide (for details refer to the Companion Volume Assessment Guidelines).
- Assessors must satisfy the requirements of the National Vocational Education and Training Regulator (Australian Skills Quality Authority, or its successors).

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