



Australian Government

MEA412 Pre-treat aluminium alloy surfaces

Release: 2

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Modification History

Release 2. Equivalent to MEA412 Pre-treat aluminium alloy surfaces with amended prerequisite codes.

Application

This unit of competency requires application of skills and knowledge relating to the application of chemical conversion coatings to aluminium alloy surfaces of fixed and rotary wing aircraft and aircraft components with aluminium alloy surfaces during the performance of scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

No licensing requirements apply to this unit at the time of publication, but requirements for compliance with legislation and regulations for the handling and disposal of hazardous materials is 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).

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. Prepare surfaces for application of chemical conversion coating	1.1 The required pre-treatment task is identified from maintenance documentation and enterprise procedures 1.2 Enterprise procedures and/or process specifications are used to identify required materials and tools 1.3 Aircraft or component identification is matched with relevant maintenance documentation 1.4 Work health and safety (WHS) requirements are identified and complied with and personal protective equipment (PPE) is checked for correct fit and function 1.5 Common surface soils are removed in accordance with enterprise procedures and/or process specifications 1.6 Masking is completed on areas where pre-treatment is not required 1.7 Aluminium alloy substrate is prepared for application of conversion coating in accordance with enterprise procedures and/or process specifications
2. Apply chemical conversion coating	2.1 The correct environment for conversion coating application is established and maintained 2.2 The applicable chemical conversion coating is applied while observing all relevant WHS requirements, including the use of material safety data sheets (MSDS) and items of PPE 2.3 Masking is removed and the aircraft or component is left in a suitable condition for the next task 2.4 Completion of the pre-treatment process is documented in accordance with enterprise procedures
3. Clean up work area and maintain equipment	3.1 Material that can be reused is collected and correctly stored 3.2 Waste material is removed and disposed of or stored in accordance with legislative, regulatory and enterprise

procedures

- 3.3 Equipment is cleaned in accordance with enterprise procedures or manufacturer's instructions while observing all relevant WHS requirements, including the use of MSDS and items of PPE
- 3.4 Equipment is checked for serviceability and unserviceable items are dealt with in accordance with enterprise procedures
- 3.5 Tools are cleaned and maintained in accordance with enterprise procedures
- 3.6 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:

- Commonwealth/state/territory WHS legislation, regulations and codes
- Procedures manual
- Safety manual
- Work instructions
- Maintenance organisation manual
- MSDS
- Defence regulations and instructions
- Standing instructions

Common surface soils include:

- Paint
- Dirt
- Grease
- Oils

Legislative, regulatory and enterprise procedures include:

- Fuel
- Adhesives
- Commonwealth/state/territory environmental legislation, regulations and codes for the storage and disposal of hazardous and toxic materials
- MSDS
- Maintenance organisation manual
- Procedures manual
- Work instructions
- Relevant Defence regulations and instructions
- Standing instructions

Unit Mapping Information

Release 2. Equivalent to MEA412 Pre-treat aluminium alloy surfaces

Links

Companion Volume implementation guides are found in VETNet -

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