



Australian Government

MEA417 Apply specialty coatings to aircraft

Release: 1

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Modification History

Release 1 - New unit of competency

Application

This unit of competency requires application of skills and knowledge relating to the preparation and application of a range of specialty coatings to fixed and rotary wing aircraft and aircraft components using application methods applicable to the specific coating material 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 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

MEA101	Interpret work health and safety practices in aviation maintenance
MEA103	Plan and organise aviation maintenance work activity
MEA105	Apply quality standards applicable to aviation maintenance processes
MEA107	Interpret and use aviation maintenance industry manuals and specifications
MEA108	Complete aviation maintenance industry documentation
MEA109	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. Determine specialty coating requirements	<p>1.1 Specialty coating requirements are identified from maintenance documentation and enterprise procedures</p> <p>1.2 Enterprise procedures and maintenance publications are used to identify materials and tools to be used for specialty coating application</p> <p>1.3 Aircraft or component identification is matched with relevant maintenance documentation</p>
2. Prepare surface for coating application	<p>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</p> <p>2.2 Materials and equipment required for specialty coating application are assembled</p> <p>2.3 Surfaces are cleaned and degreased in accordance with enterprise procedures</p> <p>2.4 Final finishing of surfaces is performed in accordance with enterprise procedures and/or process specifications</p> <p>2.5 Reject parts and surfaces are identified, recorded and reported in accordance with standard enterprise procedures</p> <p>2.6 Masking is applied to relevant areas</p>
3. Prepare and apply coating	<p>3.1 The required coating is prepared in accordance with manufacturer's specifications and directions while observing all relevant WHS requirements, including the use of material safety data sheets (MSDS) and items of PPE</p> <p>3.2 Coating mix is inspected in accordance with enterprise procedures and/or process specifications</p> <p>3.3 Coating is applied to the required surfaces in accordance with enterprise procedures and/or process</p>

- specifications while observing all relevant WHS requirements, including the use of MSDS and items of PPE
- 3.4 Coating is inspected for coating thickness and quality compliance with enterprise procedures and/or process specifications
 - 3.5 Defects in the coating are identified and rectified as required
 - 3.6 Masking materials are removed and final cleaning of surfaces is performed
 - 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

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

Specialty coatings include:

- Specialised inner layer coatings
- Engine coatings
- Leading edge coatings
- Radome coatings
- Waterborne heatproof paints
- Walkway compounds
- Fuel tank coatings
- Heatproof coatings
- Electrical conductive coatings

WHS requirements are identified from relevant:

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

Materials and equipment include:

- Chemicals
- Cleaning materials
- Specialty coating material
- Various spray guns
- Brush
- Roller
- Trowel
- PPE
- Baking oven
- Heat lamps
- Electrical test equipment
- Wet film thickness gauges

Defects in the coating include:

- Sags
- Runs
- Delamination
- Imperfections

Legislative, regulatory and enterprise procedures include:

- Dry spray
- Contamination
- Over-spray
- Egress
- Commonwealth/state/territory environmental legislation, regulations and codes for the storage and disposal of hazardous and toxic materials
- MSDS
- Maintenance organisation manuals
- Procedures manuals
- Work instructions
- Relevant Defence regulations and instructions
- Standing instructions

Unit Mapping Information

Release 1 – equivalent to MEA417A Apply specialty coatings to aircraft

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>