



Australian Government

MEASTR0012 Apply specialty coatings to aircraft

Release: 1

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Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA417 Apply specialty coatings to aircraft.

Application

This unit describes the skills and knowledge required to prepare and apply 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.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA).

Any other relevant legislation, industry standards and codes of practice within Australia must be applied.

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

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine specialty coating requirements	1.1 Identify specialty coating requirements from maintenance documentation and enterprise procedures 1.2 Identify required materials and tools for specialty coating application

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	from enterprise procedures and maintenance publications 1.3 Match aircraft or component identification to correct maintenance documentation
2. Prepare surface for coating application	2.1 Identify and comply with work health and safety (WHS) requirements and check personal protective equipment (PPE) for correct fit and function 2.2 Assemble materials and equipment required for specialty coating application 2.3 Clean and degrease surfaces in accordance with enterprise procedures 2.4 Perform final finishing of surfaces in accordance with enterprise procedures or process specifications 2.5 Identify, record and report on substandard parts and surfaces in accordance with standard enterprise procedures 2.6 Apply required masking in accordance with standard enterprise procedures
3. Prepare and apply coating	3.1 Prepare required coating in accordance with manufacturer's specifications and directions while observing all relevant WHS requirements, including the use of material safety data sheets (MSDSs) and items of PPE 3.2 Inspect coating mix in accordance with enterprise procedures or process specifications 3.3 Apply required coating to surfaces in accordance with enterprise procedures or process specifications while observing all relevant WHS requirements, including the use of MSDSs and items of PPE 3.4 Inspect coating for thickness and quality compliance with enterprise procedures or process specifications 3.5 Identify and rectify any defects in the coating in accordance with specified procedures 3.6 Remove masking materials and perform final surface cleaning in accordance with standard enterprise procedures 3.7 Complete documentation in accordance with standard enterprise procedures
4. Clean up work area and maintain equipment	4.1 Remove and dispose of or store waste materials in accordance with legislative, regulatory and enterprise procedures

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	4.2 Clean equipment in accordance with enterprise procedures or manufacturer's instructions 4.3 Check equipment for serviceability and deal with unserviceable items in accordance with enterprise procedures 4.4 Clean and maintain tools in accordance with enterprise procedures 4.5 Clean work area and inspect for serviceable condition in accordance with standard enterprise procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret maintenance manuals and specialty coating procedures.
- Writing skills to complete documentation.
- Numeracy skills to interpret technical information.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEA417 Apply specialty coatings to aircraft.

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 MEASTR0012 Apply specialty coatings to aircraft

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Performance Evidence

There must be evidence the candidate has completed all the tasks outlined in the elements and performance criteria of this unit and demonstrated the ability to:

- apply speciality coatings to aircraft during scheduled or unscheduled maintenance on a minimum of two types of specialty coating on at least three application tasks
- apply cleanliness requirements, safety precautions and environmental protection procedures at all times, and as relevant to the surfaces and coatings being worked on.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- relevant legislative, regulatory and enterprise procedures and maintenance publications, as outlined in:
 - Commonwealth, state and territory environmental legislation, regulations and codes for the storage and disposal of hazardous and toxic materials
 - material safety data sheets (MSDSs)
 - maintenance organisation manuals
 - procedures manuals
 - work instructions
 - relevant Defence regulations and instructions
 - standing instructions
- work health and safety (WHS) procedures for applying specialty aerospace coatings, including personal protective equipment (PPE), as outlined in:
 - Commonwealth, state and territory WHS legislation, regulations and codes
 - procedures manuals
 - safety manuals
 - work instructions
 - maintenance organisation manuals
 - MSDSs
 - Defence regulations and instructions

- standing instructions
- relevant data from manufacturers of specialty coatings
- how to obtain MSDSs
- criticality of areas of aircraft structure with regard to coating application
- cleaning processes and chemicals used to prepare surfaces for coating application
- types of speciality coatings, including:
 - specialised inner layer coatings
 - engine coatings
 - leading edge coatings
 - radome coatings
 - waterborne heatproof paints
 - walkway compounds
 - fuel tank coatings
 - heatproof coatings
 - electrical conductive coatings
- coating application methods
- materials and equipment typically used to apply speciality coatings, including:
 - chemicals
 - cleaning materials
 - specialty coating material
 - various spray guns
 - brush
 - roller
 - trowel
 - PPE
 - baking oven
 - heat lamps
 - electrical test equipment
 - wet film thickness gauges
- masking materials
- typical defects found in specialty coatings:
 - sags
 - runs
 - delamination
 - imperfections
 - dry spray
 - contamination
 - over-spray
 - egress

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

The following conditions of assessment represent the requirements of the regulators Defence Aviation Safety Authority (DASA), Civil Aviation Safety Authority (CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in applying specialty coatings to aircraft. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials relevant to applying specialty coatings to aircraft
 - materials, tools and equipment specified in the maintenance manuals and applicable procedures
 - general and special-purpose tools and items of ground support.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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