



Australian Government

DEFEXO125 Determine the properties of explosives

Release: 2

DEFEXO125 Determine the properties of explosives

Modification History

Release 2. Modifications made to Foundation Skills and Assessment Conditions.

Release 1. This unit was released in DEF Defence Training Package release 1.0 and meets the Standards for Training Packages.

This unit supersedes and is equivalent to DEFEO607C Determine the properties of explosive ordnance.

- Unit code updated
- Content and formatting updated to comply with the new standards
- All PC transitioned from passive to active voice
- Unit title changed to better reflect unit outcomes
- PC 1.5 removed
- Element 4 one new PC

Application

This unit describes the skills required to determine the properties of explosives through the process of measuring and recording during initiation or firing, in a research environment.

This unit applies to those required to determine the properties of explosives independently or may contribute to the determination of the properties of explosives as a member of a collaborative team.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently or as part of a team, under indirect or direct supervision, using discretion and judgement and taking responsibility for the quality of their outputs. They would perform complex tasks in a range of contexts that could be unpredictable.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Explosive Ordnance

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Plan for explosive testing	1.1	Identify and confirm type of explosive and required test or analysis
	1.2	Identify nature and type of effects or properties to be determined
	1.3	Investigate and select appropriate methods of measuring and recording the desired effects or properties
	1.4	Investigate and select appropriate firing or initiation techniques and methods
	1.5	Prepare and review the test plan
2 Prepare for explosive testing	2.1	Test and validate models, simulation and/or prototypes
	2.2	Incorporate modifications or alterations into the testing processes based on validation results
	2.3	Arrange building or purchase of necessary equipment given project constraints and available skills and materials
	2.4	Develop experimental designs in liaison with other staff
	2.5	Assemble, set up and calibrate apparatus
	2.6	Perform routine standardisation procedures prior to the test, and record results
3 Perform explosive test	3.1	Test instrumentation required for data collection for functionality
	3.2	Prepare and test explosive initiation or firing mechanisms
4 Recover equipment and	4.1	Recover measurement and recording equipment and

validate results**extract required data**

- 4.2** Analyse data for anomalies and ‘out of control’ conditions and accept or reject
- 4.3** Assess data for validity against required information, known previous test results and/or relevant reference materials
- 4.4** Record test procedures and, if necessary, recommend modifications to test procedures
- 4.5** Determine properties and or effects from data and measurements collected

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit supersedes and is equivalent to DEFEO607C Determine the properties of explosive ordnance.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>

Assessment Requirements for DEFEXO125 Determine the properties of explosives

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and includes:

- accessing, interpreting and applying technical information related to explosives and measuring and recording.
- carrying out tests and measurements
- developing and applying explosive testing processes and techniques
- developing and using computer programs related to testing
- handling explosives and explosive ordnance
- maintaining documentation and records
- planning and preparing for tests
- recording and validating results

Knowledge Evidence

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

- operational knowledge of:
 - analysis processes and techniques
 - characteristics, technical capabilities and limitations of explosives
 - characteristics, technical capabilities and limitations of measuring and recording equipment

- physics of explosions
- properties and characteristics of relevant explosives
- validation processes

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- acceptable means of simulation assessment
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and PPE currently used in industry.

Links

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