



Australian Government

DEFEXO127 Predict and confirm explosive effects

Release: 2

DEFEXO127 Predict and confirm explosive effects

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 DEFEO006 Predict and confirm explosive ordnance effects.

- 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 1.3, 1.4, 2.1, 2.3 and 3.1 removed
- PC 1.1 and 1.2 merged
- PC 4.1 and 4.2 merged
- PC 3.4 and 3.5 merged and revised
- Element 1 reworded and one new PC
- Elements 2 and 3 and 4 merged and reworded

Application

This unit describes the skills required to predict and confirm explosive effects. It includes the requirement to identify the explosive, predict its effects through analysis and identify the explosive. The activity will generally include the test detonation of the explosive using the actual conditions or simulation to confirm the prognosis.

This unit applies to those required to predict the likely effect of the detonation of explosives and then confirm the prognosis.

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 make high level, fully independent judgements, applying a detailed knowledge of explosives, analysing complex data and producing specific documents detailing the outcomes of highly specialised technical functions. They would perform sophisticated tasks in highly specialised operational contexts.

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.

1 Gather information for activity

PERFORMANCE CRITERIA

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

1.1 Receive and confirm customer requirements

1.2 Identify and apply safety and security requirements

1.3 Research explosives to identify known effects for constituents and combinations

1.4 Identify combinations that produce required effects

2 Identify, analyse and report explosive effects

2.1 Predict probable effects of explosive detonation in required environment

2.2 Develop tests to evaluate effect of explosive detonation in required environment

2.3 Identify and prepare equipment, tools and stores required for post blast analysis

2.4 Conduct tests

2.5 Conduct and record post blast analysis

2.6 Analyse and match the explosive effects to those predicted

2.7 Refine the prediction and/or repeat the tests where discrepancies occur

2.8 Seek specialist advice when discrepancies remain in analysis results

2.9 Document and process test outcomes

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 DEFEO006 Predict and confirm explosive ordnance effects.

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 DEFEXO127 Predict and confirm explosive effects

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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:

- interpreting and applying technical instructions
- operating test equipment
- conducting appropriate tests
- interpreting test methods/procedures
- maintaining security, integrity, traceability of samples, sub-samples, test data and results and documentation

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:

- In-depth knowledge of:
 - characteristics, technical capabilities, effects and limitations of explosives
 - chemical/physical principles and concepts of explosives
 - initiation procedures

- comparative measures of an explosive
- Operational knowledge of:
 - theory of explosive design:
 - instruments for qualitative and/or quantitative analysis
 - traceability requirements
 - armour design and deployment principles

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.

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