



Australian Government

Department of Education, Employment and Workplace Relations

TDMMR1907B SAFELY HANDLE AND STOW EXPLOSIVE AND FLAMMABLE MATERIALS

Revision Number: 1

TDMMR1907B SAFELY HANDLE AND STOW EXPLOSIVE AND FLAMMABLE MATERIALS

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required to safely handle and stow explosive and flammable materials, including explosive liquids, gases, solids and other materials likely to be carried on a small vessel less than 1,500 KW propulsion power. In particular, this may include spare fuel, lubricants, LPG cooking gas, flares, liquid fuels and refrigerant gases.

Application of the Unit

Application of the unit	The unit has applications in the qualifications for Marine Engine Drivers Grades 1, 2 and 3 and Marine Engine Driver Grade 3 as per relevant sections of Part D of the NSCV, i.e. Certificate IV in Transport&Distribution (Marine Engine Driving - Grade 1), Certificate III in Transport&Distribution (Marine Engine Driving - Grade 2), Certificate II in Transport&Distribution (Marine Engine Driving - Grade 3) and Diploma of Transport&Distribution (Coastal Marine Engineering - Engineer Class 3).
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Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant sections of State and Territory maritime regulations and NSCV/USL Code for Marine Engine Drivers, Grades 1, 2 and 3 and Marine Engine Driver Grade 3 on commercial vessels operating in coastal waters.
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Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1 Handle and stow explosive and flammable materials</p>	<p>a Preparations for handling and stowing explosive and flammable materials are undertaken as per relevant hazardous materials regulations and material safety data sheets</p> <p>b Explosive or flammable materials are correctly identified prior to commencement of handling and stowage operations</p> <p>c Techniques for handling of the hazardous materials are selected and correctly applied according to the types of materials to be handled and/or stowed</p> <p>d Communication with others is clear, concise and acknowledged at all times according to good hazardous materials handling practice and regulations</p> <p>e Records of explosive or flammable materials handled or stowed on the vessel are completed as per regulatory requirements and vessel's procedures</p>
<p>2 Follow safety and hazard control procedures</p>	<p>a Potential hazards when handling explosive and dangerous materials are identified and action is taken to minimise or eliminate risk to personnel, the vessel and the environment</p> <p>b Safety precautions and hazard minimisation procedures and</p>

ELEMENT

PERFORMANCE CRITERIA

regulations are followed when handling and stowing explosive and flammable materials

ELEMENT	PERFORMANCE CRITERIA
2 Follow safety and hazard control procedures (continued)	c Action is taken in the event of an incident or emergency involving explosive or flammable materials to secure the materials and the vessel and maintain the safety of the vessel and persons involved

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Relevant OH&S and hazardous materials legislation, and codes of practice
- 2 Explosive and flammable materials identification codes and signage requirements
- 3 Material safety data sheets and their use
- 4 Methods for handling various types of explosive and flammable materials typically stowed on a small vessel, including segregation and separation requirements
- 5 Characteristics, hazards and problems of different types of explosive and flammable materials typically stowed on a small vessel, and associated preventative and remedial action and solutions
- 6 Implications for the handling and stowage of explosive and flammable materials in various wind, weather and sea conditions
- 7 Communication techniques required in the course of handling or stowage of explosive and flammable materials on-board a small vessel
- 8 Records required concerning the handling or stowage of explosive and flammable materials on-board a small vessel
- 9 Basic knowledge of International Maritime Dangerous Goods Code (IMDG Code)

REQUIRED KNOWLEDGE

REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Use basic verbal communication skills required during handling or stowage of various types of explosive and flammable materials on a small vessel
- 2 Read, interpret and apply simple instructions on the handling or stowage of various types of explosive and flammable materials on a small vessel
- 3 Complete any required records related to the handling or stowage of various types of explosive and flammable materials on a small vessel
- 4 Work safely and collaboratively with others during the handling or stowage of various types of explosive and flammable materials on a small vessel
- 5 Select and use relevant tools and equipment as per instructions
- 6 Take appropriate action in the event of an accidental spillage or safety incident that may occur during the handling or stowage of various types of explosive and flammable materials on a small vessel
- 7 React appropriately to changed conditions during the handling or stowage of various types of explosive and flammable materials on a small vessel
- 8 Recognise faulty equipment and take appropriate action as per operating instructions
- 9 Recognise routine problems and hazards during the handling or stowage of various types of explosive and flammable materials on a small vessel and take appropriate action
- 10 Adapt to changes in equipment and procedures in the workplace
- 11 Follow required work schedule as per company requirements

Evidence Guide

Evidence Guide

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The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

1 Critical aspects of evidence required to demonstrate competency in this unit	Assessment must confirm appropriate knowledge and skills to: <ul style="list-style-type: none">a Handle and stow various types of explosive and flammable materials typically found on a small vesselb Exercise all required safety, environmental and hazard control precautions and procedures during the handling and stowage of explosive and flammable materialsc Communicate effectively with others when handling and stowing explosive and flammable materials on board a small vessel
2 Evidence required for demonstration of consistent performance	<ul style="list-style-type: none">a Performance is demonstrated consistently over a period of time and in a suitable range of contextsb Consistently applies underpinning knowledge and skills when:<ul style="list-style-type: none">1 handling and stowing explosive and flammable materials on a small vessel2 taking required safety precautions when handling or stowing explosive and flammable materials on board a small vesselc Shows evidence of application of relevant workplace procedures, including<ul style="list-style-type: none">1 relevant sections of NSCV and USL Code2 relevant OH&S regulations and hazard prevention policies and procedures3 safety management system

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	<p>4 job procedures and work instructions</p> <p>d Action is taken promptly to report and/or rectify problems and safety incidents during handling and stowing of explosive and flammable materials on board a small vessel</p> <p>e Work is completed systematically with required attention to detail and standard procedures</p> <p>f Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among crew and others</p>
<p>3 Context of assessment</p>	<p>a Assessment of competency must comply with the assessment requirements of the relevant maritime regulations</p> <p>b Assessment of this unit must be undertaken within relevant marine authority approved and audited arrangements by a registered training organisation:</p>

Evidence Guide (continued)

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<p>3 Context of assessment (continued)</p>	<p>1 As a minimum, assessment of knowledge must be conducted through appropriate written/oral examinations, and</p> <p>2 Appropriate practical assessment must occur:</p> <p>i at the registered training organisation; and/or</p> <p>ii on an appropriate working or training vessel</p>
<p>4 Specific resources required for assessment</p>	<p>Access is required to opportunities to:</p> <p>a participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to handle and stow</p>

Evidence Guide (continued)

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- explosive and flammable materials on board a small vessel; and/or
- b handle and stow explosive and flammable materials on an operational small commercial or training vessel

Range Statement

Range Statement

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The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

VARIABLE

SCOPE

1. GENERAL CONTEXT

a. Work must be carried out:	1 in compliance with the relevant sections of the State and Territory marine regulations and the National Standard for Commercial Vessels and USL Code
b. Work is performed:	1 within established procedures, with responsibility for own outputs in relation to specified quality standards
d. Work requires:	1 limited responsibility for others in achieving outcomes, including the application of solutions to a variety of predictable maintenance problems

2. WORKSITE ENVIRONMENT

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Range Statement

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<p>a Explosive and flammable materials may include:</p>	<p>1 those handled or stowed on a small commercial coastal vessel operated by a Marine Engine Driver Grade 1, 2 or 3</p>
<p>b Types of explosive and flammable materials may include:</p>	<p>1 spare diesel or petroleum fuel 2 lubricants 3 LPG 4 refrigerant gases 5 chemicals and cleaning products</p>
<p>c Handling of explosive and flammable materials may need to be carried out:</p>	<p>1 by day or night in both normal and emergency situations 2 under any permissible conditions of weather 3 while underway 4 while anchored or moored 5 during maintenance operations 6 when vessel is slipped 7 when transferring fuel 8 when in port</p>

Range Statement (continued)

**TDMMR1907B SAFELY HANDLE AND STOW
EXPLOSIVE AND FLAMMABLE MATERIALS**

<p>VARIABLE</p>	<p>SCOPE</p>
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Range Statement (continued)

**TDMMR1907B SAFELY HANDLE AND STOW
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| d Hazards when handling and stowing explosive or flammable materials may include: | <ol style="list-style-type: none"> 1 faulty materials handling equipment 2 damaged or corroded fuel or LPG containers 3 leaking or spilt flammable liquid or explosive gas containers 4 materials handling operations in poor weather or sea conditions 5 incorrectly stowed explosive and flammable materials 6 incorrectly lashed or secured containers of dangerous materials 7 naked flames, ignition or sparks 8 explosion or fire 9 non-compliance with safe working procedures |
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| e Sources of information and documentation may include: | <ol style="list-style-type: none"> 1 company materials handling procedures 2 relevant material safety data sheets 3 records and inventories of explosive or flammable materials stored on a small vessel 4 explosive or flammable materials manufacturer's instructions 5 instructions of relevant maritime authorities related to the handling of explosive and flammable materials on board small vessels 6 IMDG Code 7 relevant Australian and international standards |
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| f Applicable regulations and legislation may include: | <ol style="list-style-type: none"> 1 relevant sections of State and Territory marine regulations related to the handling and stowage of explosive and flammable materials on board a small vessel 2 relevant sections of the NSCV and USL Code |
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Range Statement (continued)

**TDMMR1907B SAFELY HANDLE AND STOW
EXPLOSIVE AND FLAMMABLE MATERIALS**

- 3 relevant international, Commonwealth, State and Territory OH&S legislation and standards concerning the handling and stowage of explosive and flammable materials

Unit Sector(s)

Not applicable.

Field

Field R Carry Out Operations on Equipment and Systems

Relationship to other units

Relationship to other units	The unit may be assessed in conjunction with other units that relate to the functions of the occupation(s) concerned.
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