



**Australian Government**

# **MEM13003 Work safely with industrial chemicals and materials**

**Release: 1**

# MEM13003 Work safely with industrial chemicals and materials

## Modification History

Release 1. Supersedes and is equivalent to MEM13003B Work safely with industrial chemicals and materials

## Application

This unit of competency defines the skills and knowledge required to work safely with industrial chemicals and materials subject to codes and regulations that are stored and used in a workplace, for example, chemicals, solvents, dangerous materials, acids and noxious waste products in a manufacturing and/or engineering environment.

This unit describes the competencies which are beyond those safety requirements normally applied in the workplace as described in unit MEM13015 Work safely and effectively in manufacturing and engineering, or specifically described in individual units, such as welding.

Where the selection and use of engineering measurement is required unit MEM12023 Perform engineering measurements should also be selected.

Evidence of competency is to encompass the satisfactory application of current state/territory work health and safety (WHS) legislation, standards and codes of practice, and the hierarchy of hazard control measures.

**Band: A**

**Unit Weight: 2**

## Pre-requisite Unit

|          |                                                              |
|----------|--------------------------------------------------------------|
| MEM11011 | Undertake manual handling                                    |
| MEM13015 | Work safely and effectively in manufacturing and engineering |
| MEM16006 | Organise and communicate information                         |

## Competency Field

Work health and safety

## Elements and Performance Criteria

|                                           |                                                                                                 |
|-------------------------------------------|-------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
|-------------------------------------------|-------------------------------------------------------------------------------------------------|

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|-------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                         | <b>Determine job requirements</b>        | 1.1                                                                                             | Follow standard operating procedures (SOPs)                                                                                                   |
|                                           |                                          | 1.2                                                                                             | Comply with work health and safety (WHS) requirements at all times                                                                            |
|                                           |                                          | 1.3                                                                                             | Identify job requirements from specifications, job sheets or work instructions                                                                |
| 2                                         | <b>Use personal protective equipment</b> | 2.1                                                                                             | Select correct and appropriate personal protective equipment (PPE) and use correctly based on information in relevant safety data sheet (SDS) |
|                                           |                                          |                                                                                                 |                                                                                                                                               |
| 3                                         | <b>Adhere to emergency procedures</b>    | 3.1                                                                                             | Locate emergency equipment and use in accordance with workplace policies and SOPs                                                             |
|                                           |                                          | 3.2                                                                                             | Demonstrate responses to emergency procedures as detailed in approved safety procedures and instructions                                      |
| 4                                         | <b>Observe safe working practices</b>    | 4.1                                                                                             | Identify hazardous areas and materials and understand and identify special handling procedures and obtain permits to work, if necessary       |
|                                           |                                          | 4.2                                                                                             | Use all equipment and hazardous materials in accordance with relevant WHS legislation, manufacturers' instructions and SOPs                   |
|                                           |                                          | 4.3                                                                                             | Identify and understand all site-specific safety policies, safety signs, symbols and labels                                                   |
|                                           |                                          | 4.4                                                                                             | Interpret and apply SDS                                                                                                                       |
|                                           |                                          | 4.5                                                                                             | Use safe manual handling procedures, including equipment                                                                                      |
|                                           |                                          | 4.6                                                                                             | Ensure decanted chemicals and storage is to state/territory dangerous goods, WHS legislation and requirements                                 |
|                                           |                                          | 4.7                                                                                             | Update chemical manifest following SOPs                                                                                                       |
|                                           |                                          | 4.8                                                                                             | Perform housekeeping duties to maintain a safe working                                                                                        |

Elements describe the essential outcomes.

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

## Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

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.

**Hierarchy of control measures include the following:**

The application of the hierarchy of control follows the six-step preference of control measures to manage and control risk:

1. elimination
2. substitution
3. isolation
4. engineering control measures
5. using safe work practices
6. personal protective equipment (PPE)

**PPE includes one (1) or more of the following:**

- goggles/face shields
- respirators
- air supplied or self-contained helmets
- safety boots
- gloves and appropriate clothes/garments

**Safe working practices include one (1) or more of the following:**

- environment is inspected
- hazards (and chemical reactive hazards) are assessed and controlled using hierarchy of hazard control
- properly maintained PPE is available
- emergency management plan is documented/understood
- work to be undertaken in safe 'thermal' environments and all possible ignition sources are to be identified and controlled

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**Storage includes the following:**

- only using containers, which includes minor quantities and those in consumer packages, that are suitable for chemical exposure
- labelling and/or placarding containers
- updating chemical manifests

**State or territory legislative requirements include one (1) or more of the following:**

- appropriate WHS
- dangerous goods acts and regulations
- Australian Standards
- Australian Code for the Transport of Dangerous Goods by Road and Rail (ADGC)
- Safe Work Australia codes of practice

## Unit Mapping Information

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## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>