



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	Determine job requirements	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	Use personal protective equipment	2.1	Select correct and appropriate personal protective equipment (PPE) and use correctly based on information in relevant safety data sheet (SDS)
3	Adhere to emergency procedures	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	Observe safe working practices	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

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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>

Assessment Requirements for MEM13003 Work safely with industrial chemicals and materials

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- selecting appropriate PPE based on data obtained in relevant safety data sheets (DS)
- observing safe working practices including undertaking a risk assessment
- following approved safety procedures and instructions in demonstrating responses to real or simulated emergencies
- performing proper manual handling techniques when shifting and moving industrial chemicals and materials
- ensuring all decanted chemicals are stored in storage containers that are suitable for chemical exposure and are properly labelled and/or placarded
- updating chemical manifests following SOPs
- complying with appropriate state or territory legislative requirements at all times.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- dangerous goods classification and labelling/placarding
- testing and maintenance of PPE
- inherent hazardous properties of the chemicals to be used
- interpretation of the relevant safety data sheets (SDS)
- basic fire-fighting procedures
- site-specific emergency plan procedures
- chemical spill confinement procedures
- dangerous occurrence (near miss) reporting procedures
- hierarchy of controls.

Assessment Conditions

- Assessors must:
 - have vocational competency in working safely with industrial chemicals and materials at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- 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.

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