



Australian Government

Department of Education, Employment and Workplace Relations

MEM26010A Store and handle composite materials

Release: 1

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Modification History

Release 1 New unit

Unit Descriptor

This unit of competency covers the skills and knowledge required to recognise hazards, shelf life, commercial and other issues controlling appropriate storage and handling of materials used to make composites and storing and handling materials in accordance with work procedures.

Application of the Unit

Storage of materials used to make composites is subject to a range of influences, including:

- chemical hazards (e.g. fire)
- physical hazards (e.g. manual handling)
- cost hazards (e.g. economic purchasing quantity vs shelf life)
- efficiency hazards (e.g. having the material where you need it when you need it)

This unit covers the determining of appropriate storage and handling protocols and procedures as well as storing and handling materials in accordance with these procedures.

Determining storage and handling requirements may typically be undertaken by an individual in liaison with relevant stakeholders or it may be undertaken by a team. This decision making may be undertaken in an office environment or at the worksite.

Storing and handling of materials in accordance with the procedures should be followed by all relevant personnel.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Identify properties and characteristics of materials used	1.1	List all materials used on site
		1.2	Interpret material safety data sheet (MSDS) for each material
		1.3	Identify relevant manual handling issues
		1.4	Identify environmental hazards for each material
		1.5	Define the hazards for each material
		1.6	Categorise materials into groups based on their hazards
		1.7	Determine appropriate hazard controls
2	Identify key factors effecting storage and handling	2.1	Identify requirements for dangerous goods licence
		2.2	Identify environmental regulation requirements
		2.3	Identify occupational health and safety (OHS) requirements
		2.4	Identify usage patterns and frequencies
		2.5	Identify cost sensitivity to volume purchased
		2.6	Identify shelf life
3	Determine appropriate storage and handling protocols	3.1	Check manufacturer's storage and handling recommendations/requirements
		3.2	Check MSDS
		3.3	Check dangerous goods/environment protection agency

- (EPA)/OHS requirements
 - 3.4 Check company usage requirements
 - 3.5 Resolve conflicts between different requirements
 - 3.6 Prepare storage and handling procedure for materials
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- 4 Store and handle materials in accordance with protocols
 - 4.1 Identify and control hazards
 - 4.2 Use required handling aids
 - 4.3 Move material in accordance with procedures
 - 4.4 Store materials in accordance with procedures
 - 4.5 Monitor storage and handling of materials
 - 4.6 Take appropriate action

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- manual handling
- using mechanical handling devices

Required knowledge

Required knowledge includes:

- MSDS and product data sheets
- material registers (e.g. set up hazardous goods register, maintain it and use it)
- personal protective equipment required (e.g. for reinforcement, resins and catalyst/hardener)
- bunding
- ventilation
- handling and storage and impact on product
- contamination (e.g. from water)
- storage temperature (e.g. low temperature for catalyst)

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>It is essential that the process and equipment be understood and that the importance of critical material properties, settings and readings is known. Competence must be demonstrated in the ability to recognise and analyse potential situations requiring action and then in implementing appropriate corrective action.</p> <p>Consistent performance should be demonstrated. In particular look to see that:</p> <ul style="list-style-type: none"> • all hazards are appropriately identified • appropriate hazard controls are determined • appropriate storage and handling procedures are developed
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	<ul style="list-style-type: none"> • appropriate storage and handling is practiced. <p>Competence must be demonstrated in the operation of all ancillary equipment to the level required for this unit of competency.</p>
Context of and specific resources for assessment	<p>Assessment will require the determining appropriate storage and handling protocols and procedures and then using them for composite materials.</p> <p>Assessment will occur over a range of situations which will include disruptions to normal, smooth operation.</p>
Method of assessment	<p>A single assessment event is not appropriate. On-the-job assessment should be included as part of the assessment process wherever possible. Where assessment occurs off the job, judgement must consider evidence of the candidate's performance in a productive work environment that includes a sufficient range of appropriate tasks and materials to cover the scope of application for this unit.</p> <p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways, including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.</p> <p>The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Procedures	<p>Procedures may be written, verbal, computer-based or in some other form, and may include:</p> <ul style="list-style-type: none"> • all work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions • any similar instructions provided for the smooth running of the plant • good operating practice as may be defined by industry codes of practice (e.g. Responsible Care) and government regulations
Materials	<p>Materials may include:</p> <ul style="list-style-type: none"> • resins • catalysts • promoters • solvents • reinforcing • cores • fillers • pigments • mould release • other materials used directly or indirectly in making products
Dangerous goods licence	<p>The dangerous goods licence conditions may vary between states/territories and councils but will typically cover conditions related to:</p> <ul style="list-style-type: none"> • fire • storage • the fee payable
Environmental regulations	<p>Environmental regulations may be from any tier of government and will include:</p> <ul style="list-style-type: none"> • trade waste • atmosphere • other wastes • other emissions
Hazard controls	<p>Hazard controls should be based on the hierarchy of control:</p> <ul style="list-style-type: none"> • eliminate • substitute

	<ul style="list-style-type: none"> • isolate • engineering controls • administrative controls • personal protective equipment
Logs and reports	<p>Logs and reports may include:</p> <ul style="list-style-type: none"> • paper or electronic based • verbal reports • items found which require action
Appropriate action	<p>Appropriate action includes:</p> <ul style="list-style-type: none"> • determining problems needing action • determining possible fault causes • rectifying problem using appropriate solution within area of responsibility • following through items initiated until final resolution has occurred • reporting problems outside area of responsibility to designated person
Typical problems	<p>Typical problems may include:</p> <ul style="list-style-type: none"> • conflicting requirements • inadequate storage facilities
Health, safety and environment (HSE)	<p>All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between Performance Criteria and HSE requirements, the HSE requirements take precedence</p>

Unit Sector(s)

Composites

Custom Content Section

Not applicable.