



Australian Government

MEM19003 Handle gem materials

Release: 1

MEM19003 Handle gem materials

Modification History

Release 1. Supersedes and is equivalent to MEM19003B Handle gem materials

Application

This unit of competency defines the skills and knowledge required to safely handle a variety of gem materials and identify the condition and features of gem materials.

Emphasis is placed on knowledge of the principles of gemmology, gemstone and diamond nomenclature, gemstone processing enhancement and repair, and appreciation of gemstone qualities.

This unit applies to an individual working autonomously in a jewellery manufacturing environment and guided by strict rules of procedure.

Note: The competencies covered by this unit do not include the requirement to perform accurate and positive gemstone identifications.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Jewellery and horological

Elements and Performance Criteria

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times

Elements describe the essential outcomes.

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

		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, job sheets or work instructions
2	Handle gem materials	2.1	Select tools and equipment to observe gem materials
		2.2	Observe the physical properties, techniques and results of gem materials
		2.3	Identify requirements for protection and storage of gem materials
		2.4	Handle gem materials to minimise risk of damage
3	Record and compare general observations	3.1	Record observations and compare with reference materials
		3.2	Interpret results

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.

Gem materials include one (1) or more of the following:

- natural (including diamonds)
- composite
- synthetic
- imitation

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.

- treated

Tools and equipment include one (1) or more of the following:

- tweezers and 10x loupe
- ultrasonic cleaner
- measuring gauges

Techniques and results include one (1) or more of the following:

- prior enhancing treatments
- imperfections
- weaknesses

Reference material includes one (1) or more of the following:

- charts
- lists
- graphs
- diagrams
- other control material

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 MEM19003 Handle gem 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 relevant tools and equipment to handle and observe gem materials
- using gemstone measuring devices
- using a loupe
- identifying gem condition and characteristics
- comparing data with reference material.

Knowledge Evidence

Essential knowledge required to effectively handle and observe gemstone materials outlined in elements and performance criteria of this unit includes:

- safe work practices and procedures and use of personal protective equipment (PPE)
- gemstone types, including selections of all the major gemstone materials as well as composite, synthetic and imitation gemstones, and diamonds
- gemstone weaknesses and imperfections
- effects of manufacturing and repairing techniques on various gem materials
- effects of gem properties and treatments on handling
- function and limitations of selected equipment
- handling procedures for gem materials
- gemstone and diamond nomenclature.

Assessment Conditions

- Assessors must:
 - have vocational competency in handling and examining gemstone 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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