



Australian Government

MEM19026 Investigate quality and application of jewellery materials

Release: 1

MEM19026 Investigate quality and application of jewellery materials

Modification History

Release 1. Supersedes and is equivalent to MEM19026A Investigate quality and application of jewellery materials.

Application

This unit of competency defines the skills and knowledge required to investigate the quality and application of materials used in jewellery construction in order to inform design and production. It includes conducting research into materials and selecting materials according to construction and design requirements.

This unit applies to individuals involved in jewellery design or manufacture in a small or large-scale production context. They use and adapt technical knowledge to complete work.

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

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research jewellery materials	1.1 Follow standard operating procedures (SOPs) and comply with work health and safety (WHS) requirements at all times 1.2 Use personal protective equipment (PPE) in accordance with SOPs 1.3 Identify materials typically used in jewellery construction and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	their uses 1.4 Identify and access credible sources of information about jewellery materials 1.5 Identify specialist expertise available to confirm uses and quality of materials
2. Select materials for jewellery construction	2.1 Select material options based on research 2.2 Use basic testing to assess quality and purity of materials 2.3 Determine costing implications of using different materials 2.4 Select final materials according to design, work and quality requirements
3. Apply safe work practices in handling materials	3.1 Conduct risk assessments for materials and processes to be used in construction 3.2 Identify characteristics of chemicals and hazardous materials used in construction and ensure workplace safety procedures are applied 3.3 Access, interpret and apply safety data sheets (SDS) and labelling information

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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.

Materials include one or more of the following:	- gemstones (diamonds, rubies, sapphires and emeralds) - ornamental materials (lapis lazuli and malachite) - biological gem materials (amber, coral and ivory) and their synthetics and imitations
---	--

	• rocks • non-crystalline materials (amorphous opal) • glass, plastic and composite stones • gold • silver • platinum • palladium • copper • alloys.
Qualities of materials include one or more of the following:	• malleability • ductility • conductivity • strength • reaction to treatments • construction processes.
Information sources and specialist expertise include one or more of the following:	• industry associations • Australian Standards documentation • gemmologists • trade publications • internet • suppliers.
Types of gemstones include one or more of the following:	• diamonds • beryl • quartz • agate • opal • jade.
Basic tests to assess purity of metal include one or more of the following:	• acid testing • touch stone • electronic testing.
Gem characteristics include one or more of the following:	• beauty • durability • rarity • cost • colouring • size • shape.
Facet cuts used on gems include one or more of the following:	• emerald • pear cut • round brilliant • asscher cut

	• cushion cut • oval cut • radiant cut • marquise cut • princess cut • heart cut.
--	---

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM19026A Investigate quality and application of jewellery materials.

Links

Companion Volume implementation guides are found in VETNet -

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