



Australian Government

Department of Education, Employment and Workplace Relations

CUVOPA401A Use opal carving tools

Release: 1

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Modification History

Version	Comments
CUVOPA401A	This version first released with <i>CUV11 Visual Arts, Craft and Design Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to carve opal, including all the processes from the selection of the piece of opal to the completed polished carving.

Application of the Unit

Those applying the skills and knowledge covered by this unit produce individual pieces that comply with commercial standards and demonstrate the ability to capitalise on the potential of the stone using carving techniques.

Licensing/Regulatory Information

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

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>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.</i>

Elements and Performance Criteria

1. Select the stone and clarify the required outcome	1.1 Review available pieces of rough opal to determine the suitability or necessity for carving 1.2 Assess the potential of pieces of opal for carving depending on the shape, size, position of the colour, and other characteristics of the stone 1.3 Rub the stone, removing foreign materials and eliminating faults 1.4 Discuss the potential for enhancing stone with colleagues and client 1.5 Determine the approach to be taken to achieve the potential of the stone and maximise the value of the finished product
2. Select tools, equipment and materials	2.1 Select carving tools and equipment needed to achieve the desired result 2.2 Select consumables for sanding and polishing the carving 2.3 Determine OHS issues and comply with OHS procedures when using the equipment and consumables
3. Carve opal	3.1 Clean the stone, removing foreign materials and eliminating faults 3.2 Grind stone to desired shape using high speed fine grit burr and accommodating existing colour and patterns 3.3 Ensure opal is not heated 3.4 Sand carving with suitable sanding mediums, from coarse to extra fine
4. Polish the carving	4.1 Polish entire carving with polishing compound 4.2 Use magnification to check the finished carving for faults and if necessary rectify faults
5. Ensure that industry standards are satisfied	5.1 Check the carving to ensure that industry practice and expectations are satisfied 5.2 Correct any faults or defects if required

Required Skills and Knowledge

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

Required skills

- communication skills to discuss potential for enhancing stone with colleagues and clients
- critical thinking and analytical skills to assess the potential of pieces and choose the best approach
- planning and organising skills to select appropriate tools, equipment and materials
- numeracy skills to use numerical features of machinery
- technical skills to:
 - choose appropriate stone for cutting
 - cut, sand and polish opals using correct technique
 - correct faults and defects.

Required knowledge

- characteristics of opal gemstone structure
- suitability of opal pieces for carving
- opal carving process, including required equipment and consumables
- safety issues associated with opal cutting and polishing machinery
- industry standards for carving.

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.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • select opal pieces suitable for carving • carve the opal using opal carving equipment to industry standard • polish the carving according to industry standards.
Context of and specific resources for assessment	Assessment must ensure access to: • carving and polishing equipment • tools and consumables.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • observation of processes and procedures • oral and/or written questioning on underpinning knowledge and skills • evaluation of finished pieces • review of portfolios of evidence • review of third-party workplace reports of on-the-job performance by candidate. Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties, such as speakers of languages other than English, remote communities and those with interrupted schooling).
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector workplace and job role is recommended.

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.

<i>Carving tools</i> may include:	- assorted mandrels - coarse, medium, fine and extra fine wheels - diamond grinding burrs of assorted shapes - diamond polishing wheels of assorted shapes - diamond sanding wheels of assorted shapes - felt polishing buffs - sanding discs, assorted grit sizes and diameters - silicon carbide grinding burrs of assorted shapes - supporting equipment: - drip feed watering system - dust extraction system - wooden polishing buffs.
<i>Carving equipment</i> may include:	- air power tools - centre point carvers - flexible drive - hobby carvers - micro motor - personal protective equipment (PPE).
<i>OHS issues</i> for carving may include:	- contamination - eye protection - guarding - keeping a clean work area - minimising dust inhalation - maintaining equipment - unattended running machinery.
<i>Sanding mediums</i> may include:	- coarse, medium, fine and extra fine wheels of assorted shapes - diamond powders up to #1200 on felt/wooden wheels - pumice powders on felt wheels - sandpaper wheels and discs up to #1200, assorted sizes - silicon carbide powders up to #1200 on felt/wooden wheels.
<i>Polishing compounds</i> may include:	- cerium oxide on felt, leather or wooden wheels or discs - diamond compounds from #1200 to #100,000 - tin oxide.

<i>Industry practice and expectations</i> may relate to:	• no sharp or protruding areas • when shaping, keep the setting into jewellery in mind • very high polish • no grinding marks or sanding marks on surface • no cracks or obvious inclusions that should have been removed with initial grinding • avoiding making the carving too large • considering how strength of colour may affect the need for detail.
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Unit Sector(s)

Opal cutting and polishing