



Australian Government

Department of Education, Employment and Workplace Relations

CUVOPA07B Use opal carving tools

Release: 1

CUVOPA07B Use opal carving tools

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit encompasses the skills and knowledge required to carve opal including all the processes from the selection of the piece of opal to the completed polished carving.

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

Application of the Unit

Application of the unit This unit requires the application of knowledge and skills to produce individual pieces that comply with commercial standards and demonstrate the ability to capitalise on the potential of the stone. Carving requires access to carving equipment and consumables appropriate for use with opals. Carving skills may be used to capitalise on the potential of the piece of opal by using carving tools to correct faults or to produce individual carved pieces.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

This unit may be assessed on its own or it may be assessed with other units that cover related skills and knowledge.

Evidence is most relevant when provided through an integrated activity which combines the Elements of competency for the unit, or a cluster of units of competency.

Employability Skills Information

Employability skills

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

ELEMENT

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, the position of the colour and other characteristics of the stone.
1.3 Rub the stone and remove foreign materials and eliminating faults.
1.4 Discuss the possibilities 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 and equipment and materials. | 2.1 Select carving tools and equipment needed to achieve the desired result.
2.2 Select consumable for sanding and polishing the carving.
2.3 Determine OHS issues and comply with OHS procedures to be followed when using the equipment and consumables. |
| 3 Carve opal. | 3.1 Clean stone removing foreign materials and eliminating faults.
3.2 Grind to desired shape using high speed fine grit burr 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 | 5.1 Check the carving to ensure that industry |

ELEMENT**PERFORMANCE CRITERIA**

**industry
standards are
satisfied.**

standards are satisfied.
5.2 Correct any faults or defects if required.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills:

- carving skills
- sanding and polishing skills.

Required knowledge:

- the suitability of opal pieces for carving
- opal carving process - the equipment and consumables required
- industry standards.

Evidence Guide

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.

**Critical aspects for
assessment and evidence
required to demonstrate
competency in this unit**

To achieve competency in this unit, a person must be able to carve opal to industry standards.

The assessment must confirm the ability to select opal pieces suitable for carving, carve the opal using opal-carving equipment, and polish the carving in accordance with industry standards.

Competence in this unit must be assessed over a period

EVIDENCE GUIDE

of time in order to ensure consistency of performance over the range of variables and contexts applicable to the work environment

Context of and specific resources for assessment

This unit may be assessed in a work environment or in a simulated work environment or in a combination of these situations.

Method of assessment

For valid and reliable assessment of this unit, evidence should be gathered through a range of methods to indicate consistent performance.

Assessment of this unit of competence will usually include observation of processes and procedures, oral and/or written questioning on underpinning knowledge and skills and other methods such as the evaluation of the finished piece (or pieces) as required.

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).

Assessment of this competency requires access to:

- carving and polishing equipment
- tools and consumables
- a qualified workplace assessor or assessment team.

Range Statement

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.

Carving tools may include:

- assorted mandrels
- coarse, medium, fine and extra fine CRATEX wheels
- diamond grinding burrs, assorted shapes
- diamond polishing wheels, assorted shapes
- diamond sanding wheels, assorted shapes
- felt polishing buffs
- sanding discs, assorted grit sizes and diameters
- silicon-carbide grinding burrs, assorted shapes
- supporting equipment, e.g.:
 - drip feed watering system
 - dust extraction system
- wooden polishing buffs.

Carving equipment may include:

- air power tools
- centre point carver
- flexible drive
- hobby carvers, e.g. Dremel
- micro motor
- personal protective equipment.

RANGE STATEMENT

Occupational health and safety issues for carving may include:

- contamination
- eye protection
- guarding
- keeping a clean work area
- minimising dust inhalation
- the need to maintain equipment
- unattended running machinery.

Sanding mediums may include:

- CRATEX wheels, coarse, medium, fine, extra fine, 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.

Polishing compounds may include:

- cerium oxide on felt/leather/wooden wheels or discs
- diamond compounds from #1200 to #100,000
- tin oxide.

Industry standards may include:

- no sharp or protruding areas
- when shaping, keep the setting into jewellery in mind
- very high polish required
- no grinding marks or sanding marks on surface
- no cracks or obvious inclusions that should have been removed with initial grinding
- if for jewellery, avoid making the carving too large
- the more colour, the less detail is required.

Unit Sector(s)

Not Applicable

Competency field

Competency field Opal cutting and polishing