



Australian Government

MSFSL3007 Fuse glass

Release: 1

MSFSL3007 Fuse glass

Modification History

Release 1. New unit

Application

This unit specifies the skills and knowledge required to fuse glass. It includes operating and monitoring kilns to fuse glass for manufacture of customised formed glass products.

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

Pre-requisite Unit

Nil

Competency Field

Unit Sector

Leadlight and stained glass

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
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, designs, job sheets or work instructions
2	Plan and prepare for work	2.1	Identify the process for obtaining materials and moving completed work to the next process

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| | | 2.2 | Identify the procedures for checking the quality of materials and items produced, working condition of kiln and any other equipment/attachments and quality requirements for each stage of the fusing process |
| | | 2.3 | Establish and maintain communication with others involved in the work to ensure efficient work flow coordination, personnel cooperation and safety throughout the work |
| | | 2.4 | Plan the work sequence in a logical order to suit the job |
| | | 2.5 | Select and check kilns, tools, equipment and materials prior to use to ensure they are appropriate for the work and are in a safe and serviceable condition |
| | | 2.6 | Identify and check kiln components and controls, including emergency stops and guards for correct operation |
| 3 | Conduct glass fusing operations | 3.1 | Operate, adjust and monitor kiln and fusing equipment to ensure correct product quality and output in accordance with workplace procedures |
| | | 3.2 | Identify and use appropriate firing and annealing schedules |
| | | 3.3 | Identify, manage and control root causes with adjustments as required |
| | | 3.4 | Identify and report problems occurred during work operations to appropriate personnel in accordance with workplace procedures |
| | | 3.5 | Follow authorised changes in working procedures and/or requirements |
| 4 | Complete work | 4.1 | Inspect product for quality against work instructions and re-work or discard items that do not meet requirements |
| | | 4.2 | Remove waste and scrap material for disposal and/or recycling as required |
| | | 4.3 | Remove and/or store tools, equipment and unused material as appropriate |

- 4.4 Clean work area and kiln and dispose of rubbish as appropriate
- 4.5 Complete workplace documentation in accordance with SOPs

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.

- Unit context includes:**
- WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent
 - work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
 - work requires individuals to demonstrate some discretion, judgement and problem solving
- Work instructions include one (1) or more of the following:**
- material to be used
 - pattern or mould to be used
 - process required to complete work tasks
 - number of sheets to be formed and holding area for completed items
 - the correct firing schedules suitable for the glass being fused
- Glass for fusing includes one (1) or more of the following:**
- compatible fusing glass
 - float glass (compatible)
 - patterned glass (compatible)
- Materials include:**
- compatible fusing glass

	• suitable fusing surface materials • suitable mould releases
Tools and equipment include:	• kiln with appropriate controllers • moulds • refractory suitable surfaces/shelves and furniture • polarising/annealing stress testing lenses
PPE includes one (1) or more of the following:	That prescribed under legislation, regulations and enterprise policies and practices, including: • heat rated protective gloves • safety glasses • respirator masks • safety footwear • aprons and overalls
Information and procedures include one (1) or more of the following:	• workplace procedures relating to the use and operation of tools and equipment and PPE • workplace instructions, including job sheets, cutting lists, plans, drawings and designs • workplace procedures relating to reporting and communications • manufacturer specifications and operational procedures

Unit Mapping Information

New unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFSL3007 Fuse glass

Modification History

Release 1. New unit

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- following work instructions, SOPs and safe work practices
- identifying and interpreting specifications, drawings, standards and other relevant information for fusing glass
- applying safe handling requirements for equipment, products and materials, including the use of PPE
- identifying and selecting materials to be used in the work process
- using mathematical ideas and techniques to complete measurements, including calculating area and estimating material requirements
- using tools and equipment in a safe and effective manner
- completing a minimum of:
 - three (3) differing fusing techniques to the capacity of the kiln being used (examples: tack fusing, full fusing, raking, pattern bar and pate de verre) to industry standards
- providing evidence of testing and quality control and the ability to understand and use kiln firing schedules ensuring correct annealing of fused glass components
- disposing of waste and scrap material in accordance with environmental guidelines and workplace procedures
- communicating and working effectively and safely with others.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of PPE
- qualities and characteristics of fusing glass, including hazards and handling requirements
- correct identification of equipment, processes and procedures for fusing glass
- procedures for reporting materials, product or equipment faults
- correct operation of kilns and understanding of the development of kiln firing schedules
- relevant problem identification and resolution
- work flow requirements related to fusing of glass
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- characteristics of materials used and uses of products produced.

Assessment Conditions

- Assessors must:
 - satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator
 - have vocational competency in fusing glass at least to the level being assessed with relevant industry knowledge and experience
- 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 that 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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