



Australian Government

MSFGG2009 Fabricate and assemble frames

Release: 2

MSFGG2009 Fabricate and assemble frames

Modification History

Release 2 - Update of Australian Standards codes. Statement regarding currency of Australian Standards included in Range of Conditions and Performance Evidence.

Release 1 - New unit of competency

Application

This unit of competency covers fabricating and assembling frames from aluminium and/or steel, timber or unplasticised polyvinyl chloride (uPVC) and involves the set-up and operation of relevant machines.

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

Pre-requisite Unit

Competency Field

Unit Sector

Glass and Glazing

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Identify work requirements and components	1.1 Work requirements in the form of product to be fabricated and assembled, its use, specifications, components and attachments are identified from work instructions 1.2 Australian Standards relating to glass components and products associated with the process are identified and complied with 1.3 Work health and safety (WHS) requirements for fabrication and assembly of metal frames, including personal protective equipment, are observed throughout the work 1.4 Components, attachments, materials and tools required for the fabrication and assembly are identified and their availability, suitability (in terms of size, quantity, finish

		and profile), quality and serviceability ascertained
	1.5	Tools, equipment and fasteners, fixing and joining devices suitable for the method of fixing are identified and the process for the fabrication and assembly of metal frames determined
2	Prepare for fabrication and assembly	
	2.1	Work sequence is planned in a logical order to suit the product specifications and workplace procedures
	2.2	Tools, equipment, components, attachments and materials are selected and checked prior to use to ensure they are appropriate for the work, serviceable and in a safe condition
	2.3	Required jigs are prepared or selected and checked for suitability for purpose
	2.4	Measurements are checked for accuracy, legibility and tolerance, and mating or directional marks noted and positioned
	2.5	Machines and equipment are set up in accordance with production objectives, manufacturer instructions and workplace procedures
3	Fabricate and assemble components	
	3.1	Machines, tools and equipment are operated in accordance with manufacturer instructions and workplace procedures to produce components in conformance to specifications
	3.2	Components are laid out and frames assembled ensuring conformity to specifications, alignment and appropriate fastening
4	Complete work	
	4.1	Completed frame is inspected to ensure compliance with quality standards and customer requirements
	4.2	Equipment is cleaned, inspected and stored in accordance with workplace procedures, with unserviceable items tagged, faults identified and appropriate personnel informed
	4.3	Work area is cleaned and rubbish disposed of, as appropriate
	4.4	Waste materials are removed from work area and disposed of in accordance with relevant statutory requirements and enterprise requirements

- 4.5 Tools, equipment and unused materials are removed and stored appropriately
- 4.6 Workplace documentation is completed in accordance with enterprise requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies 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. Range is restricted to essential operating conditions and any other variables essential to the work environment.

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|---|--|
| Unit context includes: | <ul style="list-style-type: none">• 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 |
| Fabrication and assembly includes: | <ul style="list-style-type: none">• selection of materials, components and attachments required for a frame, its fabrication and assembly prior to its installation• cutting• routing• milling• pressing• drilling• crimping |
| Materials include: | <ul style="list-style-type: none">• aluminium alloys and steel• timber and plastic-coated timber |

	• uPVC and other composite materials • hardware • fasteners (screws and pop rivets) • plastics • sealants • tapes • vinyl • gaskets • timber reveals
Tools and equipment include:	• assembly benches • drop and up-cut saws • pneumatic • hydraulic and manual presses • frame and sash tooling • copy routers • end millers • crimpers • electric and pneumatic powered drills and screwdrivers • pop rivet guns • pleuws guns • hand tools
Components are assembled using:	• a jig (if required) • appropriate fastenings • appropriate tools and equipment
Personal protective equipment includes:	• that prescribed under legislation, regulation and enterprise policies and practices: • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures include:	• workplace procedures relating to the use of tools and equipment and personal protective equipment • work instructions, including job sheets, cutting lists, plans, drawings and designs • workplace procedures relating to reporting and communication • manufacturer specifications and operational procedures • AS 2047:2014 Windows in buildings - Selection and installation

Note, wherever Australia Standards are listed they apply at the

time of publication, but the most current version (including amendments) or replacement versions are to be used.

Unit Mapping Information

Supersedes and is not equivalent to LMFGG2009C Fabricate and assemble metal frames.

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 MSFGG2009 Fabricate and assemble frames

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Release 1 - New unit of competency

Performance Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete work from product specification data sheets which may include fabricating frame and sash components, identifying and selecting necessary product materials
- Identify, select and install component hardware, including:
 - weather seals
 - wheels
 - stays
 - hinges
 - guides
 - locks
- Assemble metal, timber or uPVC frames, including:
 - gaskets
 - tapes
 - sealants
 - adhesives
 - fasteners
- Reveal linings and flashings in accordance with AS 2047:2014 Windows in buildings - Selection and installation (Section 6)
- Label and certify frames in accordance with AS 2047:2014 Windows in buildings - Selection and installation (Section 8)
 - *Note, wherever Australia Standards are listed they apply at the time of publication, but the most current version (including amendments) or replacement versions are to be used.*

- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Avoid backtracking, work flow interruptions or wastage
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- Work flow requirements in relation to frame production
- Workplace safety system requirements related to the fabrication and assembly of metal, timber and uPVC frames
- Operation of tools and equipment used in the fabrication and assembly process
- Identification of equipment, processes and procedures
- Relevant Australian Standards

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to frame materials and components, consumables, workplace operating procedures, personal protective equipment and appropriate work area.

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