



Australian Government

CPCCSG3012 Fabricate signs

Release: 1

CPCCSG3012 Fabricate signs

Modification History

Release 1.

This version first released with CPC Construction, Plumbing and Services Training Package Version 2.

Revised unit of competency. Replaces non-equivalent CPCCSI2005A Fabricate signage and CPCCSI3002A Use rotary router.

Application

This unit of competency specifies the outcomes required to fabricate signs using acrylic sheets and metal framing.

Fabricated signs are used for a range of purposes, including light boxes, point of sale product trays, monoliths, pylons and individual letters.

The unit supports sign manufacturers who fabricate custom-made signs in response to client design requirements.

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

Pre-requisite Unit

Nil

Competency Field

Signs and graphics

Unit Sector

Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.

- | | | | |
|---|---------------------|-----|--|
| 1 | Plan and prepare to | 1.1 | <i>Job requirements</i> are identified from work instructions and client briefs, confirmed, and applied to planning and |
|---|---------------------|-----|--|

fabricate sign.		preparation.
	1.2	Client-approved design specifications are sourced and confirmed.
	1.3	Tools and equipment are selected, checked for serviceability according to manufacturer recommendations, and any faults are rectified or reported before starting work.
	1.4	Selected tools and equipment are connected and configured ready for operation.
	1.5	Materials are selected and required quantities calculated.
	1.6	Required materials are sourced and checked to be free of imperfections.
	1.7	Specialist skills required to ensure structural integrity of fabricated sign are identified and sourced.
	1.8	Health and safety requirements are identified and planned according to schedule of tasks.
2	Manufacture sign elements.	2.1 Cutter types and their applications are identified for the specified job.
		2.2 Sourced materials are cut according to design specifications using CAD/CAM cutting tools and equipment and minimising waste.
		2.3 Light weight metals are formed according to design specifications using tools and equipment according to job requirements.
		2.4 Heating tools and equipment are used to form acrylic sign components safely and to job specifications.
3	Assemble and secure sign.	3.1 Fastenings and fixings are securely attached to sign according to job specifications.
		3.2 Sign is correctly assembled using fastenings, fixings and techniques.

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|---|--------------|-----|---|
| 4 | Finish sign. | 4.1 | Sign is trimmed and finished to required quality standards and client expectations. |
| | | 4.2 | Sign is checked for accuracy and quality against client requirements and design specifications, and imperfections are rectified. |
| | | 4.3 | Structural integrity of sign is tested by specialists and confirmed according to job requirements. |
| | | 4.4 | Finished sign is cleaned for final presentation and stored safely, for collection or installation. |
| | | | |
| 5 | Clean up. | 5.1 | Work surface area is cleaned and waste materials are sorted and removed according to statutory and regulatory authority requirements. |
| | | 5.2 | Tools and equipment, including personal protective equipment (PPE), are cleaned, maintained and stored according to workplace requirements. |

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
Learning skills to:	respond to feedback on meeting client requirements and quality expectations when fabricating signs.
Numeracy skills to:	perform measurements to inform calculations of materials required to fabricate signs.
Oral communication skills to:	clarify job requirements and expectations with client and colleagues.
Reading skills to:	- identify and interpret manufacturer specifications for tools, equipment and materials used in fabricating signs - read and interpret client briefs and work instructions.

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill**Performance feature**

Writing skills to:

- report faults in tools and equipment.

Range of Conditions

This section specifies 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. Bold italicised wording, if used in the performance criteria, is detailed below.

Job requirements must include:

- type of fabricated sign to be manufactured
- timeframes for production.

Tools and equipment must include:

- CAD/CAM software appropriate for cutting materials
- routing systems.

Health and safety requirements must include:

- selection, correct fitting, and use of PPE prescribed under legislation, regulations and workplace policies and practices
- emergency procedures, including:
 - evacuation
 - first aid
 - location and use of firefighting equipment
- hazard identification and risk control procedures
- contents of and terms used in safety data sheets (SDS) and safe work method statements (SWMS) for the safe use of tools and equipment
- workplace environmental requirements.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCSG3012 Fabricate signs

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Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit, and must fabricate three different signs as follows:

- a lower case letter 'b' in Clarendon font, using acrylic sheeting, with a minimum 50 mm return and 300 mm height
- a letter 'D' in Helvetica font, using stainless steel or aluminium, with a minimum 50 mm return and 300 mm height
- an aluminium light box with a minimum 300 mm acrylic front and back panel with a 100 mm edge; with the front and back of the light box being acrylic with a minimum of 4.5 mm thickness.

In doing the above work, the person must use at least three of the following tools and equipment:

- acrylic glues and heating equipment
- battery drill
- CAD/CAM routing equipment
- glass marking pencil
- guillotine
- metal ruler or tape measure
- welding tools and equipment
- scribe
- square
- surface cutting equipment.

For each sign to be fabricated, the person must:

- identify the job requirements for the sign, noting instructions from design specifications or client discussions, including durability and longevity requirements, purpose and location for final sign, size and material requirements
- select and prepare tools, equipment and materials to fabricate the sign according to client requirements

- select, correctly fit, and use personal protective equipment (PPE) relevant to the task
- accurately calculate required material quantities
- safely and accurately measure and cut materials to size, minimising waste
- fabricate and assemble the sign according to client requirements, maintaining safety and quality standards
- trim and clean the sign, check for imperfections, and rectify any faults prior to finalising sign
- store sign safely, ready for client inspection and installation
- clean the work area and dispose of, or identify for recycling and re-use, any waste materials.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- fabrication techniques used when working with acrylic
- folds and tolerances of light weight metals used in fabricating signs
- techniques for using rotary routers and other tools when cutting materials used in fabricating signs
- types, characteristics and applications of high and medium impact acrylic
- statutory and regulatory authority requirements, particularly those relating to:
 - removal of waste products
 - storage of chemicals and materials
 - work health and safety relevant to fabricating signs
- techniques used to weld aluminium and galvanised steel up to 3 mm in thickness
- types, uses and limitations of:
 - different extrusion systems used in sign manufacture
 - modular directory systems used in sign manufacture
- purpose and application of the following when using tools, equipment and materials to fabricate signs:
 - safety data sheets (SDS)
 - safe work method statements (SWMS)
- use of manufacturer specifications when using tools, equipment and materials to fabricate signs.

Assessment Conditions

Suitable assessment of performance requires:

- equipment:
 - tools and equipment as specified in the performance evidence
- materials:
 - acrylic sheets
 - stainless steel or aluminium sheeting as specified by the task

- PPE: gloves and safety glasses
- specifications:
 - client brief or work instructions detailing job specifications of sign to be fabricated, including size, purpose, colour, material selection, durability and quality requirements of final sign
 - work instructions
 - manufacturer instructions and specifications for tools, equipment and materials used in fabricating signs
 - relevant SDS
- physical conditions:
 - workshop with suitable lighting and facilities for the fabrication of signs
- relationship with client:
 - check and confirm job requirements
- relationships with team members:
 - work may be conducted alone or as part of a team
- timeframe:
 - according to job requirements.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

Links

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