

Title	Fabricate and assemble acrylic components		
Level	3	Credits	10

Purpose	<p>This unit standard is for people working in the plastics fabrication industry who wish to specialise in acrylic fabrication.</p> <p>People credited with this unit standard are able to demonstrate knowledge of acrylic material properties for fabrication and assembly; and, fabricate and assemble acrylic components.</p>
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Classification	Plastics Processing Technology > Plastics Fabrication
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Available grade	Achieved
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Guidance Information

1 References

Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of:
 Health and Safety at Work Act 2015;
 Health and Safety in Employment Regulations 1995.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

2 Definition

Workplace procedures – procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, procedures to comply with legislative and local body requirements.

3 Assessment information

Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with legislative requirements, workplace procedures and accepted industry practice.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of acrylic material properties for fabrication and assembly.

Range Polyvinyl Chloride (PVC), Polyethylene Terephthalate (PET), polycarbonate.

Performance criteria

- 1.1 The selection of acrylic materials to meet job specifications is explained.
- Range includes but is not limited to – intended use, surface finishing, thickness, sheet size, impact resistance, chemical resistance; evidence of three is required.
- 1.2 The differences between extruded and cast acrylic materials are described.

Outcome 2

Fabricate and assemble acrylic components.

Range PVC, PET, or polycarbonate materials;
minimum of 3 assemblies, two separate materials.

Performance criteria

- 2.1 Materials are selected to meet job requirements.
- Range workability, cost, aesthetics, durability, availability.
- 2.2 Materials are measured and marked to meet component dimensions.
- 2.3 A drill bit is sharpened and used for cutting.
- Range drill bit sharpening angles and set, drill speed selected.
- 2.4 Power tools are used for cutting.
- Range tools may include – circular saw, jig saw, table saw, bandsaw, router;
evidence is required for three power tools.
- 2.5 Materials are cut and engraved using appropriate machinery.
- Range machinery may include – computer numerically controlled (CNC) router, CNC engraver, laser cutter.
- 2.6 Material edges are finished and polished.
- Range includes but is not limited to – manual methods, mechanical methods, thermal methods, chemical methods;
methods may include – sanding, filing, scraping, flame torch, finisher, milling joiner, cutting compound, polishing compound.
- 2.7 Material is bent and folded.
- Range includes but is not limited to – heat bars, heat guns, heat ovens, bending machines.

2.8 Material is bonded.

Range includes but is not limited to – solvent based glues, adhesives.

Planned review date	31 December 2027
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 September 2023	N/A

Consent and Moderation Requirements (CMR) reference	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.