

<b>Title</b>	<b>Demonstrate knowledge of films, print media, rigid materials, paints and printing inks used in signmaking</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>20</b>

<b>Purpose</b>	<p>This unit standard is for people working in the signmaking industry.</p> <p>People credited with this unit standard are able to demonstrate knowledge of: self-adhesive vinyl films; non-adhesive flexible print media; rigid materials; paints; and large format digital printing inks used in signmaking.</p>
----------------	--

<b>Classification</b>	Sign Making > Sign Making - Core
-----------------------	----------------------------------

<b>Available grade</b>	Achieved
------------------------	----------

---

### Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:  
Health and Safety at Work Act 2015.

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 Definitions

*Service information* – refers to the recommended use and maintenance of machinery, tools and equipment.

*Workplace procedures* refer to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace, and are consistent with manufacturer's requirements. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the signmaking sector.

- 3 Assessment information

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

---

## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of self-adhesive vinyl films used in sign making.

Range films – monomeric calendered, polymeric calendered, cast, polyester based, reflective, translucent, vehicle wrap, laminating, window etch, window vision, fluorescent and other special purpose;

### Performance criteria

1.1 Identify self-adhesive films according to their use and application suitability.

Range includes – interior and/or exterior, long term and/or short term exposure, types of signs and displays.

1.2 Explain self-adhesive films in terms of their performance requirements.

Range includes – costs, life expectancy in various positions and conditions, conformability, stretchability, shrinkage, removability, colour fastness, gloss level retention.

1.3 Explain self-adhesive films and adhesives in terms of handling and storage requirements.

Range storage includes – shelf life.  
adhesive types – permanent, temporary, aggressive, air release.

### Outcome 2

Demonstrate knowledge of non-adhesive flexible print media used in signmaking.

### Performance criteria

2.1 Identify non-adhesive flexible print media according to their use and application suitability.

Range print media includes – PVC banner scrim, papers, synthetic papers, static cling materials, wallpapers.  
use includes – interior and/or exterior, long term and/or short-term exposure, types of signs and displays.

2.2 Identify non-adhesive flexible print media to meet structural and aesthetic performance requirements.

Range print media includes – PVC banner scrims, papers, synthetic papers, static cling materials, wallpapers.  
structural properties include – durability, strength, tear resistance, moisture resistance, environmental impact, recyclability;  
aesthetic finishes include but are not limited to – gloss, matte, colours, transparency, textures, prefinished coating types.

2.3 Select methods of fabrication for suitability according to print media and job type.

Range cutting, taping, sewing, hemming, eyeletting.

2.4 Select methods of laminating for suitability according to print media and job type.

Range liquid laminate, film laminate.

### Outcome 3

Demonstrate knowledge of rigid materials used in signmaking.

#### Performance criteria

3.1 Identify rigid materials according to their use and application suitability.

Range rigid materials include – paper and card based products, engineered (composite) wood sheet products including plywood and medium density fibreboard (MDF), flute boards, rigid and foam PVC, acrylic sheet, polycarbonate sheet, foam boards, aluminium composite material (ACM), aluminium sheet;  
use includes – interior and/or exterior, long term and/or short-term exposure, types of signs and displays.

3.2 Identify rigid sheet materials to meet performance requirements.

Range rigid materials include – paper and card based products, engineered (composite) wood sheet products including plywood and medium density fibreboard (MDF), flute boards, rigid and foam PVC, acrylic sheet, polycarbonate sheet, foam boards, aluminium composite material (ACM), aluminium sheet;  
structural properties include – durability, strength, toughness, rigidity, density, thermal expansion, moisture resistance, environmental impact, recyclability;  
finishes include but are not limited to – gloss, matte, colours, transparency, textures, prefinished coating types.

- 3.3 Explain fabrication and installation methods.
- Range includes – cutting, drilling, routing, bending, gluing and fastening.
- 3.4 Explain selection of laminating methods according to material and job type.
- Range includes – liquid laminate, film laminate.

#### **Outcome 4**

Demonstrate knowledge of paints used in signmaking.

#### **Performance criteria**

- 4.1 Identify paints according to their use and application suitability.
- Range paints include – water based, oil based, lacquers, two pack polyurethanes;  
use includes – interior and/or exterior, long term and/or short-term exposure, types of substrates.
- 4.2 Explain paint in terms of composition.
- Range paints include – water based, oil based, lacquers, two pack polyurethanes;  
composition includes – pigments, binders, solvents, catalysts.
- 4.3 Identify paints to meet performance requirements.
- Range paints include – water based, oil based, lacquers, two pack polyurethanes;  
requirements include – durability, ease of application, toughness and scratch resistance, flexibility, dry times, recoat times.
- 4.4 Explain application methods in terms of advantages and disadvantages.
- Range brush, roller, conventional spray, airless spray.
- 4.5 Explain surface preparation methods.
- Range cleaning, scuffing, priming, undercoating.
- 4.6 Explain handling and storage requirements for paints.
- Range includes shelf life.

**Outcome 5**

Demonstrate knowledge of large format digital printing inks used in signmaking.

Range thermal transfer, dye based aqueous, pigment based aqueous, latex, eco-solvent, solvent, UV cured.

**Performance criteria**

5.1 Identify inks according to their use and application suitability.

Range includes – interior and/or exterior, long term and/or short-term exposure, types of media.

5.2 Identify inks to meet performance requirements.

Range compatibility with media, durability (with and without lamination), scratch resistance, flexibility, dry (cure) times, colour gamuts, gloss levels.

5.3 Explain handling and storage requirements for inks.

Range includes but is not limited to – shelf life.

<b>Planned review date</b>	31 December 2027
----------------------------	------------------

**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	20 April 2017	31 December 2018
Review	2	26 July 2018	31 December 2025
Review	3	29 September 2022	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
--	------

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](mailto:qualifications@hangaarorau.nz) if you wish to suggest changes to the content of this unit standard.