

<b>Title</b>	<b>Apply intumescent coatings</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	<p>This specialist unit standard is for people working in the coatings area of the painting and decorating sector.</p> <p>People credited with this unit standard are able to: plan and prepare to apply intumescent coatings; prepare application area for applying intumescent coatings; apply intumescent coatings to timber; apply intumescent coatings to structural metal; and clean up and store equipment used for applying intumescent coatings.</p>
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<b>Classification</b>	Construction Trades > Painting and Decorating
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Legislation and references relevant to this unit standard include – Health and Safety in Employment Act 1992; Resource Management Act 1991; Hazardous Substances and New Organisms Act 1996; available at <http://legislation.govt.nz>; AS/NZS 2311:2009 *Guide to the painting of buildings*, available at <http://www.standards.co.nz/>.
- 2 Definitions  
*Worksite requirements* refer to job instructions to candidate on agreed work to be carried out.  
*Intumescent coatings* refer to surface coatings that in a fire situation undergo a chemical reaction with the increase in temperature, so the intumescent coating expands to many times its original thickness; the coating should provide an insulating foam-like coating or ‘char’ that protects the substrate; water or solvent-based, depending on the humidity requirements and job site environment; may be applied by brush, roller or airless spray equipment; must meet fire resistance level (FRL) requirements for the material it is applied to and the structure being coated.
- 3 This unit standard must be assessed against in a realistic workplace environment. The candidate must be under realistic time pressures, and use relevant commercial equipment and approved industry techniques.

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## Outcomes and performance criteria

### Outcome 1

Plan and prepare to apply intumescent coatings.

#### Performance criteria

- 1.1 Work instructions and operational details are obtained and confirmed in accordance with worksite requirements.
- 1.2 Safety instructions are followed in accordance with worksite and legislative requirements.
- 1.3 Signage and barricade requirements are identified and implemented in accordance with worksite and legislative requirements.
- 1.4 Tools and equipment are selected to meet the job requirements, and checked for serviceability prior to commencement of work in accordance with worksite requirements.
- 1.5 Material quantities are calculated to meet the job requirements in accordance with worksite requirements.
- 1.6 Any environmental requirements are identified in accordance with worksite and legislative requirements.

### Outcome 2

Prepare application area for applying intumescent coatings.

#### Performance criteria

- 2.1 Area is set up for application processes to suit surface to be painted in accordance with worksite requirements.
- 2.2 Adjoining surfaces to application area are protected in accordance with worksite requirements.
- 2.3 Ventilation is provided in application area to maintain safety of self and others in accordance with worksite and legislative requirements.
- 2.4 Measures are taken to ensure application area is dust free in accordance with worksite requirements.
- 2.5 Surface to be coated is checked to ensure sufficient clearance is available for the expansion of the coating in case of fire in accordance with worksite and legislative requirements.

**Outcome 3**

Apply intumescent coatings to timber.

**Performance criteria**

- 3.1 Surface is stripped of any pre-existing finish to prepare for application of water-based intumescent coating suitable for timber in accordance with worksite requirements.
- 3.2 Priming coat is applied to ensure coating adhesion in accordance with manufacturer's specifications and worksite requirements.
- 3.3 Intumescent coating is applied by brush, roller or airless spray, ensuring temperature and humidity requirements for application are maintained in accordance with manufacturer's specifications and worksite requirements.
- 3.4 Top or finish coat is applied to protect the final coat against abrasion and humidity in accordance with manufacturer's specifications and worksite requirements.

**Outcome 4**

Apply intumescent coatings to structural metal.

**Performance criteria**

- 4.1 Metal surface is blasted or wire-brushed to prepare for intumescent coating for structural metal in accordance with worksite requirements.
- 4.2 Galvanised steel is prepared before application of coating in accordance with worksite requirements.
- 4.3 Priming coat is applied if metal is not already primed to ensure coating adhesion in accordance with manufacturer's specifications and worksite requirements.
- 4.4 Intumescent coating is applied by brush, roller or airless spray ensuring temperature and humidity requirements for application are maintained in accordance with manufacturer's specifications and worksite requirements.
- 4.5 Required film thickness is measured using wet film thickness measuring gauges in accordance with worksite requirements.
- 4.6 Top or finish coat is applied to protect the final coat against abrasion and humidity in accordance with manufacturer's specifications and worksite requirements.

**Outcome 5**

Clean up and store equipment used for applying intumescent coatings.

**Performance criteria**

- 5.1 Unused materials are sealed and stored in accordance with worksite and legislative requirements.
- 5.2 Work area is cleared and materials are disposed of, reused, or recycled in accordance with worksite and legislative requirements.
- 5.3 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer's specifications and worksite requirements.

**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

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

Process	Version	Date	Last Date for Assessment
Registration	1	18 August 2011	31 December 2016
Review	2	19 February 2015	31 December 2026
Review	3	24 April 2025	31 December 2028

**Consent and Moderation Requirements (CMR) reference**

0048

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.