

Title	Apply intumescent coatings		
Level	4	Credits	10

Purpose	<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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Classification	Construction Trades > Painting and Decorating
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Available grade	Achieved
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Explanatory notes

- 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.

Outcomes and evidence requirements

Outcome 1

Plan and prepare to apply intumescent coatings.

Evidence requirements

- 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.

Evidence requirements

- 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.

Evidence requirements

- 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.

Evidence requirements

- 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.

Evidence requirements

- 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.

Planned review date	31 December 2019
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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	N/A

Consent and Moderation Requirements (CMR) reference	0048
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact the Building and Construction Industry Training Organisation info@bcito.org.nz if you wish to suggest changes to the content of this unit standard.