

CPCCPD3033A Matrix Map

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ELEMENTS AND PERFORMANCE CRITERIA

Element	Performance Criteria	Task / Question Map
1. Plan and prepare.	1.1. Work instructions, including plans, specifications, quality requirements and operational details are obtained from relevant information, confirmed and applied for planning and preparation purposes.	Verification of Assessment Requirements: Q1 General planning and preparation: Q1 Q3 Q4
	1.2. Safety (OHS) requirements are followed in accordance with safety plans and policies.	Intumescent coating SDS: Q1 Q2 Q3 Verification of Assessment Requirements: Q1 General planning and preparation: Q1 Q3 Q4
	1.3. Signage and barricade requirements are identified and implemented.	Verification of Assessment Requirements: Q1 General planning and preparation: Q1 Q3 Q4 Q5
	1.4. Tools and equipment are selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement.	Verification of Assessment Requirements: Q2 General planning and preparation: Q1 Q3 Q4 Q6
	1.5. Materials quantity requirements are calculated in accordance with plans, specifications and quality requirements.	General planning and preparation: Q1 Q3 Q4 Q7 Q8 Q9 Intumescent coating effectiveness: Q1 Q2 Q3 Q4 Q5
	1.6. Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.	Intumescent coating SDS: Q1 Q2 Q3 General planning and preparation: Q1 Q3 Q4 Q7

	1.7. Environmental requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied.	General planning and preparation: Q1 Q3 Q4 Q10
2. Prepare application area.	2.1. Area is set up for application processes to suit surfaces to be painted.	Verification of Assessment Requirements: Q3 Practical application of intumescent coating to timber: Q1 Workplace Task: Prepared area for intumescent coatings
	2.2. Adjoining surfaces to application area are protected by masking off or covering prior to application of decorative paint finishing materials.	Practical application of intumescent coating to timber: Q1 Workplace Task: Prepared area for intumescent coatings
	2.3. Ventilation is provided in application area to maintain safety of self and others.	Intumescent coating SDS: Q3 Workplace Task: Prepared area for intumescent coatings
	2.4. Measures are taken to ensure application area is dust free.	Workplace Task: Prepared area for intumescent coatings
	2.5. Surface to be coated is checked to ensure sufficient clearance is available for the expansion of the coating in the case of a fire.	Workplace Task: Prepared area for intumescent coatings
3. Apply intumescent coatings to timber.	3.1. Surface is completely stripped of any pre-existing finish to prepare for application of water-based intumescent coating suitable for timber.	Verification of Assessment Requirements: Q5 Practical application of intumescent coating to timber: Q1 Q3 Workplace Task: Applied and tested intumescent coating on timber
	3.2. Suitable priming coat is applied to ensure coating adhesion.	Verification of Assessment Requirements: Q5 Practical application of intumescent coating to timber: Q1 Q3 Workplace Task: Applied and tested intumescent coating on timber
	3.3. Intumescent coating is applied by brush, roller or airless spray, ensuring temperature and humidity requirements for application are maintained.	Spray application to metal - (Cafco Sprayfilm): Q1 Verification of Assessment Requirements: Q5 Practical application of intumescent coating to timber: Q1 Q3 Workplace Task: Applied and tested intumescent coating on timber
	3.4. Top/finish coat is applied to protect the finish against abrasion and humidity.	Verification of Assessment Requirements: Q5 Practical application of intumescent coating to timber: Q3 Workplace Task: Applied and tested intumescent coating on timber

4. Apply intumescent coatings to structural metal.	4.1. Metal surface is blasted or wire-brushed to prepare for intumescent coating for structural metal.	Verification of Assessment Requirements: Q4 Workplace Task: Applied and tested intumescent coating on metal
	4.2. Galvanised steel is de-greased before application of coating.	Verification of Assessment Requirements: Q4 Workplace Task: Applied and tested intumescent coating on metal
	4.3. Suitable priming coat is applied if metal is not already primed to ensure coating adhesion.	Verification of Assessment Requirements: Q4 Workplace Task: Applied and tested intumescent coating on metal
	4.4. Intumescent coating is applied by brush, roller or airless spray ensuring temperature and humidity requirements for application are maintained.	Spray application to metal - (Cafco Sprayfilm): Q1 Q2 Verification of Assessment Requirements: Q4 Practical application of intumescent coating to metal: Q1 Q2 Q3 Workplace Task: Applied and tested intumescent coating on metal
	4.5. Required film thickness is measured using appropriate wet film thickness measuring gauges.	Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Spray application to metal - (Cafco Sprayfilm): Q3 Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Verification of Assessment Requirements: Q4 Workplace Task: Applied and tested intumescent coating on metal
	4.6. Top/finish coat is applied to protect the finish against abrasion and humidity.	Verification of Assessment Requirements: Q4 Workplace Task: Applied and tested intumescent coating on metal
5. Clean up and store equipment.	5.1. Painting equipment and spray painting equipment are dismantled, cleaned, maintained and stored.	Verification of Assessment Requirements: Q6
	5.2. Waste and unwanted materials are removed and placed into job waste bins or rubbish stockpile in a safe and effective manner in accordance with sound work practices compliant with environmental requirements.	Verification of Assessment Requirements: Q6 General planning and preparation: Q10
	5.3. Unused materials are sealed and stored/stacked in accordance with standard material handling practices and techniques and company requirements.	Verification of Assessment Requirements: Q6 General planning and preparation: Q10

	<p>5.4. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.</p>	<p>Verification of Assessment Requirements: Q6</p>
	<p>5.5. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer specifications and/or standard work practices.</p>	<p>Verification of Assessment Requirements: Q6 General planning and preparation: Q6</p>

REQUIRED SKILLS

Required Skill	Task / Question Map
Required skills for this unit are:	
communication skills to:	
<i>determine requirements</i>	<i>Test Wet Film Thickness: Q2 Q7</i> <i>Spray application to metal - (Cafco Sprayfilm): Q1</i> <i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i> <i>Verification of Assessment Requirements: Q3</i> <i>General planning and preparation: Q1 Q2 Q3 Q4</i> <i>Workplace Task: Applied and tested intumescent coating on metal</i>
<i>enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand</i>	<i>Verification of Assessment Requirements: Q3</i> <i>General planning and preparation: Q1 Q2</i>
<i>follow instructions</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i> <i>Verification of Assessment Requirements: Q3</i> <i>General planning and preparation: Q1 Q2 Q3 Q4</i>
read and interpret:	
<i>documentation from a variety of sources</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i> <i>Verification of Assessment Requirements: Q1</i> <i>General planning and preparation: Q1 Q2 Q3 Q4</i>
<i>drawings and specifications</i>	<i>Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6 Q7</i> <i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i> <i>Verification of Assessment Requirements: Q1</i> <i>General planning and preparation: Q1 Q2 Q3 Q4</i>
<i>report faults</i>	<i>Verification of Assessment Requirements: Q1</i> <i>General planning and preparation: Q1 Q2</i>
<i>use language and concepts appropriate to cultural differences</i>	<i>Verification of Assessment Requirements: Q3</i> <i>General planning and preparation: Q1 Q2</i>

<i>use and interpret non-verbal communication, such as hand signals</i>	<i>Verification of Assessment Requirements: Q3 General planning and preparation: Q1 Q2 Q5</i>
<i>evaluating own actions and making judgments about performance and necessary improvements</i>	<i>General planning and preparation: Q1 Q2 Q3 Q4</i>
<i>identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials</i>	<i>General planning and preparation: Q2 Q6</i>
<i>organisational skills, including the ability to plan and set out work</i>	<i>General planning and preparation: Q2 Q3</i>
<i>recognising procedures, following instructions, responding to change and contributing to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 General planning and preparation: Q1 Q2 Q3 Q4</i>
<i>teamwork skills to coordinate own work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities</i>	<i>General planning and preparation: Q2</i>
<i>technological skills to:</i>	
<i>use a range of mobile technology, such as two-way radio and mobile phones</i>	<i>General planning and preparation: Q2</i>
<i>voice and hand signals to access and understand site-specific instructions.</i>	<i>General planning and preparation: Q2 Q5</i>

REQUIRED KNOWLEDGE

Required Knowledge	Task / Question Map
Required knowledge for this unit is:	
<i>chemical properties of the coating carbon supplier; acid source and expanding agent</i>	<i>What is an Intumescent Coating: Q1 Q2 Q3</i>
<i>coating requirements for structural metal work, including coating performance differences between hollow and concrete filled structures</i>	<i>Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Practical application of intumescent coating to metal: Q1 Q2 Q3</i>
<i>coating requirements for timber</i>	<i>Practical application of intumescent coating to timber: Q1 Q3</i>
<i>compatibility of coatings to substrates</i>	<i>Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6 Q7</i>
<i>fire resistance level (FRL) rating of intumescent coatings for a range of construction materials</i>	<i>Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Fire Resistance Levels (FRL): Q1 Q2 Q3 Q4 Q5 Workplace Task: Applied and tested intumescent coating on metal</i>
<i>job safety analysis (JSA) and safe work method statements</i>	
<i>material safety data sheets (MSDS)</i>	<i>Intumescent coating SDS: Q1 Q2 Q3</i>
<i>materials storage and environmentally friendly waste management</i>	
<i>painting and decorating terminology</i>	<i>Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Spray application to metal - (Cafco Sprayfilm): Q1 Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i>
<i>plans, drawings and specifications</i>	
<i>processes for the calculation of material requirements</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 General planning and preparation: Q8 Q9</i>
<i>quality requirements</i>	<i>Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Spray application to metal - (Cafco Sprayfilm): Q1 Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Workplace Task: Applied and tested intumescent coating on metal</i>

<i>volume solids behaviour and impact on intumescent coatings performance.</i>	<i>Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6</i>
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CRITICAL ASPECTS

Critical Aspects	Task / Question Map
A person who demonstrates competency in this unit must be able to provide evidence of the ability to:	
<i>locate, interpret and apply relevant information, standards and specifications</i>	<i>Test Wet Film Thickness: Q1 Q3 Q4 Q7 Verification of Assessment Requirements: Q1 General planning and preparation: Q1 Q3</i>
<i>comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations</i>	<i>Verification of Assessment Requirements: Q1</i>
<i>comply with organisational policies and procedures including quality requirements</i>	<i>Spray application to metal - (Cafco Sprayfilm): Q1 Verification of Assessment Requirements: Q1</i>
<i>safely and effectively operate and use tools, plant and equipment</i>	<i>Verification of Assessment Requirements: Q2 General planning and preparation: Q6</i>
<i>communicate and work effectively and safely with others</i>	<i>Spray application to metal - (Cafco Sprayfilm): Q1 Verification of Assessment Requirements: Q3 General planning and preparation: Q2</i>
complete to specification, ensuring correct film thickness, surface preparation and finishing techniques, the following intumescent coating applications:	
<i>a minimum of one application on a timber surface</i>	<i>Verification of Assessment Requirements: Q6 Practical application of intumescent coating to timber: Q1 Q3 Workplace Task: Applied and tested intumescent coating on timber</i>
<i>a minimum of one application on a structural steel surface.</i>	<i>Spray application to metal - (Cafco Sprayfilm): Q3 Verification of Assessment Requirements: Q5 Workplace Task: Applied and tested intumescent coating on metal</i>

RANGE STATEMENTS

Range Statements		Task / Question Map
<i>Information includes:</i>	<i>diagrams or sketches</i>	<i>Spray application to metal - (Cafco Sprayfilm): Q3</i>
	<i>instructions issued by authorised organisational or external personnel</i>	
	<i>manufacturer specifications and instructions, where specified</i>	<i>Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Spray application to metal - (Cafco Sprayfilm): Q1 General planning and preparation: Q3 Q4</i>
	<i>MSDS</i>	<i>Intumescent coating SDS: Q1 Q2 Q3 General planning and preparation: Q1</i>
	<i>memos</i>	<i>General planning and preparation: Q1 Q2</i>
	<i>organisation work specifications and requirements</i>	<i>General planning and preparation: Q1 Q3 Q4</i>
	<i>regulatory and legislative requirements pertaining to the application of intumescent coatings</i>	<i>General planning and preparation: Q1</i>
	<i>relevant Australian standards</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 General planning and preparation: Q1 Q3 Q4</i>
	<i>safe work procedures relating to the application of intumescent coatings</i>	<i>Spray application to metal - (Cafco Sprayfilm): Q1 Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i>
	<i>signage</i>	<i>General planning and preparation: Q5</i>
	<i>verbal, written and graphical instructions</i>	<i>General planning and preparation: Q2</i>
	<i>work bulletins</i>	<i>General planning and preparation: Q1 Q2</i>
	<i>work schedules, plans and specifications.</i>	<i>General planning and preparation: Q1 Q2</i>
<i>Planning and preparation include:</i>	<i>assessment of conditions and hazards</i>	<i>Spray application to metal - (Cafco Sprayfilm): Q2 Workplace Task: Prepared area for intumescent coatings</i>

	determination of work requirements and safety plans and policies	Test Wet Film Thickness: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Intumescent coating SDS: Q1 Q2 Q3 General planning and preparation: Q1 Q3 Q4 Workplace Task: Prepared area for intumescent coatings
	equipment defect identification	
	work site inspection.	
Safety (OHS) is to be in accordance with state and territory legislation and regulations and project safety plan and may include:	emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation	Intumescent coating SDS: Q2 Q3
	handling activities that may require the assistance of others or the use of manual or mechanical lifting devices where size, weight or other issues, such as a disability are a factor	
	hazard control	Intumescent coating SDS: Q1 Q2 Q3
	hazardous materials and substances	Intumescent coating SDS: Q1 Q2 Q3
	organisational first aid	Intumescent coating SDS: Q2 Q3
	PPE prescribed under legislation, regulations and workplace policies and practices	
safe operating procedures, including the conduct of operational risk assessment and treatments associated with:		
	earth leakage boxes	
	electrical and fire and/or explosion from combustible materials	
	falling objects	
	lighting	
	manual handling	
	power cables, including overhead service trays, cables and conduits	
	restricted access barriers	
	solvents, lead, chemicals, fumes/gases	Intumescent coating SDS: Q1 Q2 Q3

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	<i>surrounding structures</i>	
	<i>traffic control</i>	
	<i>trip hazards</i>	
	<i>work access platforms</i>	
	<i>work site visitors and the public</i>	
	<i>working at heights</i>	
	<i>working in confined spaces</i>	
	<i>working in proximity to others, work site visitors and the public</i>	
	<i>use of firefighting equipment</i>	<i>Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>use of tools and equipment</i>	<i>General planning and preparation: Q6</i> <i>Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>workplace environmental requirements and safety.</i>	
<i>Tools and equipment include:</i>	<i>brushes</i>	<i>General planning and preparation: Q6</i>
	<i>compressors</i>	<i>General planning and preparation: Q6</i>
	<i>mobile scaffold</i>	<i>General planning and preparation: Q6</i>
	<i>planks</i>	<i>General planning and preparation: Q6</i>
	<i>rollers</i>	<i>General planning and preparation: Q6</i>
	<i>sanders</i>	<i>General planning and preparation: Q6</i>
	<i>scrapers</i>	<i>General planning and preparation: Q6</i>
	<i>spray equipment</i>	<i>Spray application to metal - (Cafco Sprayfilm): Q1</i> <i>General planning and preparation: Q6</i>
	<i>stepladders</i>	<i>General planning and preparation: Q6</i>
	<i>trestles</i>	<i>General planning and preparation: Q6</i>
	<i>vacuum cleaners.</i>	<i>General planning and preparation: Q6</i>
Materials:	include:	
	<i>primers</i>	
	<i>water-based intumescent coatings</i>	<i>Test Wet Film Thickness: Q1 Q2 Q3 Q6 Q7</i> <i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i> <i>Workplace Task: Applied and tested intumescent coating on metal</i>

	<i>solvent-based intumescent coatings</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>suitable clear finishes for protection of the coating</i>	<i>Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>may include manufacturers' proprietary products.</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Workplace Task: Applied and tested intumescent coating on metal</i>
<i>Quality requirements include:</i>	<i>internal company quality policy and standards</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i>
	<i>manufacturer specifications, where specified</i>	<i>Intumescent coating SDS: Q1 Q2 Q3 Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i>
	<i>relevant regulations, including Australian standards</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i>
	<i>workplace operations and procedures.</i>	<i>Spray application to metal - (Cafco Sprayfilm): Q1 Dry film thickness testing: Q1 Q2 Q3 Q4 Q5</i>
<i>Environmental requirements include:</i>	<i>clean-up management</i>	<i>Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>dust and noise</i>	<i>Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>stormwater protection</i>	<i>Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>waste management.</i>	<i>Workplace Task: Applied and tested intumescent coating on metal</i>
<i>Intumescent coatings:</i>	<i>include:</i>	
	<i>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</i>	<i>Spray application to metal - (Cafco Sprayfilm): Q2 Intumescent coating technology: Q1 Q2 Q3 Q4 Q5 Q6 Q7</i>
	<i>water or solvent-based, depending on the humidity requirements and job site environment may be applied by:</i>	
	<i>brush</i>	<i>Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>roller or airless spray equipment</i>	<i>Workplace Task: Applied and tested intumescent coating on metal</i>

	must meet:	
	<i>fire resistance level (FRL) requirements for the material it is applied to and the structure being coated.</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Fire Resistance Levels (FRL): Q1 Q2 Q3 Q4 Q5 Workplace Task: Applied and tested intumescent coating on metal</i>
Structural metal:	includes:	
	<i>beams</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Practical application of intumescent coating to metal: Q1 Q2 Q3 Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>columns</i>	<i>Practical application of intumescent coating to metal: Q1 Q2 Q3 Workplace Task: Applied and tested intumescent coating on metal</i>
	may be:	
	<i>concrete filled</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Practical application of intumescent coating to metal: Q1 Q2 Q3 Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>hollow.</i>	<i>Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Practical application of intumescent coating to metal: Q1 Q2 Q3 Workplace Task: Applied and tested intumescent coating on metal</i>
<i>Thickness measuring gauges:</i>	<i>measure film thicknesses from 0.03mm to 13mm</i>	<i>Test Wet Film Thickness: Q7 Spray application to metal - (Cafco Sprayfilm): Q3 Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Workplace Task: Applied and tested intumescent coating on metal</i>
	<i>can be hand held.</i>	<i>Test Wet Film Thickness: Q7 Dry film thickness testing: Q1 Q2 Q3 Q4 Q5 Workplace Task: Applied and tested intumescent coating on metal</i>