



Australian Government

Department of Education, Employment and Workplace Relations

MSA30309 Certificate III in Surface Preparation and Coating Application

Revision Number: 1

MSA30309 Certificate III in Surface Preparation and Coating Application

Modification History

Not applicable.

Description

This qualification covers the skills and knowledge required to perform the wide range of surface preparation and protective coating application operations which occur across a range of typically heavy industry, ships and infrastructure.

Job roles/employment outcomes

The Certificate III in Surface Preparation and Coating Application has been developed as a trade level qualification for use in MSA07 Manufacturing Training Package. This qualification has been developed in response to an industry request. People with this qualification would be expected to work under routine only supervision, preparing surfaces and/or applying protective coatings in accordance with a provided technical specification. They would be expected to recognise situations where the intended approach was not appropriate/not working and take appropriate action to ensure the final result is satisfactory.

They may work in a manufacturer's factory or they may work as contractors on the site of the plant/ship/infrastructure.

Application

The sector typically prepares surfaces for initial application, or for the reapplication, of protective coatings. In these circumstances it also applies the protective coating which may be liquid or solid. This qualification relates to surface preparation **and** coating and coating units are required.

The surfaces being prepared are typically metal (usually ferrous) and may be structural or have other mechanical requirements.

People with this qualification may be expected to:

- abrasively blast clean surfaces to Australian Standard requirements and in accordance with the specification
- otherwise prepare surfaces for coating as required by the specification
- apply liquid protective surface coatings
- apply solid polymer surface coatings (this is usually a specialised area).

This work may be undertaken:

- in a factory environment
- in an on-site, outdoors environment
- inside a vessel or other confined space
- outside a vessel or structure
- at heights
- some combination of these.

Training programs for this qualification are suitable to be undertaken as part of a formal training contract with an employer under an Australian Traineeship or Apprenticeship arrangement.

Pathways into the qualification

This qualification may be accessed by direct entry.

The units of competency contained within this qualification are common with other qualifications and credit should be granted towards this qualification where competency has already been achieved.

Credit should also be granted towards this qualification where competency has been achieved in units of competency contained within relevant skill sets. The skill set 'Confined Space Work Team Skill Set' was created in PMA08 Chemical, Hydrocarbons and Refining Training Package and is relevant to this qualification. Other skill sets have also been endorsed in MSA07 that relate to this qualification. Details are in 'Skill Sets in this Training Package'.

The units of competency in this qualification reflect competencies which are practiced within the industry and recognition should be granted where there is sufficient evidence of competency from work based experience.

Pathways from the qualification

Further qualification pathways from this qualification include MSA40108 Certificate IV in Manufacturing Technology, MEM40105 Certificate IV in Engineering or other relevant qualifications.

Additional qualification advice

MSA41108 Certificate IV in Competitive Manufacturing is available for team leaders or others who need a more generalist qualification covering the application of good manufacturing practice and lean principles.

Licensing considerations

There are no specific licences that relate to this qualification. However, in some jurisdictions there may be licensing or regulatory requirements associated with the work. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification
Communication	<ul style="list-style-type: none"> • maintain communication about multiple subjects and with multiple audiences • complete incident and other reports • use technical information and manufacturer information • collect, analyse and organise information • communicate ideas and information • use and contribute to workplace documentation • maintain workplace records
Teamwork	<ul style="list-style-type: none"> • identify and describe own role and role of others • work within a team • resolve conflicts between team members • teamwork strategies
Problem solving	<ul style="list-style-type: none"> • recognise a problem or a potential problem • determine problems needing priority action • refer problems outside area of responsibility to appropriate person • identify appropriate theory base for problem • seek information and assistance as required to solve problems • solve problems within area of responsibility • follow through items initiated until final resolution has occurred • identify and isolate faults in equipment • use a range of formal problem solving techniques
Initiative and enterprise	<ul style="list-style-type: none"> • identify the most appropriate process conditions for equipment • determine problems needing action • recommend required action • report problems outside area of responsibility • distinguish between causes of faults
Planning and organising	<ul style="list-style-type: none"> • prioritise actions to achieve required outcomes • plan own work requirements and assist others to plan theirs • plan and organise activities • identify tasks to achieve team goals • organise allocation of tasks • monitor completion of allocated tasks • develop and adjust a production schedule

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Self-management	<ul style="list-style-type: none"> • plan own work requirements from job requests • operate within appropriate time constraints and work standards • select and use appropriate equipment, materials, processes and procedures • plan to ensure effective production • apply standard procedures • identify resource requirements • recognise limitations and seek timely advice
Learning	<ul style="list-style-type: none"> • ask questions to gain information • identify sources of information to expand knowledge and understanding • participate in improvement procedures • participate in development of continuous improvement strategies • assist others develop competency
Technology	<ul style="list-style-type: none"> • operate and adjust equipment • start up and shut down equipment • set up equipment • monitor quality • function and operating principles of equipment • maintain workplace records

Packaging Rules

Packaging Rules

To be awarded the Certificate III in Surface Preparation and Coating Application competency must be achieved in **thirty one (31)** units of competency.

- **eleven (11)** core units of competency
- **twenty (20)** elective units of competency, five (5) of which may be selected from this Training Package, other endorsed Training Packages and accredited courses, as specified below.

Note: Where prerequisite units are identified they must be counted in the total number of units required for completion of the qualification.

Core units of competency

- Select all **eleven (11)** units of competency from the following list.

Unit Code	Title
MEM12023A	Perform engineering measurements
MEM12024A	Perform computations
MEM14004A	Plan to undertake a routine task
MEM14005A	Plan a complete activity
MEM15002A	Apply quality systems
MEM15024A	Apply quality procedures
MEM16006A	Organise and communicate information
MEM16007A	Work with others in a manufacturing, engineering or related environment
MEM16008A	Interact with computing technology
MSAENV272B	Participate in environmentally sustainable work practices
MSAPMOHS200A	Work safely

Elective units of competency

Group A - Surface Preparation

- Select a minimum of **three (3)** units from the following list.

Unit Code	Title	Prerequisite
MEM08002C	Pre-treat work for subsequent surface coating	MEM13003B
MEM08007B	Control surface finish production and finished product quality	
MEM08011B	Prepare surfaces using solvents and/or mechanical means	MEM13003B MEM18001C MEM18002B
MEM08012B	Prepare surfaces by	MEM08016B

Unit Code	Title	Prerequisite
	abrasive blasting (basic)	MEM13003B

Unit Code	Title	Prerequisite
MEM08013B	Prepare surfaces by abrasive blasting (advanced)	MEM08012B MEM08016B MEM13003B
MEM08016B	Control blast coating by-products, materials and emissions	MEM13003B
MSAPMWJ301A	Operate a high pressure water jetting system	
PMBPROD248C	Prepare surfaces for coating	
<p>One (1) relevant technical surface preparation unit which is available for inclusion at Certificate III may be chosen from this Training Package, other endorsed Training Packages and accredited courses.</p>		

Group B - Coating Application

- Select a minimum of **two (2)** units from the following list.

Unit Code	Title	Prerequisite
MEM08014B	Apply protective coatings (basic)	MEM13003B
MEM08015B	Apply protective coatings (advanced)	MEM08014B MEM13003B
MSAPMOPS201A	Cut polymer materials	
MSAPMOPS202A	Fabricate polymer materials	
PMBPROD241C	Lay up rubber lining or lag pulleys	
PMBPROD242A	Bond polymers to surfaces	
PMBPROD265C	Operate portable vulcanising equipment	

Unit Code	Title	Prerequisite
PMBPROD323C	Produce powder coated products	
PMBPROD375B	Vulcanise products using an autoclave	
<p>One (1) relevant technical protective coating application unit which is available for inclusion at Certificate III may be chosen from this Training Package, other endorsed Training Packages and accredited courses.</p>		

Group C - Other elective units

- Select a minimum of **three (3)** units from the following list.

Unit Code	Title	Prerequisite
MEM11001C	Erect/dismantle scaffolding and equipment	MEM18001C
MEM11002C	Erect/dismantle complex scaffolding and equipment	MEM11001C MEM18001C
MEM11003B	Coordinate erection/dismantling of complex scaffolding/equipment	MEM11001C MEM11002C MEM18001C
MEM11004B	Undertake dogging	MEM18001C
MEM11010B	Operate mobile load shifting equipment	
MEM11011B	Undertake manual handling	
MEM11021B	Perform advanced operation of load shifting equipment	MEM11010B
MEM11022B	Operate fixed/moveable load shifting equipment	
MEM13001B	Perform emergency first aid	

Unit Code	Title	Prerequisite
MEM13003B	Work safely with industrial chemicals and materials	
MSAPMOHS216A	Operate breathing apparatus	
MSAPMOHS217A	Gas test atmospheres	
MSAPMPER200C	Work in accordance with an issued permit	
MSAPMPER202A	Observe permit work	
MSAPMPER205C	Enter confined space	MSAPMPER200B
MSAPMPER300C	Issue work permits	RIIRIS201A
RIIOHS204A	Work safely at heights	
RIIRIS201A	Conduct local risk control	

Group D - Other elective units

- Select a minimum of **three (3)** units from the following list.

Unit Code	Title	Prerequisite
MEM07001B	Perform operational maintenance of machines/equipment	MEM18001C
MEM11012B	Purchase materials	
MEM11016B	Order materials	
MEM12001B	Use comparison and basic measuring devices	
MEM15003B	Use improvement processes in team activities	MEM16007A
MEM15004B	Perform inspection	

Unit Code	Title	Prerequisite
MEM15005B	Select and control inspection process and procedures	MEM15004B
MEM16002C	Conduct formal interviews and negotiations	
MEM16005A	Operate as a team member to conduct manufacturing, engineering or related activities	
MEM16011A	Communicate with individuals and small groups	MEM16006A
MEM16013A	Operate in a self directed team	MEM16007A
MEM17001B	Assist in the development and delivery of training in the workplace	
MEM17003A	Assist in the provision of on the job training	
MEM18001C	Use hand tools	
MEM18002B	Use power tools/hand held operations	
MSAPMOPS301A	Treat corrosion	
MSAPMOPS363A	Organise on site work	
MSAPMSUP100A	Apply workplace procedures	
MSAPMSUP303A	Identify equipment faults	
MSAPMSUP390A	Use structured problem solving tools	
MSAPMWJ201A	Use high pressure water jetting equipment	

Group E - Balance of units

The balance of units, to a maximum of **nine (9)**, may be chosen from any combination of:

- units from Groups A, B, C and D above, not already selected
- up to **three (3)** relevant units can be selected from this Training Package, other endorsed Training Packages and accredited courses, where those units are available for inclusion at Certificate III.
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