Australian Government

PMB40126 Certificate IV in Polymer Technology

Release: 1

PMB40126 Certificate IV in Polymer Technology

Modification History

Release	Comments
1	This qualification was first released in PMB Plastics, Rubber and Cablemaking Release 3.0.

Qualification Description

This qualification reflects the role of senior operators and polymer technicians who may be process-based and directly involved in production or they may be based elsewhere, although they will typically still have functions on the production floor. They apply theoretical and technical knowledge and well-developed skills in situations that require autonomy, discretion and judgement, such as product and process improvements and trialling. Senior operators and polymer technicians will solve complex problems which require in depth theoretical knowledge combined with an understanding of the production process and equipment.

Products and components may be for commercial, industrial or consumer markets and be made from natural or synthetic polymers covering thermoplastics as well as thermosetting polymers. Production may be long runs of standard products, short runs, or ‘one offs’ of specialised products.

Some units in this qualification may have licensing or regulatory requirements in some jurisdictions. Local regulations should be checked for details.

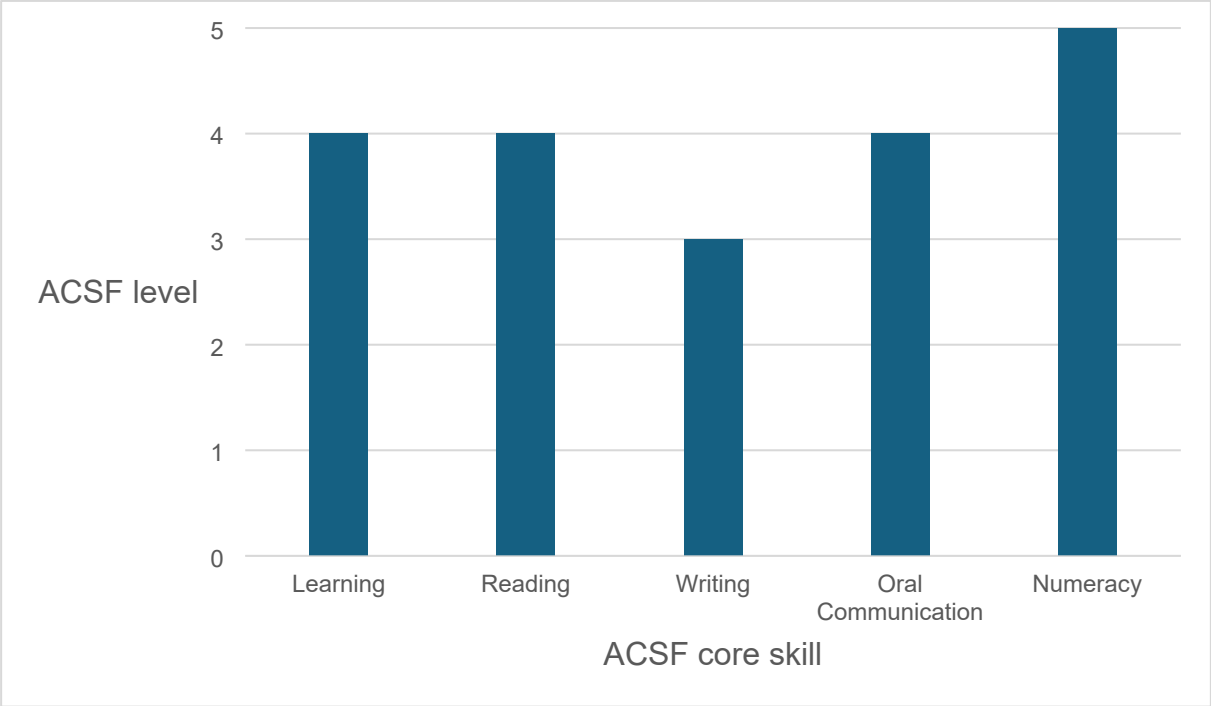
Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Foundation Skills Outcomes

The foundation skills outcomes in this qualification are outlined below.

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance



Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

Total number of units = 28

- 1 core unit
- 27 elective units, consisting of:
    - at least 24 units from the electives listed below, which must include:
        - 2 units from Group A – noting the unit selection guidelines
        - 5 units from Group B
    - up to 3 units from any endorsed Training Package or accredited course – these units must be relevant to the work outcome.

Any combination of electives that meets the rules above can be selected for the award of the Certificate IV in Polymer Technology. Where appropriate, electives may be packaged to provide a qualification with a specialisation.

Packaging for each specialisation:

- All Group C electives must be selected for the award of PMB40126 Certificate IV in Polymer Technology (Blow moulding)
- All Group D electives must be selected for the award of PMB40126 Certificate IV in Polymer Technology (Composites)

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

- All Group E electives must be selected for the award of PMB40126 Certificate IV in Polymer Technology (Conveyor belt maintenance and repair)
- All Group F electives must be selected for the award of PMB40126 Certificate IV in Polymer Technology (Extrusion)
- All Group G electives must be selected for the award of PMB40126 Certificate IV in Polymer Technology (Plastic fabrication)
- All Group H electives must be selected for the award of PMB40126 Certificate IV in Polymer Technology (Injection moulding)
- All Group I electives must be selected for the award of PMB40126 Certificate IV in Polymer Technology (Polyurethane)
- All Group J electives must be selected for the award of PMB40126 Certificate IV in Polymer Technology (Rotational moulding)

Core units	
Unit code	**Unit Title**
MSS402055	Apply quality standards

Elective units			
Unit code	**Unit Title**	**Prerequisites**	**Unit selection guidelines**
Group A			
MEM13015	Work safely and effectively in manufacturing and engineering		Do not take with MSM WHS200
MEM16006	Organise and communicate information	*	Do not take with MSMS UP210
MSMWHS200	Work safely		Do not take with MEM1 3015
MSMSUP210	Process and record information		Do not take with MEM1 6006
Group B			

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

MEM09003	Prepare basic engineering drawing	*
MSMOPS400	Optimise process/plant area	
MSMOPS401	Trial new process or product	
MSMSUP404	Coordinate maintenance	
MSS402054	Monitor process capability	
MSS404056	Apply statistics to operational processes	
PMBPROD430E	Trial a new injection moulding die	
PMBPROD431E	Trial a new production mould assembly	
PMBTECH401E	Predict polymer properties and characteristics	
PMBTECH402E	Set advanced or complex injection moulding dies	
PMBTECH403E	Test thermoset composite laminates and materials	
PMBTECH404E	Mould composites with chemically-resistant or fire-retardant properties	
PMBTECH406E	Diagnose production equipment problems	
PMBTECH407E	Produce composite products using cored-laminate techniques	
PMBTECH501E	Analyse equipment performance	*
PMBTECH502E	Analyse production trials	*

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

PMBTECH506E	Analyse the design of products and tools for polymer injection moulding	*
PMBTECH507E	Develop fibre-composite products using cored-laminate techniques	
Group C: Blow moulding		
MEM12023	Perform engineering measurements	*
MEM12024	Perform computations	*
PMBPREP303E	Set up equipment for continuous operation	
PMBPREP305E	Change extrusion die and calibrator	
PMBPROD235E	Use materials and process knowledge to complete work operations	
PMBPROD306E	Prepare and start equipment for production	
PMBPROD308E	Take a machine out of production	
PMBTECH301E	Optimise polymer processing operations	
And at least one of the following units:		
PMBPROD311E	Produce blow moulded products	
PMBPROD370E	Produce injection blow moulded products	
Group D: Composites		
MEM12023	Perform engineering measurements	*
MEM12024	Perform computations	*

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

PMBPREP201E	Prepare moulds for composites production	
PMBPROD247E	Create composite laminates using hand lay-up techniques	
PMBPROD347E	Mould composites products using hand lay-up techniques	
PMBPROD356E	Construct moulds for composite products	
PMBPROD393E	Produce composites using vacuum bagging	
PMBTECH404E	Mould composites with chemically-resistant or fire-retardant properties	
PMBTECH405E	Repair damaged fibre-composites structures	
PMBTECH407E	Produce composite products using cored-laminate techniques	
Group E: Conveyor belt maintenance and repair		
PMBPROD243E	Cut rubber materials	
PMBPROD265E	Operate portable vulcanising equipment	
PMBPROD367E	Remove and replace conveyor belts	
PMBPROD368E	Repair conveyor belt carcasses	
PMBPROD369E	Repair conveyor belt covers	
And at least one of the following units:		
PMBPROD379	Splice steel cord conveyor belts	

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

PMBPROD377E	Splice fabric ply conveyor belts	
PMBPROD378E	Splice solid woven conveyor belts	
Group F: Extrusion		
MEM12023	Perform engineering measurements	*
MEM12024	Perform computations	*
PMBPREP303E	Set up equipment for continuous operation	
PMBPREP305E	Change extrusion die and calibrator	
PMBPROD306E	Prepare and start equipment for production	
PMBPROD313E	Produce extruded polymer products	
PMBTECH301E	Optimise polymer processing operations	
Group G: Plastic fabrication		
MEM12023	Perform engineering measurements	*
MEM12024	Perform computations	*
MEM30031	Operate computer-aided design (CAD) system to produce basic drawing elements	
MEM30033	Use computer-aided design (CAD) to create and display 3D models	*
PMBPROD328E	Produce sheet-fed vacuum-formed products	
PMBPROD330E	Make moulds for thermoformed products	

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

PMBPROD357E	Construct jigs and fixtures	
PMBPROD358E	Develop polymer product patterns	
PMBPROD384E	Operate multi-axis router	
PMBPROD385E	Program computer-controlled equipment	
PMBTECH301E	Optimise polymer processing operations	
Group H: Injection moulding		
MEM12023	Perform engineering measurements	*
MEM12024	Perform computations	*
PMBPREP304E	Set a die for injection moulding production	
PMBPROD235E	Use materials and process knowledge to complete work operations	
PMBPROD306E	Prepare and start equipment for production	
PMBPROD310E	Produce injection moulded products	
PMBPROD430E	Trial a new injection moulding die	
PMBTECH301E	Optimise polymer processing operations	
PMBTECH401E	Predict polymer properties and characteristics	
Group I: Polyurethane		
MEM12023	Perform engineering measurements	*

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

MEM12024	Perform computations	*
MSMSUP292	Sample and test materials and product	
PMBPROD235E	Use materials and process knowledge to complete work operations	
PMBPROD246E	Hand mix materials	
PMBPROD360E	Produce polyurethane products using centrifugal casting	
PMBPROD362E	Produce polyurethane products using gravity casting	
PMBTECH301E	Optimise polymer processing operations	
Group J: Rotational moulding		
MEM12023	Perform engineering measurements	*
MEM12024	Perform computations	*
MSMSUP292	Sample and test materials and product	
MSMSUP303	Identify equipment faults	
PMBPROD235E	Use materials and process knowledge to complete work operations	
PMBPROD283E	Demould polymer products	
PMBPROD321E	Produce rotational moulded products	
PMBTECH301E	Optimise polymer processing operations	
Other electives		

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

MEM09002	Interpret technical drawing	*
MEM11011	Undertake manual handling	*
MEM12023	Perform engineering measurements	*
MEM13003	Work safely with industrial chemicals and materials	*
MEM15001	Perform basic statistical quality control	*
MSMENV472	Implement and monitor environmentally sustainable work practices	
MSMOPS200	Operate equipment	
MSMOPS212	Use organisation computers or data systems	
MSMOPS244	Lay out and cut materials	
MSMSUP106	Work in a team	
MSMSUP200	Achieve work outcomes	
MSMSUP205	Transfer loads	
MSMSUP240	Undertake minor maintenance	
MSMSUP291	Participate in continuous improvement	
MSMSUP292	Sample and test materials and product	
MSMSUP300	Identify and apply process improvements	
MSMSUP309	Maintain and organise workplace records	
MSMSUP310	Contribute to the development of workplace documentation	
MSMSUP330	Develop and adjust a production schedule	
MSMSUP382	Provide coaching/mentoring in the workplace	

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

MSMSUP383	Facilitate a team	
MSMSUP390	Use structured problem-solving tools	
MSMSUP400	Develop and monitor quality systems	
MSMWHS400	Contribute to WHS management system	
MSS402042	Apply 5S procedures	
PMBFIN201E	Finish components and products	
PMBFIN203E	Rework product imperfections	
PMBHAN103E	Shift materials safely by hand	
PMBPREP205E	Assemble materials and equipment for production	
PMBPREP206E	Prepare polymer materials to specified formulae	
PMBPREP301E	Set up and prepare for batch production	
PMBPROD206E	Operate ancillary equipment	
PMBPROD236E	Operate hand-held air or power equipment for production processes	
PMBPROD240E	Cut plastic materials	
PMBPROD241E	Install rubber lining or pulley lagging using lay-up techniques	
PMBPROD242E	Bond polymers to surfaces	
PMBPROD245E	Fabricate products with rubber or plastics	
PMBPROD248E	Prepare surfaces for coating	

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

PMBPROD251E	Apply gel coat or other polymer surface finish	
PMBPROD280E	Operate a chopper gun to lay-up composites	
PMBPROD281E	Finish composite products	
PMBPROD282E	Reassemble production mould components	
PMBPROD287E	Weld thermoplastics materials	
PMBPROD304E	Wind up wire or belts	
PMBPROD343E	Shut down plant area	
PMBPROD355E	Make pattern or plug for composites moulds	
PMBPROD380E	Produce composites products using mechanised open mould wet lay-up	
PMBPROD384E	Operate multi-axis router	
PMBPROD385E	Program computer-controlled equipment	
PMBPROD390E	Produce composites using filament winding	
PMBPROD391E	Produce composites using resin infusion	
PMBPROD392E	Produce thermoset composites using pultrusion	
PMBPROD394E	Produce composites using resin transfer moulding	
PMBTECH302E	Modify existing compounds	

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

PMBTECH303E	Make minor modifications to products	
PMBWELD312	Join polyethylene plastic pipelines using butt welding	
PMBWELD313	Join polyethylene plastic pipelines using electrofusion welding	
PMBWELD314	Weld plastic using extrusion techniques	
PMBWELD315	Join plastic membranes and geotextiles using wedge-welding	
PMBWELD316	Join polyethylene plastic pipelines of DN 355 or greater using electrofusion welding	*

Pre-requisite Requirements

Unit of competency	Pre-requisite requirement
MEM09002 Interpret technical drawing	MEM12023 Perform engineering measurements MEM12024 Perform computations MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM09003 Prepare basic engineering drawing	MEM09002 Interpret technical drawing MEM12023 Perform engineering measurements MEM12024 Perform computations MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM11011 Undertake manual handling	MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

MEM12023 Perform engineering measurements	MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM12024 Perform computations	MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM13003 Work safely with industrial chemicals and materials	MEM11011 Undertake manual handling MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM15001 Perform basic statistical quality control	MEM12024 Perform computations MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM16006 Organise and communicate information	MEM13015 Work safely and effectively in manufacturing and engineering
MEM30033 Use computer-aided design (CAD) to create and display 3D models	MEM30031 Operate computer-aided design (CAD) system to produce basic drawing elements
PMBTECH501E Analyse equipment performance	PMBTECH401E Predict polymer properties and characteristics MSMOPS401 Trial new process or product
PMBTECH502E Analyse production trials	MSMOPS401 Trial new process or product.
PMBTECH506E Analyse the design of products and tools for polymer injection moulding	MSMOPS401 Trial a new process or product.
PMBWELD316 Join polyethylene plastic pipelines of DN355 or greater using electrofusion welding	PMBWELD313 Join polyethylene plastic pipelines up to and including DN315 using electrofusion welding

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance

Mandatory Workplace Requirements

There are no mandatory workplace requirements associated with units packaged in this qualification.

Qualification Mapping Information

Previous Code and Title	Equivalence	Comments
PMB40121 Certificate IV in Polymer Technology	Equivalent	

Links

Companion volumes, including implementation guides, are found on the national training register - https://training.gov.au/training/details/PMB.

© Commonwealth of Australia, 2026 Manufacturing Industry Skills Alliance