PMB Plastics, Rubber and Cablemaking Training Package (Release 2.0)

Companion Volume Implementation Guide

August 2020

IBSA MANUFACTURING

www.ibsa.org.au
manufacturing@ibsa.org.au
(03) 9815 7099
Level 3, 289 Wellington Parade South
East Melbourne, Victoria 3002

This Companion Volume Implementation Guide has been prepared on behalf of the Process Manufacturing, Recreational Vehicle and Laboratory (PMRVL) Industry Reference Committee (IRC) for the Australian Industry and Skills Committee (AISC).

Contents

Introduction

Who is this guide for?

The PMB Plastics, Rubber and Cablemaking Companion Volume Implementation Guide (CVIG), Release 2.0, is designed to assist State Training Authorities, regulators, assessors, trainers, Registered Training Organisations (RTOs) and enterprises in delivering training based on the units and qualifications in the PMB Plastics, Rubber and Cablemaking Training Package.

It has been developed to assist RTOs in meeting the requirements of the *Standards for Registered Training Organisations (RTOs) 2015*.

What is in this guide?

This CVIG provides specific information and advice about the structure of the qualifications and their key features, implementation advice and information on licensing and regulatory requirements.

The Appendices section contains:

- qualifications and units of competency, including prerequisites
- imported units
- mapping information for qualifications and units
- qualification and certificate level descriptions
- careers pathways
- ACSF core skills numerical indicator
- employability skills summaries
- industry taxonomy.

Version control and modification history

Version control

TP release	Status	Release date	Approval process
2.0	Current	xx Month 2020	Endorsement
1.0	Superseded	23 June 2016	Endorsement

Modification history details

Release 2

Release 2 of the PMB Plastics, Rubber and Cablemaking Training Package includes the following components:

- four qualifications

- 128 units of competency
- 82 imported units of competency.

Summary of changes to qualifications

PMB20120 Certificate II in Polymer Processing

This qualification has amended packaging rules and the number of units in the elective bank has been reduced.

PMB30120 Certificate III in Polymer Processing

This qualification has been restructured to include 11 specialisations, with amended packaging rules, and fewer units in the elective bank.

PMB40120 Certificate IV in Polymer Technology

This qualification has been restructured to include eight specialisations, with amended packaging rules, and fewer units in the elective bank.

PMB50120 Diploma of Polymer Technology

This qualification has amended packaging rules and the number of units in the elective bank has been reduced.

PMB60116 Advanced Diploma of Polymer Technology

This qualification has been deleted as industry has identified there is no vocational outcome at this level.

Summary of changes to units of competency

Changes to units of competency include:

- two new units:
  - PMBTECH407E Produce composite products using cored-laminate techniques
  - PMBPROD243E Cut rubber materials
- changes to the elements and performance criteria, including alignment across similar units
- title changes to several units to better reflect the task
- Foundation Skills section populated where foundation skills were not explicit within [erformance criteria
- addition of the modification history to fulfil National Register of VET (training.gov.au) requirements
- minor changes to the application and licensing statement
- removal of the range of conditions – relevant information has been included in other unit fields
- performance evidence reduced to include only key evidence. In previous units the evidence was often a repeat of the Performance Criteria
- knowledge evidence updated to provide the depth of understanding required
- a significant volume of guidance/superfluous information in the assessment conditions reduced and content amended to focus on the conditions that must be in place for assessment.

Release 1.0

Release 1.0 of the PMB Plastics, Rubber and Cablemaking Training Package included the following components:

- five qualifications
- 178 units of competency
- 116 imported units of competency.

Qualifications, skill sets and units of competency

The PMB Plastics, Rubber and Cablemaking Training Package contains:

- four qualifications
- 128 units of competency
- 82 imported units of competency.

Release 2.0 qualifications

Code	Title	Comment
PMB20120	Certificate II in Polymer Processing	Release 1. Supersedes PMB20116.
PMB30120	Certificate III in Polymer Processing	Release 1. Supersedes PMB30116.
PMB40120	Certificate IV in Polymer Technology	Release 1. Supersedes PMB40116.
PMB50120	Diploma of Polymer Technology	Release 1. Supersedes PMB50116.

Skill sets

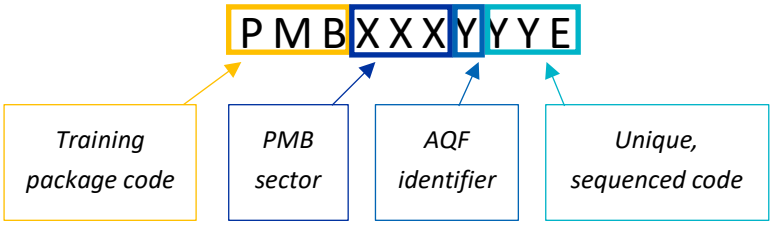
There are no skill sets in the training package.

Units of competency

A complete list of PMB-coded units is provided in Appendix 2.

Unit coding

All unit codes take the following form:



The code begins with PMB, followed by the sector code, then an indicative Australian Qualifications Framework (AQF) identifier (linked to the complexity of the skills and knowledge covered), followed by a unique unit code of three numbers. For example, the code PMBPROD310E is a unit coded for the

'Production' sector, targeted at AQF level 3, number 10 in the sequence for similar units. All units in Release 2.0 have had an E added to the end of the code to differentiate them from Release 1.0.

Summary mapping information

Detailed mapping and equivalence tables are provided in the Appendices:

Appendix 1: PMB qualifications mapping

Appendix 4: Mapping – PMB Release 1.0 to PMB Release 2.0

Appendix 5: Mapping – PMB Release 2.0 to PMB Release 1.0.

Continuous improvement

As Release 2.0 covers a review of the entire training package, all items logged in IBSA Manufacturing's ongoing Issues Register have formed part of the broader training package review process.

Key work and training requirements in the industry

The PMB Plastics, Rubber and Cablemaking Training Package provides a nationally endorsed and industry supported training framework for the polymer processing industry. The polymer processing industry is a downstream industry to the chemical and petrochemical industry, sourcing both the polymer raw materials (polymer manufacture) and many of the additives from the chemical and petrochemical sectors. Other additives, typically fillers, may be sourced from the ground minerals sector of the manufactured mineral products industry. Its products are used directly in nearly all industries and as components in many consumer products (both durables and consumables).

As a whole, the industry employs around 55,000 people (May 2018)[1], with a turnover of approximately $9,000 million. At the time of Release 2.0, COVID-19 was significantly impacting much of the Australian economy. For the polymer processing industry raw materials and replacement parts from the United States, China and Germany have been in short supply for some operators due to overseas factory shutdowns and travel restrictions. COVID-19 has also brought Australia's need for domestic manufacturing to the front of people's minds as it has exposed Australia's sovereign manufacturing gaps.

The manufacturing sector has also been identified, by the National Skills Commission, as key in post COVID-19 economic recovery, providing new jobs as Australia rebuilds. As a result, there may be ongoing opportunities for not only the polymer processing industry but also the manufacturing sector.

The three main sectors within the polymer processing industry are commonly identified as plastics, rubber and cablemaking. However, the industry stakeholders see the industry grouped as follows:

- product type, such as:
    - tyres – manufacture or retreading

[1] ABS 6291.0.55.003 Labour Force, Australia, May 2018

  - conveyor belts – manufacture or repair
  - cable – electrical power or data cables
- material type, such as:
  - composites
  - general rubber
  - specialist polymers
- process type, such as:
  - injection moulding or retreading
  - rotational moulding
  - extrusion.

It should be noted that while these processes are used as subsector names (typically for thermoplastic processes) the various processes themselves are used generally across all subsectors.

Units are also available for the sector/equipment-specific skills and knowledge in areas such as blow moulding, injection moulding and composites and technical problem-solving. Some competencies are common across job roles, sectors and in some cases industries; for example, production support, common processes and common equipment. These units maximise connectivity and transferability. Industry and training providers can select and package these units to meet the needs of a specific workplace or the broader needs of a sector.

Formal training

All qualifications are competency-based and can be achieved through a formal skills recognition process where substantial industry experience is evident. Where formal training is required, competence will be realised through a combination of on-the-job and off-the-job skills and knowledge development.

Occupational outcomes

RTOs must meet the requirements of the AQF and ensure that individual students are enrolled in appropriate qualifications. This section provides the AQF qualification descriptor and the PMB Plastics, Rubber and Cablemaking Training Package qualification description. This will assist RTOs in determining the most suitable qualification level for each student.

The statements in the qualifications contain critical information about the intended purpose of the qualification and are necessary to ensure that the occupational outcome associated with the qualifications is clear, and that the qualifications are used for their intended purpose.

Additional information on expected qualification outcomes and industry recognised skills profiles is available in the ‘Qualifications and occupational outcomes’ section.

Volume of learning

The AQF qualification descriptors include the volume of learning. RTOs must comply with this, and ensure that students are enrolled in qualifications that are suitable for the needs of the individual and

for industry employers. RTOs must also develop and implement training and assessment strategies that are consistent with the AQF to ensure their delivery meets the requirements of the AQF.

The AQF defines the volume of learning allocated to a qualification, expressed in years. The volume of learning is one of the dimensions that is used to define the complexity of a qualification. This includes all teaching, learning and assessment activities that are required to be undertaken by a typical student to achieve the learning outcomes. These activities include guided learning (classes, lectures, tutorials, and online or self-paced study), individual study, research, practice, learning activities in the workplace, and assessment activities.

The amount of training provided by an RTO is part of the overall volume of learning and relates primarily to formal activities (including classes and other activities, as well as workplace learning).

RTOs must consider the need to allow learners to reflect on and absorb knowledge, to practise the skills in different contexts, and to learn to apply the skills and knowledge in the varied environments of workplaces before being assessed. However, the amount of training should be defined with consideration of factors such as:

- the structure and content of the program and whether it is a full qualification
- the requirements within the relevant training product
- the AQF volume of learning
- the learner's qualifications, skills and experience
- the mode of delivery and how it affects the training/assessment needed
- workplace arrangements.

Regulation and licensing implications

At the time of writing, there are no licensing or other regulatory requirements applicable to the PMB Plastics, Rubber and Cablemaking Training Package qualifications as a whole. Where regulatory requirements may apply to individual units, this information is provided in the unit. However, these requirements differ between jurisdictions and are frequently updated. RTOs should always confirm licensing requirements with the regulator.

Applicable legislation, regulations, standards and codes of practice may include:

- work health and safety (WHS) legislation, regulations and codes of practice relevant to the workplace, manual handling practices and dealing with hazardous materials
- Australian/international standards relevant to the materials being used and products being made, including one or more of the following:
    - AS/NZS 1477:2017 – PVC pipes and fittings for pressure applications
    - AS/NZS 2032:2006 – Installation of PVC pipe systems
    - AS/NZS 2033:2008 – Installation of Polyethylene (PE) pipe systems
    - AS/NZS 2566.2:2002 – Buried flexible pipelines – Part 2: Installation

- AS/NZS 3879:2011 – Solvent cements and priming fluids for PVC (PVC-U and PVC-M) and ABS and ASA pipes and fittings
- AS/NZS 4130:2018 Polyethylene (PE) pipes for pressure applications, or its replacement
- AS/NZS 4131:2010 Polyethylene (PE) compounds for pressure pipes and fittings, or its replacement and amendments
- AS/NZS 4401:2006 (R2017) Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings - Polyethylene (PE), or its replacement
- AS/NZS 4129:2020 Fittings for polyethylene (PE) pipes for pressure applications.
- AS/NZS 4441:2017 – Oriented PVC (PVC-O) pipes for pressure applications (ISO 16422:2014, MOD)
- AS/NZS 4765:2017 – Modified PVC (PVC-M) pipes for pressure applications
- AS/NZS 5065:2005 (R2017) Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications, or its replacement
- ISO 21307:2017 Plastics pipes and fittings – Butt fusion jointing procedures for polyethylene (PE) piping systems or its replacement and amendments
- EN/ISO and Australian regulatory guidelines for medical devices (ARGMD)
- Class 1 of the Australian Register of Therapeutic Goods (ARTG).

General compliance

Businesses in the plastics, rubber and cablemaking industries must also comply with:

- federal, state and local government environmental standards
- product safety standards
- occupational health and safety regulations.

Standards for RTOs

Assessor requirements of the *Standards for Registered Training Organisations (RTOs) 2015*

The *Standards for Registered Training Organisations (RTOs) 2015* provides a guide for nationally consistent, high-quality training and assessment services in the vocational education and training (VET) system.

Download the *Standards* from the Australian Skills Quality Authority (ASQA) website www.asqa.gov.au/about/australias-vet-sector/standards-registered-training-organisations-rtos-2015.

Trainers and assessors must satisfy the trainer and assessor requirements in the *Standards* and the *National Vocational Education and Training Act 2011*. RTOs must stay aware of any changes to these requirements and ensure that they are compliant at all times.

Requirements for assessors include the prescribed qualification or skill set, vocational expertise at least to the level being assessed, and currency in both assessment and vocational skills. Where an individual does not meet all of these requirements, a co-assessment process may be used.

Assessment

In the context of the PMB Plastics, Rubber and Cablemaking Training Package, vocational skills are predominantly technical. The training package defines the following requirements for demonstrating technical skills and currency. Note that any additional requirements set by the VET regulator must also be adhered to.

Technical competence can be demonstrated through one or more of the following:

- relevant VET or other qualification/Statement of Attainment
- appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
- appropriate workplace experience supervising or evaluating the type of work being assessed under routine and non-routine conditions.

Currency can be demonstrated through one or more of the following:

- being currently employed undertaking the type of work being assessed
- being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
- having consulted or had contact with an organisation undertaking the type of work being assessed within the last twelve months, where the consultation or contact was related to the assessment
- conducting on-the-job training/assessments of the type of work being assessed
- being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

Mode of delivery

Training and assessment in the training package may be delivered face-to-face, online, through workplace training, using distance learning or a mixture of different modes, also called blended delivery.

Candidates can be assessed through skills recognition, on-the-job or off-the-job assessment activities or a combination of these. However, all assessments must comply with:

- the principles of assessment (Table 1.8-1 in the *Standards*)
- the rules of evidence (Table 1.8-2 in the *Standards*)
- all requirements set out in the unit and assessment requirements.

Australian Qualifications Framework (AQF)

Each RTO must issue AQF qualifications and Statements of Attainment that meet the requirements of the current *Australian Qualifications Framework* and the endorsed training packages within the scope of its registration. An AQF qualification is issued once the full requirements for a qualification, as specified

in the nationally endorsed training package are met. A Statement of Attainment is issued when an individual has completed one or more units from nationally recognised qualification(s) or courses(s).

See the current edition of the *Australian Qualifications Framework* (2ed, January 2013) available on the AQF website www.aqf.edu.au.

Overview of components in Release 2.0

To achieve a PMB Plastics, Rubber and Cablemaking Training Package qualification, competence must be achieved in all core units, a minimum number of operational or technical units of appropriate complexity, and electives that are selected according to the packaging rules of the qualification.

Units of competency

Core units

Competence must be achieved in the core units. Core units have been selected because they are necessary competencies for any operations person in the industry and they have an emphasis on safety and quality, both of which are key issues for this industry.

Electives

The training package qualifications use groups of electives to make the packaging rules clear and to ensure that the combination of electives results in a qualification that meets the AQF qualification type requirements. At the Certificate III and IV levels, Group A recognises the different needs of industry and the pathways learners may enter these qualifications. The specialisations allow learners to specialise within the qualification, the following table shows the specialisations available across Certificates III and IV.

Certificate III		Certificate IV	
B	Blow moulding	B	Blow moulding
C	Blown film	C	Composites
D	Composites	D	Conveyor belt maintenance and repair
E	Conveyor belt maintenance and repair	E	Extrusion
F	Conveyor belt manufacture	F	Plastic fabrication
G	Extrusion	G	Injection moulding
H	Plastic fabrication	H	Polyurethane
I	Injection moulding	I	Rotational moulding
J	Polyurethane		
K	Rotational moulding		
L	Rubber lining		

In the Certificate IV, the 5 units required to be selected from Group J support the technical requirements for a qualification at AQF Level 4. The number of electives varies between qualifications, and the packaging rules specify the total number of electives that can be chosen from the listed units.

A specified number of units may be selected from other training packages and accredited courses according to the specifications in the packaging rules.

The training package qualifications provide flexibility in the choice of electives. The electives should be chosen to meet the needs of the particular learner, learner group and/or enterprise client while ensuring the packaging requirements have been followed.

Operational or technical units should be chosen based on a review of the equipment and processes being used in the job role and the type of responsibilities expected in relation to them.

Additional electives can then be chosen to meet the requirements of the job role; for example, in support competencies, WHS, communications and teamwork.

Contextualising units of competency

Units may, and in some cases should, be contextualised to the subsector and type of work environment involved. However, contextualisation must only be applied in a manner that maintains the rigour and level of the unit; contextualisation that changes the elements or performance criteria is not permitted.

Contextualisation is acceptable where it:

- replaces general directions with organisationally specific needs
- replaces generic equipment or process names with organisationally specific names
- replaces general processes or specifications with organisationally specific needs.
- As a minimum, the contextualised unit should:
- maintain the level and rigour of the original unit
- be of a similar breadth, complexity and size to the original unit
- be relevant to the industry sector and the organisation
- not reduce the health, safety or environmental requirements of the original unit
- retain the original unit code and title.

Prerequisite units of competency and prerequisite pathways

The PMB-coded units are built on a structure of accumulated skills and knowledge. This means that there are hierarchies of skills and knowledge that are built up from a range of competencies. This may have an impact on training and assessment delivery strategies. Any units that underpin others are listed as prerequisites; however, these have been kept to a minimum.

Unit code	Unit title	Prerequisites
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
PMBTECH505E	Choose polymer materials for an application	PMBTECH401E Predict polymer properties and characteristics
PMBTECH506E	Analyse the design of products and tools for polymer injection moulding	MSMOPS401 Trial new process or product
PMBTECH601E	Develop a new product	PMBTECH502E Analyse production trials (prerequisite chain MSMOPS401) PMBTECH505E Choose polymer materials for an application (prerequisite chain PMBTECH401E)
PMBTECH602E	Develop a new die or tool	PMBTECH506E Analyse the design of products and tools (prerequisite chain MSMOPS401)
PMBTECH603E	Design structural or mechanical polymer components	PMBTECH505E Choose polymer materials for an application (prerequisite chain PMBTECH401E)

Competency fields

Competency fields are used to categorise a set or group of units in relation to a type or area of work. They are convenient groupings of units to assist with the organisation of the competency standards and to help users in the selection of relevant competency standards. The fields do not set up barriers to accessing any competency units in a field, or between fields. They also do not limit the applicability of the unit; rather, they should be regarded as an indicator of potential applicability. Contextualisation beyond the areas the competency field indicates is acceptable.

The competency fields used in the PMB Plastics, Rubber and Cablemaking Training Package are:

All Sectors
All Sectors, not Composites
Belt Manufacturing
Belt Production
Belt Technician
Blow Moulding
Blown Film
Composites
Conveyor Belt
Conveyor Belt Manufacturing
Conveyor Belts
Extrusion
Extrusion Blow Moulding
Fibre-Reinforced Plastic
Finishing
Generic
Injection Blow Moulding
Injection Moulding
Installation
Masterbatch
Pipeline Installation
Plastic Extrusion Welding
Plastic Fabrication
Plastic Pipelines
Plastic Pipelines Design
Plastic Welding
Plastics Fabrication
Polymer Printing
Polymer Technology
Polyurethane
Production
Reinforced Plastics
Robotic Assistance Devices
Rotational Moulding
Rotomoulding
Rubber and Urethanes

Rubber Processing	Thermoplastic Processing	Urethanes
Technical	Thermoset Composites	
Thermoforming	Pultrusion	

Application

Units of competency have specific scope and limitation as well as purpose and operating conditions in different contexts and workplaces.

The Application section is designed to give clear and enforceable direction to users of the training package about how the unit is to be applied. This is to ensure that duplication is minimised, skills pathways are not compromised, and that unit selection is appropriate from an industrial outcome perspective.

For example, some of the units and qualifications contain directives in relation to the application of the units and/or qualifications, which are required to ensure that they are applied as intended. The information is usually clearly stated. For example, *PMBTECH506E Analyse the design of products and tools for polymer injection moulding* contains a statement in the application:

> *"This unit of competency does not apply to non-metallic moulds such as those used for composites or thermoforming."*

Statements such as this help ensure that proper consideration is given to the selection of units in meeting the end purpose.

Implementation information – key features

RTOs will need to implement a comprehensive training and assessment strategy for each qualification that they deliver.

This implementation information is provided to assist RTOs to develop their learning and assessment strategies to meet industry and student needs. It includes information on:

- choosing the appropriate qualification, skill set or unit
- choosing electives as required
- supporting students
- delivering the training
- assessing students.

Mandatory entry requirements for qualifications

There are no mandatory entry requirements for any of the PMB Plastics, Rubber and Cablemaking Training Package qualifications.

Choosing the appropriate qualification

This section will assist training package users to develop their training and assessment strategies, customise the program to meet industry sector and student needs, identify the most suitable qualification for each student ,and apply the volume of learning and amount of training required to comply with the AQF.

This section provides information about:

- career pathways into and out of each qualification. There are no entry requirements for any of the training package qualifications.
- qualifications, occupational outcomes and the AQF.

Industry sectors

All PMB Plastics, Rubber and Cablemaking Training Package qualifications are designed to provide an industry-recognised skills profile related to work performed in or related to the plastics, rubber and cablemaking industries.

Qualifications and occupational outcomes

The training package qualifications have been developed to align to job roles in the PMB sectors while maintaining the rigour of the AQF qualification types and levels. Qualifications in the training package support occupational outcomes ranging from workers below trade level through to trade and technician levels. These align with Certificate II through to Diploma in the AQF.

See Appendix 6 for full AQF qualification descriptors and their PMB-specific explanations.

Pathways through the training package

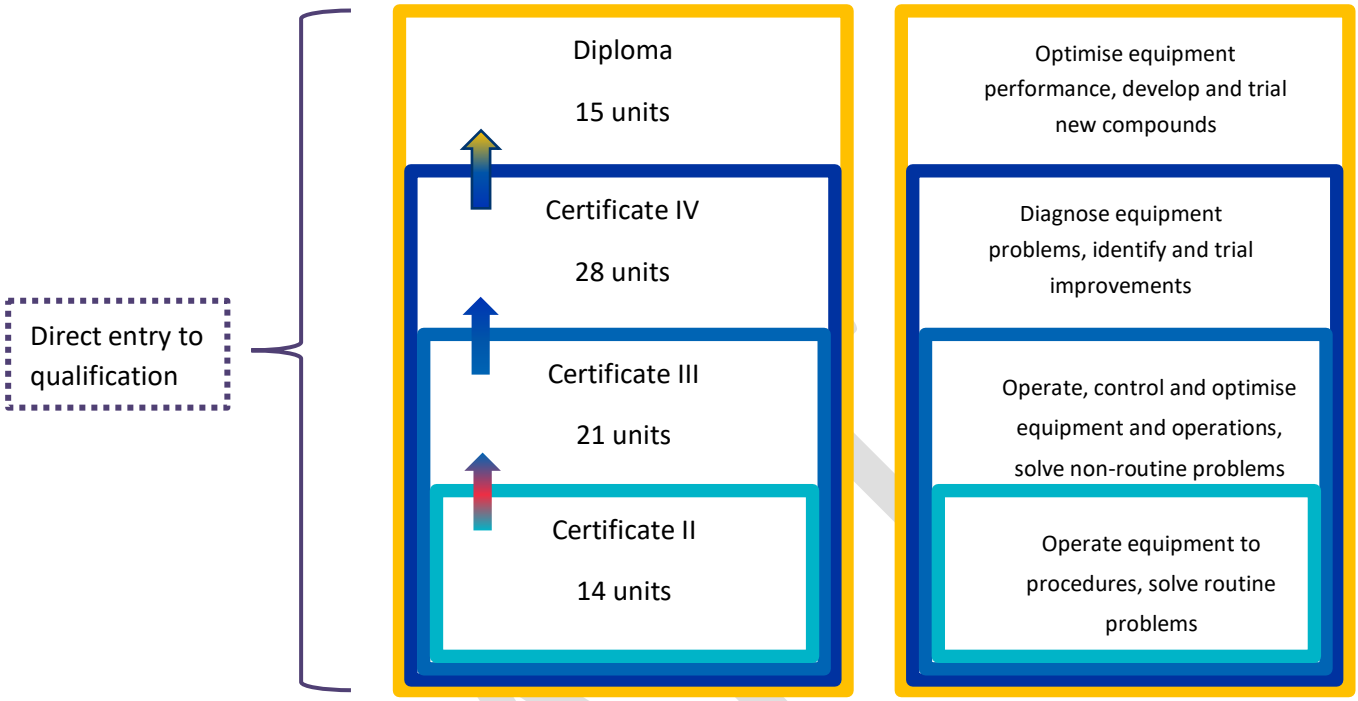
The training package provides a suite of operational and technical qualifications. There are qualifications at Certificate II, Certificate III, Certificate IV and Diploma levels.

All qualifications can be undertaken by accessing recognition of prior learning (RPL), and certain qualifications can be undertaken as traineeship and apprenticeship pathways.

The following chart shows career pathways and an indication of the alignment between occupational roles and qualifications.

Note that should a Certificate I be required, it is available in the MSM Manufacturing Training Package.

Figure 1: PMB qualifications and career pathways



Qualification pathways

The training package qualifications have been developed to support career pathways for operations personnel with articulation through AQF levels.

There are pathways between qualifications that enable career progression from below trade-level through to trade-equivalent and technician levels. Depending on the choice of elective units, qualifications provide some articulation with a higher-level qualification.

All qualifications allow for credit transfer, again depending on the electives that have been achieved.

Assessment guidelines

The training package unit of competency assessment requirements summarise essential evidence for an assessment but do not replace the requirements set out in the elements and performance criteria in the unit.

Assessment methods must be relevant to and comply with all of the requirements of the unit and associated assessment requirements.

The assessment requirements for PMB-coded units do not define the assessment process and are not assessment tools. The performance and knowledge evidence requirements should be analysed to identify logical/practical groupings that will help in designing assessment methods and assessment tools.

Evidence of knowledge may be collected concurrently with performance evidence or through an independent process such as workbooks, written assessments or interviews (provided a record is kept in each case).

Workplace assessment

Where assessment occurs in the workplace:

- take into account that the person being assessed may have had little experience of structured training and assessment. Carefully explain the process of making judgements against the standards and make the candidate feel as relaxed as possible, consistent with the needs of the unit
- consult on the assessment process with the parties involved
- the assessment should take place over a reasonable length of time so that the candidate has the opportunity to demonstrate work responsibility and contingency management
- third-party reports of workplace performance, if available, may be useful; however, the third party must have relevant experience on which to base their report
- consider the other staff in the workplace likely to be affected by the process. All staff directly or indirectly involved in the process should be briefed on the factors that will impact on them, such as duration or changes in work routine
- ensure that assessment is as compatible as possible with the normal pattern of work and causes minimal disruption. If the process involves candidates being away from their work area for a period of time, then arrangements should be made with their immediate supervisor to cover their duties for that period of time.

Simulation

Simulation may be appropriate where safety/environmental risk, production processes and/or cost factors prevent workplace evidence being generated. This might be the case, for example, where WHS competencies must be achieved prior to performing the work or where operational activities are not performed regularly (for example, process shutdown).

Where off-the-job assessment is used the RTO must design realistic workplace simulations that cover the range of conditions, challenges and contingencies found in an operational workplace as relevant to the unit being assessed.

Where assessment is occurring out of the workplace, it is important to ensure that:

- the assessment takes place in a situation as close as possible to workplace reality
- all aspects of competency are assessed
- the assessment takes place over a reasonable length of time so that the candidate has the opportunity to demonstrate work responsibility and contingency management
- third-party reports of workplace performance, if available, may be useful; however the third party must have relevant experience on which to base their report
- documents used in assessment closely reflect workplace reality.

Evidence guidelines

Judgement of competence

Judgement of competence must be based on holistic review of all of the evidence against the unit of competency and assessment requirements. Assessment must meet the Principles of Assessment and the Rules of Evidence.

The design of assessment needs to ensure that the following dimensions of competency are covered:

- task skills (performance of individual tasks)
- task management skills (managing a number of different tasks within the job)
- contingency management skills (responding to problems, breakdowns and changes in routine)
- job/role environment skills (dealing with the responsibilities and expectations of the workplace).

Evidence-gathering methods must be gender and culturally inclusive and take into account the language, literacy and numeracy skills of the candidate and requirements of the unit and the workplace.

Assessment design should also consider:

- incorporating a range of assessment techniques
- integrating the assessment of units related to the performance of 'whole of work' tasks, roles or functions
- using a holistic approach that combines knowledge, understanding, problem-solving, technical skills and applications to new situations into the assessment process
- assessing in the workplace (wherever possible), using familiar skills and materials
- ensuring that the amount and level of reading and writing is commensurate with what is required to do the job competently
- using the language and terms of the job and the workplace
- encouraging the candidate to ask questions to clarify instructions
- providing clarification of purpose and process of assessment
- identifying and addressing any cultural and gender issues that may arise.

The following resources provide advice on designing assessment tools:

- *Guide to developing assessment tools* (ASQA, 2015; https://www.asqa.gov.au/resources/guides/guide-developing-assessment-tools)
- A guide to developing training package assessment materials [kit] (ANTA, 2001: https://trove.nla.gov.au/work/16529162?selectedversion=NBD24099286f)
- ASQA forms: https://www.asqa.gov.au/forms.html
- *Disability Standards for Education 2005* (Australian Government, https://www.comlaw.gov.au/Details/F2005L00767)

Access and equity

A learner's access to the training and assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this training package. Training and assessment must be bias-free.

Reasonable adjustments

Under the *Disability Standards for Education 2005*, education providers must make reasonable adjustments for people with disability to the maximum extent that those adjustments do not cause that provider unjustifiable hardship. While 'reasonable adjustment' and 'unjustifiable hardship' are different concepts and involve different considerations, they both seek to strike a balance between the interests of education providers and the interests of candidates with and without disability. The Disability Standards and guidelines for their implementation can be downloaded at http://www.comlaw.gov.au/Details/F2005L00767.

An adjustment is any measure or action that a candidate requires because of their disability, and which has the effect of assisting them to access and participate in education and training on the same basis as those without a disability. An adjustment is reasonable if it achieves this purpose while taking into account factors such as the nature of the candidate's disability, their views, the potential effect of the adjustment on the candidate and others who might be affected, and the costs and benefits of making the adjustment.

A training provider is also entitled to maintain the academic requirements of a course or program and to consider the requirements or components that are inherent or essential to its nature when assessing whether an adjustment is reasonable. There may be more than one adjustment that is reasonable in a given set of circumstances; education providers are required to make adjustments that are reasonable and that do not cause them unjustifiable hardship.

Adjustments must not diminish the rigour of the unit being assessed.

Foundation skills

What are foundation skills?

Foundation skills are the core or essential skills needed to engage successfully in work and life. The term 'foundation skills' is currently used to include the five core skills defined in the Australian Core Skills Framework (ACSF) as well as the eight employability skills that are required for effective performance in the workplace.

Information about the foundation skills has been identified for the PMB-coded units and qualifications and is provided below.

How are they relevant?

Training providers should use the foundation skills information in the training package qualifications to assist with designing valid and reliable training and assessment strategies and practices. This analysis could include:

- reviewing units to locate relevant employability skills and determine how they are applied within the units

- analysing the Employability Skills Summary for the AQF qualification level in which the unit or units are packaged to help clarify relevant industry and workplace contexts and the application of employability skills in a particular qualification outcome
- designing training and assessment to address employability skills requirements.

Foundation skills are deemed essential to successful learning and continuing employment. Foundation skills are integral to competent performance of each unit and should not be assessed separately.

ACSF core skills

There are five core skills in the ACSF:

- reading
- writing
- oral communication
- numeracy
- learning.

The core skills are embedded in the performance criteria in the units in the PMB Plastics, Rubber and Cablemaking Training Package. Where the skills are not explicit in the performance criteria, they have been highlighted in the foundation skills field of the units. This is to ensure they are addressed as part of the training program.

Appendix 7 includes the ACSF levels for units of competency. The levels indicate what is required by competent learners at the end of a training program. The levels are not entry levels. They are noted in this guide to assist trainers to determine the level of skill that should be addressed in training and assessment. They should also be taken into account when designing training and assessment materials. For example, a unit of competency with a level 2 reading skills must not use an assessment activity based on reading complex technical reports or utilise complex language in assessment tasks.

Employability skills

Employability skills are deemed to be essential for effective performance in the workplace. They apply holistically at the qualification level.

There are eight employability skills:

- communication
- teamwork
- problem-solving
- initiative and enterprise
- planning and organising
- self-management
- learning
- technology.

Employability skills summaries have been developed for the PMB Plastics, Rubber and Cablemaking Training Package qualifications. The summaries are designed to assist trainers and assessors to identify and include important industry application of employability skills in training and assessment strategies.

Employability skills summaries provide examples of how each skill is applicable to the occupational outcomes covered by the qualification. They contain general information about industry context and are a broad summary of the measurable outcomes of performance in the units in each qualification.

Employability skills summaries are not exhaustive lists of qualification requirements nor checklists of performance.

Foundation skills are integral to competent performance of the unit and should not be assessed separately. In other words, if an assessment covers all aspects of the unit and assessment requirements the foundation skills will also have been assessed.

Health and safety implications for manufacturing

All operations must comply with WHS and environmental management requirements, which may be imposed through state/territory or federal legislation. These requirements must not be compromised at any time.

All operations must recognise the potentially hazardous nature of the materials, equipment and processes used in the plastics, rubber and cablemaking industries.

The PMB-coded units include adherence to the current 'regulatory framework' as an essential operating condition. The regulatory framework includes any or all legislation, regulations, standards, codes of practice and licensing requirements that apply to the workplace and the products, materials and processes being used.

The wording of the regulatory framework statement is common to many units and does not list the specific regulations to follow. This is because regulations often vary between jurisdictions and are frequently updated. In addition, some units can be applied to different contexts that might be subject to different requirements.

It is critical, however, that RTOs ensure that all training, assessment and related workplace activities are conducted within the requirements of the regulatory framework.

In most cases the regulatory framework will define requirements for WHS, environmental protection, testing and quality (often related to safety and environment). It may also relate to areas such as discrimination, privacy, and consumer protection.

The regulatory framework will typically include several of the following:

- WHS legislation, codes of practice and guidance material
- major hazard facility (MHF) codes and regulations
- environmental regulations and guidelines
- other relevant government legislation, regulations and codes
- Australian, ISO and other standards
- other relevant codes and standards

- licence and certification requirements.

Individual units may also outline specific WHS activities or responsibilities. But if there appears to be any conflict between performance criteria and explicit regulatory requirements the legislative requirements take precedence.

The regulatory framework should be reflected in workplace policies and procedures and is not required to be independently assessed. Where workplace policies and procedures do not reflect regulatory requirements, the RTO must still ensure that the learner adheres to and is competent in the regulatory requirements.

Resources and equipment

The resource and equipment requirements for assessing a unit are typically included in each PMB-coded unit. Where specific equipment is not listed in the unit, the plant and/or equipment must be determined from the content of the unit and the context of delivery and made available for the assessment.

The RTO must also determine all tools, documents, computers, communications equipment and other items that would normally be used in the performance of the competency in the workplace and make them available for the assessment.

Technical units generally require access to operational, industrial type plant and equipment. This creates a bias towards using workplace evidence and, where appropriate, simulation. See the Simulation section.

Appendices

Appendix 1: PMB qualifications mapping

Key: E = Equivalent, N = Non-equivalent

PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		PMB Plastics, Rubber and Cable-making Training Package Release 2.0		Equiv. status	
Qual Code	Qual Title	Qual Code	Qual Title	E/N	Comments
PMB20116	Certificate II in Polymer Processing	PMB20120	Certificate II in Polymer Processing	E	Fewer units in elective bank.
PMB30116	Certificate III in Polymer Processing	PMB30120	Certificate III in Polymer Processing	E	Restructured to include 10 specialist elective groups, with amended packaging rules; fewer units in elective bank.
PMB40116	Certificate IV in Polymer Technology	PMB40120	Certificate IV in Polymer Technology	E	Restructured to include 8 specialist elective groups, with amended packaging rules, and a reduced number of units in elective banks.
PMB50116	Diploma of Polymer Technology	PMB50120	Diploma of Polymer Technology	E	A reduced number of units in elective bank.
PMB60116	Advanced Diploma of Polymer Technology				This qualification has been deleted as industry has identified there is no vocational outcome at this level.

Appendix 2: PMB units of competency and prerequisites

Unit code	Unit title	Prerequisite units
PMBFIN201E	Finish components and products	
PMBFIN202E	Fit attachments and assemble components for customised polymer products	
PMBFIN203E	Rework product imperfections	
PMBFIN205E	Hand decorate products	
PMBHAN103E	Shift materials safely by hand	
PMBPREP201E	Prepare moulds for composites production	
PMBPREP205E	Assemble materials and equipment for production	
PMBPREP206E	Prepare polymer materials to specified formulae	
PMBPREP301E	Set up and prepare for batch production	
PMBPREP303E	Set up equipment for continuous operation	
PMBPREP304E	Set a die for injection moulding production	
PMBPREP305E	Change extrusion die and calibrator	
PMBPROD206E	Operate ancillary equipment	
PMBPROD207E	Operate rubber calendering equipment	
PMBPROD209E	Operate cable winding equipment	
PMBPROD210E	Operate injection moulding equipment	
PMBPROD213E	Operate polymer extruders	
PMBPROD216E	Operate blown film equipment	
PMBPROD217E	Operate printing equipment	
PMBPROD221E	Operate rotational moulding equipment	
PMBPROD235E	Use materials and process knowledge to complete work operations	
PMBPROD236E	Operate hand-held air or power equipment for production processes	
PMBPROD238E	Perform creel rack operations for belting production	
PMBPROD239E	Build fabric-reinforced conveyor belts	
PMBPROD240E	Cut plastic materials	
PMBPROD241E	Install rubber lining or pulley lagging using lay-up techniques	
PMBPROD242E	Bond polymers to surfaces	

PMBPROD243E	Cut rubber materials	
PMBPROD245E	Fabricate products with rubber or plastics	
PMBPROD246E	Hand mix materials	
PMBPROD247E	Create composite laminates using hand lay-up techniques	
PMBPROD248E	Prepare surfaces for coating	
PMBPROD249E	Apply liquid surface coatings	
PMBPROD251E	Apply gel coat or other polymer surface finish	
PMBPROD252E	Operate polymer compounding equipment	
PMBPROD253E	Operate an internal mill blender	
PMBPROD254E	Operate an open mill blender	
PMBPROD255E	Operate polymer mixing equipment	
PMBPROD261E	Operate continuous vulcanising equipment	
PMBPROD265E	Operate portable vulcanising equipment	
PMBPROD280E	Operate a chopper gun to lay-up composites	
PMBPROD281E	Finish composite products	
PMBPROD282E	Reassemble production mould components	
PMBPROD283E	Demould polymer products	
PMBPROD287E	Weld thermoplastic materials	
PMBPROD293E	Create composite laminates using vacuum-assisted closed-moulding processes	
PMBPROD300E	Produce products	
PMBPROD301E	Draw wire	
PMBPROD302E	Bunch and strand wire	
PMBPROD303E	Produce cable and tape lay-up cables	
PMBPROD304E	Wind up wire or belts	
PMBPROD306E	Prepare and start equipment for production	
PMBPROD307E	Produce calendered rubber or vinyl products	
PMBPROD308E	Take a machine out of production	
PMBPROD310E	Produce injection moulded products	
PMBPROD311E	Produce blow moulded products	
PMBPROD313E	Produce extruded polymer products	
PMBPROD316E	Produce blown film	
PMBPROD321E	Produce rotational moulded products	

PMBPROD325E	Lay-on tyre retreads	
PMBPROD326E	Inspect tyres	
PMBPROD328E	Produce sheet-fed vacuum-formed products	
PMBPROD330E	Make moulds for thermoformed products	
PMBPROD336E	Inspect heavy off-the-road tyres	
PMBPROD337E	Prepare heavy off-the-road tyres for repair	
PMBPROD338E	Repair heavy off-the-road tyres	
PMBPROD339E	Produce steel cord-reinforced conveyor belts	
PMBPROD340E	Cure heavy off-the-road tyre repairs	
PMBPROD341E	Finish heavy off-the-road tyre repairs	
PMBPROD343E	Shut down plant area	
PMBPROD347E	Mould composites products using hand lay-up techniques	
PMBPROD352E	Produce compounded materials	
PMBPROD355E	Make pattern or plug for composites moulds	
PMBPROD356E	Construct moulds for composite products	
PMBPROD357E	Construct jigs and fixtures	
PMBPROD358E	Develop polymer product patterns	
PMBPROD360E	Produce polyurethane products using centrifugal casting	
PMBPROD362E	Produce polyurethane products using gravity casting	
PMBPROD367E	Remove and replace conveyor belts	
PMBPROD368E	Repair conveyor belt carcasses	
PMBPROD369E	Repair conveyor belt covers	
PMBPROD370E	Produce injection blow moulded products	
PMBPROD375E	Vulcanise products using an autoclave	
PMBPROD376E	Splice steel cord conveyor belts	
PMBPROD377E	Splice fabric ply conveyor belts	
PMBPROD378E	Splice solid woven conveyor belts	
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	
PMBPROD393E	Produce composites using vacuum bagging	
PMBPROD394E	Produce composites using resin transfer moulding	
PMBPROD398E	Produce composites using prepregs	
PMBPROD430E	Trial a new injection moulding die	
PMBPROD431E	Trial a new production mould assembly	
PMBTECH301E	Optimise polymer processing operations	
PMBTECH302E	Modify existing compounds	
PMBTECH303E	Make minor modifications to products	
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	
PMBTECH405E	Repair damaged fibre-composites structures	
PMBTECH406E	Diagnose production equipment problems	
PMBTECH407E	Produce composite products using cored-laminate techniques	
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
PMBTECH505E	Choose polymer materials for an application	PMBTECH401E Predict polymer properties and characteristics
PMBTECH506E	Analyse the design of products and tools for polymer injection moulding	MSMOPS401 Trial new process or product
PMBTECH507E	Develop fibre-composite products using cored-laminate techniques	
PMBTECH508E	Develop a new compound	
PMBTECH509E	Modify an existing product	
PMBTECH601E	Develop a new product	PMBTECH502E Analyse production trials

		PMBTECH505E Choose polymer materials for an application
PMBTECH602E	Develop a new die or tool	PMBTECH506E Analyse the design of products and tools
PMBTECH603E	Design structural or mechanical polymer components	PMBTECH505E Choose polymer materials for an application
PMBWELD301E	Join polyethylene plastic pipelines using butt welding	
PMBWELD302E	Join polyethylene plastic pipelines using electrofusion welding	
PMBWELD303E	Install polyethylene plastic pipelines for non-pressure drainage	
PMBWELD304E	Design polyethylene plastic pipelines for non-pressure drainage	
PMBWELD305E	Install polyethylene plastic pipelines for pressurised applications	
PMBWELD306E	Design polyethylene plastic pipelines for pressurised applications	
PMBWELD307E	Install plastic pipelines for high temperature applications	
PMBWELD308E	Install PVC plastic pipelines for pressurised applications	
PMBWELD309E	Weld plastics using extrusion techniques	
PMBWELD310E	Design PVC plastic pipelines for pressure applications	
PMBWELD311E	Design plastic pipelines for high temperature and pressure applications	

Appendix 3: PMB Release 2.0 – imported units

Unit code	Unit title	Prerequisites	Prerequisite chains
HLTAID003	Provide first aid		
MEM05050	Perform routine gas metal arc welding	MEM11011	MEM13015, MEM16006
		MEM13015	
		MEM16006	MEM13015
MEM09002	Interpret technical drawing	MEM12023	MEM13015
		MEM12024	MEM13015, MEM16006
		MEM13015	
		MEM16006	MEM13015
MEM09202A	Produce freehand sketches		
MEM11011	Undertake manual handling	MEM13015	
		MEM16006	MEM13015
MEM12023	Perform engineering measurements	MEM13015	
		MEM16006	MEM13015
MEM12024	Perform computations	MEM13015	
		MEM16006	MEM13015
MEM13003	Work safely with industrial chemicals and materials	MEM11011	MEM13015, MEM16006
		MEM13015	
		MEM16006	MEM13015
MEM13015	Work safely and effectively in manufacturing and engineering		
MEM16006	Organise and communicate information	MEM13015	
MEM16008	Interact with computing technology	MEM13015	
		MEM16006	MEM13015
MEM18001	Use hand tools	MEM11011	MEM13015, MEM16006
		MEM13015	
		MEM16006	MEM13015
MEM18002	Use power tools/hand held operations	MEM11011	MEM13015, MEM16006
		MEM13015	

		MEM16006	MEM13015
MEM30031A	Operate computer-aided design (CAD) system to produce basic drawings		
MEM30033A	Use computer-aided design (CAD) to create and display 3-D models	MEM30031A	
MSMENV172	Identify and minimise environmental hazards		
MSMENV272	Participate in environmentally sustainable work practices		
MSMENV472	Implement and monitor environmentally sustainable work practices		
MSMOPS100	Use equipment		
MSMOPS101	Make measurements		
MSMOPS102	Perform tasks to support production		
MSMOPS200	Operate equipment		
MSMOPS212	Use organisation computers or data systems		
MSMOPS244	Lay out and cut materials		
MSMOPS363	Organise on-site work		
MSMOPS400	Optimise process/plant area		
MSMOPS401	Trial new process or product		
MSMPER200	Work in accordance with an issued permit		
MSMPER201	Monitor and control work permits		
MSMPER205	Enter confined space	MSMPER200	
MSMSUP100	Apply workplace context to own job		
MSMSUP101	Clean workplace or equipment		
MSMSUP102	Communicate in the workplace		
MSMSUP106	Work in a team		
MSMSUP200	Achieve work outcomes		
MSMSUP204	Pack products or materials		
MSMSUP205	Transfer loads		
MSMSUP210	Process and record information		
MSMSUP230	Monitor process operations		
MSMSUP240	Undertake minor maintenance		
MSMSUP273	Handle goods		
MSMSUP280	Manage conflict at work		
MSMSUP291	Participate in continuous improvement		

MSMSUP292	Sample and test materials and product		
MSMSUP300	Identify and apply process improvements		
MSMSUP303	Identify equipment faults		
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		
MSMSUP383	Facilitate a team		
MSMSUP390	Use structured problem-solving tools		
MSMSUP400	Develop and monitor quality systems		
MSMSUP404	Coordinate maintenance		
MSMSUP405	Identify problems in fluid power system		
MSMSUP406	Identify faults in electronic control		
MSMWHS100	Follow WHS procedures		
MSMWHS110	Follow emergency response procedures		
MSMWHS200	Work safely		
MSMWHS205	Control minor incidents		
MSMWHS210	Undertake first response to non-fire incidents		
MSMWHS212	Undertake first response to fire incidents		
MSMWHS216	Operate breathing apparatus		
MSMWHS217	Gas test atmospheres		
MSMWHS400	Contribute to WHS management system		
MSMWHS401	Assess risk		
MSS015022	Develop strategies for more sustainable use of resources		
MSS402002	Sustain process improvements		
MSS402020	Apply quick changeover procedures		
MSS402021	Apply Just in Time procedures		
MSS402040	Apply 5S procedures		
MSS402050	Monitor process capability		
MSS402051	Apply quality standards		
MSS402080	Undertake root cause analysis		
MSS402082	Apply cost factors to work practices		

MSS402083	Use planning software systems in operations		
MSS403085	Ensure process improvements are sustained		
MSS404054	Apply statistics to operational processes		
MSS405020	Develop quick changeover procedures		
MSS405021	Develop a Just in Time system		
MSS405030	Optimise cost of product or service		
MSS405031	Undertake value analysis of product or process costs in terms of customer requirements		
MSS405054	Determine and improve process capability	MSS404054	
MSS405088	Plan, implement and monitor energy management		
MSTGN3009	Coordinate work of team or section		
RIIRIS201D	Conduct local risk control		
TLID2010	Operate a forklift		

Appendix 4: Mapping – PMB Release 1.0 to PMB Release 2.0

Key: E = Equivalent, N = Non-equivalent

PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBFIN201	Finish products and components	PMBFIN201E	Finish components and products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBFIN202	Fit attachments to products	PMBFIN202E	Fit attachments and assemble components for customised polymer products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBFIN203	Repair product imperfections	PMBFIN203E	Rework product imperfections	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBFIN205	Hand decorate products	PMBFIN205E	Hand decorate products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBHAN103	Shift materials safely by hand	PMBHAN103E	Shift materials safely by hand	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria

					changed. Range of Conditions removed. Assessment Requirements changed.
PMBHAN208	Store products				Deleted
PMBPREP201	Prepare moulds for composites production	PMBPREP201E	Prepare moulds for composites production	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP205	Assemble materials and equipment for production	PMBPREP205E	Assemble materials and equipment for production	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP206	Prepare materials to formulae	PMBPREP206E	Prepare polymer materials to specified formulae	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP301	Set up and prepare for production	PMBPREP301E	Set up and prepare for batch production	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP303	Set up equipment for continuous operation	PMBPREP303E	Set up equipment for continuous operation	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

					Assessment Requirements changed.
PMBPREP304	Set a die	PMBPREP304E	Set a die for injection moulding production	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP305	Change extrusion die and setup	PMBPREP305E	Change extrusion die and calibrator	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD206	Operate ancillary equipment	PMBPROD206E	Operate ancillary equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD207	Operate calender	PMBPROD207E	Operate rubber calendering equipment		Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD209	Operate cable winding equipment	PMBPROD209E	Operate cable winding equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMBPROD210	Operate injection moulding equipment	PMBPROD210E	Operate injection moulding equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD211	Operate blow moulding equipment				Deleted
PMBPROD212	Operate thermoforming equipment				Deleted
PMBPROD213	Operate extruders	PMBPROD213E	Operate polymer extruders		Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD216	Operate blown film equipment	PMBPROD216E	Operate blown film equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD217	Operate printing equipment	PMBPROD217E	Operate printing equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD221	Operate rotational moulding equipment	PMBPROD221E	Operate rotational moulding equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

					Assessment Requirements changed.
PMBPROD229	Operate polystyrene shape moulding equipment				Deleted
PMBPROD233	Operate film conversion equipment				Deleted
PMBPROD235	Use materials and process knowledge to complete work operations	PMBPROD235E	Use materials and process knowledge to complete work operations	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD236	Operate hand held air/power equipment for production processes	PMBPROD236E	Operate hand-held air or power equipment for production processes	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD237	Splice cables				Deleted
PMBPROD238	Perform creel rack operations	PMBPROD238E	Perform creel rack operations for belting production	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD239	Build reinforced conveyor belts	PMBPROD239E	Build fabric-reinforced conveyor belts	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMBPROD240	Cut materials	PMBPROD240E	Cut plastic materials	E	Revised. Unit code and title changed Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD241	Lay up rubber lining or lag pulleys	PMBPROD241E	Install rubber lining or pulley lagging using lay-up techniques	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD242	Bond polymers to surfaces	PMBPROD242E	Bond polymers to surfaces	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD243E	Cut rubber materials		New unit.
PMBPROD245	Fabricate materials	PMBPROD245E	Fabricate products with rubber or plastics	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD246	Hand mix materials	PMBPROD246E	Hand mix materials	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD247	Hand lay up composites	PMBPROD247E	Create composite	E	Revised. Unit code and title changed.

			laminates using hand lay-up techniques		Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD248	Prepare surfaces for coating	PMBPROD248E	Prepare surfaces for coating	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD249	Apply liquid surface coatings	PMBPROD249E	Apply liquid surface coatings	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD251	Apply gel coat or other polymer surface finish	PMBPROD251E	Apply gel coat or other polymer surface finish	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD252	Operate compounding equipment	PMBPROD252E	Operate polymer compounding equipment	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD253	Operate an internal mill blender	PMBPROD253E	Operate an internal mill blender	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

					Assessment Requirements changed.
PMBPROD254	Operate an open mill blender	PMBPROD254E	Operate an open mill blender	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD255	Operate mixing equipment	PMBPROD255E	Operate polymer mixing equipment	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD259	Operate granulating equipment				Deleted
PMBPROD261	Operate continuous vulcanising equipment	PMBPROD261E	Operate continuous vulcanising equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD262	Operate tyre curing equipment				Deleted
PMBPROD263	Operate retread curing equipment				Deleted
PMBPROD265	Operate portable vulcanising equipment	PMBPROD265E	Operate portable vulcanising equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMBPROD266	Prepare tyre casings for retreading				Deleted
PMBPROD267	Operate steel cutting equipment				Deleted
PMBPROD268	Operate bead coiling equipment				Deleted
PMBPROD270	Operate injection blow moulding equipment				Deleted
PMBPROD280	Operate resin-glass depositor equipment	PMBPROD280E	Operate a chopper gun to lay-up composites	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD281	Finish composite products	PMBPROD281E	Finish composite products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD282	Assemble mould	PMBPROD282E	Reassemble production mould components	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD283	Demould product	PMBPROD283E	Demould polymer products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

					Assessment Requirements changed.
PMBPROD284	Operate open flame moulding equipment				Deleted
PMBPROD285	Operate computer controlled equipment				Deleted
PMBPROD287	Weld plastics materials	PMBPROD287E	Weld thermoplastics materials	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD290	Operate filament winding equipment				Deleted
PMBPROD291	Operate resin infusion moulding equipment				Deleted
PMBPROD292	Operate pultrusion equipment				Deleted
PMBPROD293	Operate vacuum bagging equipment	PMBPROD293E	Create composite laminates using vacuum-assisted closed-moulding processes	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD294	Operate resin transfer moulding equipment				Deleted
PMBPROD295	Operate composite sheeting equipment				Deleted

PMBPROD296	Operate centrifugal casting equipment				Deleted
PMBPROD297	Operate equipment using moulding compounds				Deleted
PMBPROD298	Operate equipment using pre-preg material				Deleted
PMBPROD300	Produce products	PMBPROD300E	Produce products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD301	Draw wire	PMBPROD301E	Draw wire	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD302	Bunch and strand wire	PMBPROD302E	Bunch and strand wire	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD303	Lay up and tape cables	PMBPROD303E	Produce cable and tape lay-up cables	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD304	Wind products onto drums	PMBPROD304E	Wind up wire or belts	E	Revised. Unit code and title changed.

					Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD305	Colour optical fibre				Deleted
PMBPROD306	Prepare and start equipment for production	PMBPROD306E	Prepare and start equipment for production	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD307	Produce calendered products	PMBPROD307E	Produce calendered rubber or vinyl products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Prerequisite removed.
PMBPROD308	Take a machine out of production	PMBPROD308E	Take a machine out of production	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD309	Produce electroplated products				Deleted
PMBPROD310	Produce injection moulded products	PMBPROD310E	Produce injection moulded products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMBPROD311	Produce blow moulded products	PMBPROD311E	Produce blow moulded products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD312	Produce continuous thermoforming products				Deleted
PMBPROD313	Produce extruded products	PMBPROD313E	Produce extruded polymer products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Prerequisite removed.
PMBPROD314	Produce compression moulded products				Deleted
PMBPROD315	Produce polyurethane foam				Deleted
PMBPROD316	Produce blown film	PMBPROD316E	Produce blown film	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Prerequisite removed.
PMBPROD317	Print and decorate rigid products				Deleted
PMBPROD319	Build up rollers				Deleted
PMBPROD320	Produce foam injected mouldings				Deleted

PMBPROD321	Produce rotational moulded products	PMBPROD321E	Produce rotational moulded products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Prerequisite removed.
PMBPROD323	Produce powder coated products				Deleted
PMBPROD324	Inspect tyres for retreading				Deleted
PMBPROD325	Lay on tyre retreads	PMBPROD325E	Lay on tyre retreads	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD326	Inspect tyres	PMBPROD326E	Inspect tyres	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD328	Produce sheet feed vacuum forming products	PMBPROD328E	Produce sheet-fed vacuum-formed products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD329	Produce polystyrene shape moulded products				Deleted
PMBPROD330	Make moulds for formed products	PMBPROD330E	Make moulds for thermoformed products	E	Revised. Unit code and title changed. Application changed. Elements and

					Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD331	Produce printed and decorated film				Deleted
PMBPROD332	Produce thermally bent products				Deleted
PMBPROD333	Convert plastic film				Deleted
PMBPROD334	Produce products using twin screw extruders				Deleted
PMBPROD336	Inspect heavy off-the-road tyres	PMBPROD336E	Inspect heavy off-the-road tyres	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD337	Prepare heavy off-the-road tyres for repair	PMBPROD337E	Prepare heavy off-the-road tyres for repair	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD338	Repair heavy off-the-road tyres	PMBPROD338E	Repair heavy off-the-road tyres	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD339	Produce reinforced conveyor belts	PMBPROD339E	Produce steel cord-reinforced conveyor belts	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria

					changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD340	Cure heavy off-the-road tyre repairs	PMBPROD340E	Cure heavy off-the-road tyre repairs	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD341	Finish heavy off-the-road tyre repairs	PMBPROD341E	Finish heavy off-the-road tyre repairs	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD343	Shut down plant area	PMBPROD343E	Shut down plant area	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD347	Produce composites using hand lamination	PMBPROD347E	Mould composites products using hand lay-up techniques	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD349	Produce liquid surface coated products				Deleted
PMBPROD352	Produce compounded materials	PMBPROD352E	Produce compounded materials	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

					Assessment Requirements changed.
PMBPROD353	Compound materials using an internal mill blender				Deleted
PMBPROD354	Compound materials using an open mill blender				Deleted
PMBPROD355	Make pattern/plug for composites moulds	PMBPROD355E	Make pattern or plug for composites moulds	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD356	Construct moulds for composite products	PMBPROD356E	Construct moulds for composite products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD357	Construct jigs and fixtures	PMBPROD357E	Construct jigs and fixtures	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD358	Develop patterns	PMBPROD358E	Develop polymer product patterns	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD360	Produce centrifugally cast	PMBPROD360E	Produce polyurethane	E	Revised. Unit code and title changed.

	polyurethane products		products using centrifugal casting		Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD362	Produce gravity cast polyurethane products	PMBPROD362E	Produce polyurethane products using gravity casting	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD367	Remove and replace conveyor belts	PMBPROD367E	Remove and replace conveyor belts	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD368	Repair conveyor belt carcass	PMBPROD368E	Repair conveyor belt carcasses	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD369	Repair conveyor belt covers	PMBPROD369E	Repair conveyor belt covers	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed
PMBPROD370	Produce injection blow moulded products	PMBPROD370E	Produce injection blow moulded products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

					Assessment Requirements changed.
PMBPROD372	Produce fibre optic preforms				Deleted
PMBPROD373	Draw optical fibre				Deleted
PMBPROD375	Vulcanise products using an autoclave	PMBPROD375E	Vulcanise products using an autoclave	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD376	Splice steel cord conveyor belts	PMBPROD376E	Splice steel cord conveyor belts	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD377	Splice fabric ply conveyor belts	PMBPROD377E	Splice fabric ply conveyor belts	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD378	Splice solid woven conveyor belts	PMBPROD378E	Splice solid woven conveyor belts	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD380	Produce composites using chopper gun/depositor	PMBPROD380E	Produce composites products using mechanised open mould wet lay-up	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

					Assessment Requirements changed.
PMBPROD384	Operate multi-axis router	PMBPROD384E	Operate multi-axis router	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD385	Program computer controlled equipment	PMBPROD385E	Program computer-controlled equipment	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD387	Produce welded plastics materials				Deleted
PMBPROD390	Produce composites using filament winding	PMBPROD390E	Produce composites using filament winding	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD391	Produce composites using resin infusion	PMBPROD391E	Produce composites using resin infusion	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD392	Produce composites using pultrusion	PMBPROD392E	Produce thermoset composites using pultrusion	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMBPROD393	Produce composites using vacuum bagging	PMBPROD393E	Produce composites using vacuum bagging	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD394	Produce composites using resin transfer moulding	PMBPROD394E	Produce composites using resin transfer moulding	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD395	Produce composite sheet products				Deleted
PMBPROD396	Produce composites using centrifugal casting				Deleted
PMBPROD397	Produce composites using moulding compounds				Deleted
PMBPROD398	Produce composites using pre-pregs	PMBPROD398E	Produce composites using prepregs	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD430	Trial a new die/tool	PMBPROD430E	Trial a new injection moulding die	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMBPROD431	Trial a new, advanced or complex mould	PMBPROD431E	Trial a new production mould assembly	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH301	Use materials and process knowledge to solve problems	PMBTECH301E	Optimise polymer processing operations	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH302	Modify existing compounds	PMBTECH302E	Modify existing compounds	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH303	Make minor modifications to products	PMBTECH303E	Make minor modifications to products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH401	Predict polymer properties and characteristics	PMBTECH401E	Predict polymer properties and characteristics	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH402	Set advanced or complex dies	PMBTECH402E	Set advanced or complex injection moulding dies	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria

					changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH403	Test fibre-composites materials and laminates	PMBTECH403E	Test thermoset composite laminates and materials	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH404	Mould chemical resistant and/or fire retardant fibre-composites	PMBTECH404E	Mould composites with chemically-resistant or fire-retardant properties	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH405	Repair damaged fibre-composites structures	PMBTECH405E	Repair damaged fibre-composites structures	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH406	Diagnose production equipment problems	PMBTECH406E	Diagnose production equipment problems	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBTECH407E	Produce composite products using cored-laminate techniques		New unit.
PMBTECH501	Analyse equipment performance	PMBTECH501E	Analyse equipment performance	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria

					changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH502	Review and analyse production trials and specify retrials	PMBTECH502E	Analyse production trials	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH503	Determine rheology and output of plastics materials from processing equipment				Deleted
PMBTECH504	Determine heat transfer loads for processing equipment				Deleted
PMBTECH505	Choose polymer materials for an application	PMBTECH505E	Choose polymer materials for an application	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH506	Analyse the design of products and tools	PMBTECH506E	Analyse the design of products and tools for polymer injection moulding	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH507	Develop fibre-composite products using cored-laminate techniques	PMBTECH507E	Develop fibre-composite products using cored-laminate techniques	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

					Assessment Requirements changed.
PMBTECH508	Develop a new compound	PMBTECH508E	Develop a new compound	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH509	Modify an existing product	PMBTECH509E	Modify an existing product	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH510	Analyse failure on polymeric materials				Deleted
PMBTECH601	Develop a new product	PMBTECH601E	Develop a new product	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH602	Develop a new die or tool	PMBTECH602E	Develop a new die or tool	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH603	Design structural/mechanical polymer components	PMBTECH603E	Design structural or mechanical polymer components	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMBWASTE101	Collect waste for recycling or safe disposal				Deleted
PMBWASTE302	Coordinate waste disposal				Deleted
PMBWELD301	Butt weld polyethylene plastic pipelines	PMBWELD301E	Join polyethylene plastic pipelines using butt welding	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD302	Electrofusion weld polyethylene pipelines	PMBWELD302E	Join polyethylene plastic pipelines using electrofusion welding	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD303	Install polyethylene (non-pressure) drainage pipelines	PMBWELD303E	Install polyethylene plastic pipelines for non-pressure drainage	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD304	Design polyethylene (non-pressure) drainage pipelines	PMBWELD304E	Design polyethylene plastic pipelines for non-pressure drainage	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD305	Install polyethylene plastic pressure pipelines	PMBWELD305E	Install polyethylene plastic pipelines for pressurised applications	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria

					changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD306	Design polyethylene plastic pressure pipelines	PMBWELD306E	Design polyethylene plastic pipelines for pressurised applications	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD307	Install high temperature plastic pressure pipelines	PMBWELD307E	Install plastic pipelines for high temperature applications	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD308	Install PVC plastic pressure pipelines	PMBWELD308E	Install PVC plastic pipelines for pressurised applications	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD309	Weld plastic using extrusion techniques	PMBWELD309E	Weld plastic using extrusion techniques	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD310	Design PVC plastic pressure pipelines	PMBWELD310E	Design PVC plastic pipelines for pressure applications	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

					Assessment Requirements changed.
PMBWELD311	Design high temperature plastic pressure pipelines	PMBWELD311E	Design plastic pipelines for high temperature and pressure applications	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

Appendix 5: Mapping – PMB Release 2.0 to PMB Release 1.0

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBFIN201E	Finish components and products	PMBFIN201	Finish products and components	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBFIN202E	Fit attachments and assemble components for customised polymer products	PMBFIN202	Fit attachments to products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBFIN203E	Rework product imperfections	PMBFIN203	Repair product imperfections	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBFIN205E	Hand decorate products	PMBFIN205	Hand decorate products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBHAN103E	Shift materials safely by hand	PMBHAN103	Shift materials safely by hand	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Conditions removed. Assessment Requirements changed.
		PMBHAN208	Store products		Deleted
PMBPREP201E	Prepare moulds for composites production	PMBPREP201	Prepare moulds for composites production	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP205E	Assemble materials and equipment for production	PMBPREP205	Assemble materials and equipment for production	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP206E	Prepare polymer materials to specified formulae	PMBPREP206	Prepare materials to formulae	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP301E	Set up and prepare for batch production	PMBPREP301	Set up and prepare for production	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP303E	Set up equipment for	PMBPREP303	Set up equipment for	E	Revised. Unit code changed. Application changed. Elements and

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
	continuous operation		continuous operation		Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP304E	Set a die for injection moulding production	PMBPREP304	Set a die	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPREP305E	Change extrusion die and calibrator	PMBPREP305	Change extrusion die and setup	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD206E	Operate ancillary equipment	PMBPROD206	Operate ancillary equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD207E	Operate rubber calendering equipment	PMBPROD207	Operate calender	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBPROD209E	Operate cable winding equipment	PMBPROD209	Operate cable winding equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD210E	Operate injection moulding equipment	PMBPROD210	Operate injection moulding equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD211	Operate blow moulding equipment		Deleted
		PMBPROD212	Operate thermoforming equipment		Deleted
PMBPROD213E	Operate polymer extruders	PMBPROD213	Operate extruders	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD216E	Operate blown film equipment	PMBPROD216	Operate blown film equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD217E	Operate printing equipment	PMBPROD217	Operate printing equipment	E	Revised. Unit code changed. Application

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD221E	Operate rotational moulding equipment	PMBPROD221	Operate rotational moulding equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD229	Operate polystyrene shape moulding equipment		Deleted
		PMBPROD233	Operate film conversion equipment		Deleted
PMBPROD235E	Use materials and process knowledge to complete work operations	PMBPROD235	Use materials and process knowledge to complete work operations	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD236E	Operate hand-held air or power equipment for production processes	PMBPROD236	Operate hand held air/power equipment for production processes	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD237	Splice cables		Deleted
PMBPROD238E	Perform creel rack operations	PMBPROD238	Perform creel rack operations	E	Revised. Unit code and title changed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
	for belting production				Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD239E	Build fabric-reinforced conveyor belts	PMBPROD239	Build reinforced conveyor belts	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD240E	Cut plastic materials	PMBPROD240	Cut materials	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD241E	Install rubber lining or pulley lagging using lay-up techniques	PMBPROD241	Lay up rubber lining or lag pulleys	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD242E	Bond polymers to surfaces	PMBPROD242	Bond polymers to surfaces	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBPROD243E	Cut rubber materials			NA	New unit.
PMBPROD245E	Fabricate products with rubber or plastics	PMBPROD245	Fabricate materials	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD246E	Hand mix materials	PMBPROD246	Hand mix materials	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD247E	Create composite laminates using hand lay-up techniques	PMBPROD247	Hand lay up composites	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD248E	Prepare surfaces for coating	PMBPROD248	Prepare surfaces for coating	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD249E	Apply liquid surface coatings	PMBPROD249	Apply liquid surface coatings	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Assessment Requirements changed.
PMBPROD251E	Apply gel coat or other polymer surface finish	PMBPROD251	Apply gel coat or other polymer surface finish	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD252E	Operate polymer compounding equipment	PMBPROD252	Operate compounding equipment	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD253E	Operate an internal mill blender	PMBPROD253	Operate an internal mill blender	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD254E	Operate an open mill blender	PMBPROD254	Operate an open mill blender	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD255E	Operate polymer mixing equipment	PMBPROD255	Operate mixing equipment	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Assessment Requirements changed.
		PMBPROD259	Operate granulating equipment		Deleted
PMBPROD261E	Operate continuous vulcanising equipment	PMBPROD261	Operate continuous vulcanising equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD262	Operate tyre curing equipment		Deleted
		PMBPROD263	Operate retread curing equipment		Deleted
PMBPROD265E	Operate portable vulcanising equipment	PMBPROD265	Operate portable vulcanising equipment	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD266	Prepare tyre casings for retreading		Deleted
		PMBPROD267	Operate steel cutting equipment		Deleted
		PMBPROD268	Operate bead coiling equipment		Deleted
		PMBPROD270	Operate injection blow moulding equipment		Deleted

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBPROD280E	Operate a chopper gun to lay-up composites	PMBPROD280	Operate resin-glass depositor equipment	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD281E	Finish composite products	PMBPROD281	Finish composite products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD282E	Reassemble production mould components	PMBPROD282	Assemble mould	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD283E	Demould polymer products	PMBPROD283	Demould product	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD284	Operate open flame moulding equipment		Deleted
		PMBPROD285	Operate computer		Deleted

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
			controlled equipment		
PMBPROD287E	Weld thermoplastic materials	PMBPROD287	Weld plastics materials	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD290	Operate filament winding equipment		Deleted
		PMBPROD291	Operate resin infusion moulding equipment		Deleted
		PMBPROD292	Operate pultrusion equipment		Deleted
PMBPROD293E	Create composite laminates using vacuum-assisted closed-moulding processes	PMBPROD293	Operate vacuum bagging equipment	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD294	Operate resin transfer moulding equipment		Deleted
		PMBPROD295	Operate composite sheeting equipment		Deleted
		PMBPROD296	Operate centrifugal		Deleted

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
			casting equipment		
		PMBPROD297	Operate equipment using moulding compounds		Deleted
		PMBPROD298	Operate equipment using pre-preg material		Deleted
PMBPROD300E	Produce products	PMBPROD300	Produce products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD301E	Draw wire	PMBPROD301	Draw wire	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD302E	Bunch and strand wire	PMBPROD302	Bunch and strand wire	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD303E	Produce cable and tape lay-up cables	PMBPROD303	Lay up and tape cables	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Assessment Requirements changed.
PMBPROD304E	Wind up wire or belts	PMBPROD304	Wind products onto drums	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD305	Colour optical fibre		Deleted
PMBPROD306E	Prepare and start equipment for production	PMBPROD306	Prepare and start equipment for production	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD307E	Produce calendered rubber or vinyl products	PMBPROD307	Produce calendered products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Prerequisite removed.
PMBPROD308E	Take a machine out of production	PMBPROD308	Take a machine out of production	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
		PMBPROD309	Produce electroplated products		Deleted
PMBPROD310E	Produce injection moulded products	PMBPROD310	Produce injection moulded products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD311E	Produce blow moulded products	PMBPROD311	Produce blow moulded products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD312	Produce continuous thermoforming products		Deleted
PMBPROD313E	Produce extruded polymer products	PMBPROD313	Produce extruded products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Prerequisite removed.
		PMBPROD314	Produce compression moulded products		Deleted
		PMBPROD315	Produce polyurethane foam		Deleted

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBPROD316E	Produce blown film	PMBPROD316	Produce blown film	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Prerequisite removed.
		PMBPROD317	Print and decorate rigid products		Deleted
		PMBPROD319	Build up rollers		Deleted
		PMBPROD320	Produce foam injected mouldings		Deleted
PMBPROD321E	Produce rotational moulded products	PMBPROD321	Produce rotational moulded products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Prerequisite removed.
		PMBPROD323	Produce powder coated products		Deleted
		PMBPROD324	Inspect tyres for retreading		Deleted
PMBPROD325E	Lay on tyre retreads	PMBPROD325	Lay on tyre retreads	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD326E	Inspect tyres	PMBPROD326	Inspect tyres	E	Revised. Unit code changed. Application changed. Elements and

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD328E	Produce sheet-fed vacuum-formed products	PMBPROD328	Produce sheet feed vacuum forming products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD329	Produce polystyrene shape moulded products		Deleted
PMBPROD330E	Make moulds for thermoformed products	PMBPROD330	Make moulds for formed products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD331	Produce printed and decorated film		Deleted
		PMBPROD332	Produce thermally bent products		Deleted
		PMBPROD333	Convert plastic film		Deleted
		PMBPROD334	Produce products using twin screw extruders		Deleted

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBPROD336E	Inspect heavy off-the-road tyres	PMBPROD336	Inspect heavy off-the-road tyres	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD337E	Prepare heavy off-the-road tyres for repair	PMBPROD337	Prepare heavy off-the-road tyres for repair	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD338E	Repair heavy off-the-road tyres	PMBPROD338	Repair heavy off-the-road tyres	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD339E	Produce steel cord-reinforced conveyor belts	PMBPROD339	Produce reinforced conveyor belts	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD340E	Cure heavy off-the-road tyre repairs	PMBPROD340	Cure heavy off-the-road tyre repairs	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBPROD341E	Finish heavy off-the-road tyre repairs	PMBPROD341	Finish heavy off-the-road tyre repairs	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD343E	Shut down plant area	PMBPROD343	Shut down plant area	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD347E	Mould composites products using hand lay-up techniques	PMBPROD347	Produce composites using hand lamination	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD349	Produce liquid surface coated products		Deleted
PMBPROD352E	Produce compounded materials	PMBPROD352	Produce compounded materials	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD353	Compound materials using an internal mill blender		Deleted

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
		PMBPROD354	Compound materials using an open mill blender		Deleted
PMBPROD355E	Make pattern or plug for composites moulds	PMBPROD355	Make pattern/plug for composites moulds	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD356E	Construct moulds for composite products	PMBPROD356	Construct moulds for composite products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD357E	Construct jigs and fixtures	PMBPROD357	Construct jigs and fixtures	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD358E	Develop polymer product patterns	PMBPROD358	Develop patterns	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD360E	Produce polyurethane products using	PMBPROD360	Produce centrifugally cast	E	Revised. Unit code and title changed. Application changed. Elements and

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
	centrifugal casting		polyurethane products		Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD362E	Produce polyurethane products using gravity casting	PMBPROD362	Produce gravity cast polyurethane products	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD367E	Remove and replace conveyor belts	PMBPROD367	Remove and replace conveyor belts	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD368E	Repair conveyor belt carcasses	PMBPROD368	Repair conveyor belt carcass	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD369E	Repair conveyor belt covers	PMBPROD369	Repair conveyor belt covers	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed
PMBPROD370E	Produce injection blow moulded products	PMBPROD370	Produce injection blow moulded products	E	Revised. Unit code changed. Application changed. Elements and

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD372	Produce fibre optic preforms		Deleted
		PMBPROD373	Draw optical fibre		Deleted
PMBPROD375E	Vulcanise products using an autoclave	PMBPROD375	Vulcanise products using an autoclave	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD376E	Splice steel cord conveyor belts	PMBPROD376	Splice steel cord conveyor belts	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD377E	Splice fabric ply conveyor belts	PMBPROD377	Splice fabric ply conveyor belts	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD378E	Splice solid woven conveyor belts	PMBPROD378	Splice solid woven conveyor belts	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBPROD380E	Produce composites products using mechanised open mould wet lay-up	PMBPROD380	Produce composites using chopper gun/depositor	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD384E	Operate multi-axis router	PMBPROD384	Operate multi-axis router	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD385E	Program computer-controlled equipment	PMBPROD385	Program computer controlled equipment	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD387	Produce welded plastics materials		Deleted
PMBPROD390E	Produce composites using filament winding	PMBPROD390	Produce composites using filament winding	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD391E	Produce composites using resin infusion	PMBPROD391	Produce composites using resin infusion	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Assessment Requirements changed.
PMBPROD392E	Produce thermoset composites using pultrusion	PMBPROD392	Produce composites using pultrusion	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD393E	Produce composites using vacuum bagging	PMBPROD393	Produce composites using vacuum bagging	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD394E	Produce composites using resin transfer moulding	PMBPROD394	Produce composites using resin transfer moulding	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBPROD395	Produce composite sheet products		Deleted
		PMBPROD396	Produce composites using centrifugal casting		Deleted
		PMBPROD397	Produce composites using moulding compounds		Deleted
PMBPROD398E	Produce composites using prepregs	PMBPROD398	Produce composites using pre-pregs	E	Revised. Unit code changed. Application changed. Elements and

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD430E	Trial a new injection moulding die	PMBPROD430	Trial a new die/tool	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBPROD431E	Trial a new production mould assembly	PMBPROD431	Trial a new, advanced or complex mould	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH301E	Optimise polymer processing operations	PMBTECH301	Use materials and process knowledge to solve problems	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH302E	Modify existing compounds	PMBTECH302	Modify existing compounds	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBTECH303E	Make minor modifications to products	PMBTECH303	Make minor modifications to products	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH401E	Predict polymer properties and characteristics	PMBTECH401	Predict polymer properties and characteristics	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH402E	Set advanced or complex injection moulding dies	PMBTECH402	Set advanced or complex dies	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH403E	Test thermoset composite laminates and materials	PMBTECH403	Test fibre-composites materials and laminates	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH404E	Mould composites with chemically-resistant or fire-retardant properties	PMBTECH404	Mould chemical resistant and/or fire retardant fibre-composites	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Assessment Requirements changed.
PMBTECH405E	Repair damaged fibre-composite structures	PMBTECH405	Repair damaged fibre-composite structures	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH406E	Diagnose production equipment problems	PMBTECH406	Diagnose production equipment problems	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH407E	Produce composite products using cored-laminate techniques				New unit.
PMBTECH501E	Analyse equipment performance	PMBTECH501	Analyse equipment performance	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH502E	Analyse production trials	PMBTECH502	Review and analyse production trials and specify retrials	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
		PMBTECH503	Determine rheology and output of plastics materials from processing equipment		Deleted
		PMBTECH504	Determine heat transfer loads for processing equipment		Deleted
PMBTECH505E	Choose polymer materials for an application	PMBTECH505	Choose polymer materials for an application	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH506E	Analyse the design of products and tools for polymer injection moulding	PMBTECH506	Analyse the design of products and tools	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH507E	Develop fibre-composite products using cored-laminate techniques	PMBTECH507	Develop fibre composite products using cored-laminate techniques	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH508E	Develop a new compound	PMBTECH508	Develop a new compound	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
					Assessment Requirements changed.
PMBTECH509E	Modify an existing product	PMBTECH509	Modify an existing product	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBTECH510	Analyse failure on polymeric materials		Deleted
PMBTECH601E	Develop a new product	PMBTECH601	Develop a new product	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH602E	Develop a new die or tool	PMBTECH602	Develop a new die or tool	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBTECH603E	Design structural or mechanical polymer components	PMBTECH603	Design structural/mechanical polymer components	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
		PMBWASTE101	Collect waste for recycling or safe disposal		Deleted

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
		PMBWASTE302	Coordinate waste disposal		Deleted
PMBWELD301E	Join polyethylene plastic pipelines using butt welding	PMBWELD301	Butt weld polyethylene plastic pipelines	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD302E	Join polyethylene plastic pipelines using electrofusion welding	PMBWELD302	Electrofusion weld polyethylene pipelines	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD303E	Install polyethylene plastic pipelines for non-pressure drainage	PMBWELD303	Install polyethylene (non-pressure) drainage pipelines	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD304E	Design polyethylene plastic pipelines for non-pressure drainage	PMBWELD304	Design polyethylene (non-pressure) drainage pipelines	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD305E	Install polyethylene plastic pipelines	PMBWELD305	Install polyethylene	E	Revised. Unit code and title changed. Application changed. Elements and

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
	for pressurised applications		plastic pressure pipelines		Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD306E	Design polyethylene plastic pipelines for pressurised applications	PMBWELD306	Design polyethylene plastic pressure pipelines	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD307E	Install plastic pipelines for high temperature applications	PMBWELD307	Install high temperature plastic pressure pipelines	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD308E	Install PVC plastic pipelines for pressurised applications	PMBWELD308	Install PVC plastic pressure pipelines	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD309E	Weld plastics using extrusion techniques	PMBWELD309	Weld plastic using extrusion techniques	E	Revised. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

PMB Plastics, Rubber and Cablemaking Training Package Release 2.0		PMB Plastics, Rubber and Cablemaking Training Package Release 1.0		Equiv. Status	
Unit Code	Unit Title	Unit Code	Unit Title	E/N	Comments
PMBWELD310E	Design PVC plastic pipelines for pressure applications	PMBWELD310	Design PVC plastic pressure pipelines	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.
PMBWELD311E	Design plastic pipelines for high temperature and pressure applications	PMBWELD311	Design high temperature plastic pressure pipelines	E	Revised. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed.

Appendix 6: AQF Certificate level descriptors and Qualification descriptors

The following information highlights the relationship between the AQF descriptors and the qualifications in this training package. It provides the AQF qualification type descriptor for each level followed by the description of outcomes of each PMB qualification.

Certificate II AQF qualification type descriptor

Purpose

The Certificate II qualifies individuals to undertake mainly routine work and as a pathway to further learning.

Knowledge

Graduates of a Certificate II will have basic factual, technical and procedural knowledge in a defined area of work and learning.

Skills

Graduates of a Certificate II will have:

cognitive skills to access, record and act on a defined range of information from a range of sources

cognitive and communication skills to apply and communicate known solutions to a limited range of predictable problems

technical skills to use a limited range of equipment to complete tasks involving known routines and procedures with a limited range of options.

Application of skills and knowledge

Graduates of a Certificate II will demonstrate the application of knowledge and skills with some accountability for the quality of own outcomes and some responsibility for own outputs in work and learning. Work involves limited autonomy and judgement in the completion of own defined and routine tasks in known and stable contexts and in collaboration with others in a team environment.

Volume of learning

The volume of learning of a Certificate II is typically 0.5–1 year, which equates to 600–1200 hours.

Outcomes of *PMB20120 Certificate II in Polymer Processing*

The *PMB20120 Certificate II in Polymer Processing* is intended for competent operators who operate production equipment or undertake similar roles to directly produce products.

The operator will be able to operate production equipment within defined specifications and procedures and carry out a range of support functions. The operator will be able to apply technical and procedural knowledge to a defined range of situations and activities.

The operator will be able to solve predictable process control variances by applying known or documented solutions and will report less common or unusual variances to appropriate personnel.

Certificate III AQF qualification type descriptor

Purpose

The Certificate III qualifies individuals who apply a broad range of knowledge and skills in varied contexts to undertake skilled work and as a pathway for further learning.

Knowledge

Graduates of a Certificate III will have factual, technical, procedural and theoretical knowledge in an area of work and learning.

Skills

Graduates of a Certificate III will have:

cognitive, technical and communication skills to interpret and act on available information

cognitive and communication skills to apply and communicate known solutions to a variety of predictable problems and to deal with unforeseen contingencies using known solutions

technical and communication skills to provide technical information to a variety of specialist and non-specialist audiences

technical skills to undertake routine and some non-routine tasks in a range of skilled operations.

Application of skills and knowledge

Graduates of a Certificate III will demonstrate the application of knowledge and skills with discretion and judgement in the selection of equipment, services or contingency measures, and skills to adapt and transfer skills and knowledge within known routines, methods, procedures and time constraints.

Work is in the context of taking responsibility for own outputs in work and learning, including participation in teams and taking limited responsibility for the output of others within established parameters.

Volume of learning

The volume of learning of a Certificate III is typically 1–2 years, which equates to 1200–2400 hours.

Outcomes of *PMB30120 Certificate III in Polymer Processing*

The *PMB30120 Certificate III in Polymer Processing* is intended for advanced operators who use production equipment to directly produce products.

The operator will be able to apply theoretical and technical knowledge and well-developed skills to undertake advanced operations and exercise judgement in areas such as startup and shutdown procedures and quality assurance.

The operator will be able to apply their knowledge to anticipate problems and to solve a range of process control variances, using product and process knowledge to develop solutions to problems that do not have a known solution or do not have a solution recorded in the workplace procedures.

Certificate IV AQF qualification type descriptor

Purpose

The Certificate IV qualifies individuals who apply a broad range of specialised knowledge and skills in varied contexts to undertake skilled work and as a pathway for further learning.

Knowledge

Graduates of a Certificate IV will have broad factual, technical and theoretical knowledge in a specialised field of work and learning.

Skills

Graduates of a Certificate IV will have:

- cognitive skills to identify, analyse, compare and act on information from a range of sources
- cognitive, technical and communication skills to apply and communicate technical solutions of a non-routine or contingency nature to a defined range of predictable and unpredictable problems
- specialist technical skills to complete routine and non-routine tasks and functions
- communication skills to guide activities and provide technical advice in the area of work and learning.

Application of skills and knowledge

Graduates of a Certificate IV will demonstrate the application of knowledge and skills to specialised tasks or functions in known or changing contexts with responsibility for own functions and outputs, and may have limited responsibility for organisation and quantity and quality of the output of others within limited parameters.

Volume of learning

The volume of learning of a Certificate IV is typically 0.5–2 years, which equates to 600–2400 hours

Outcomes of *PMB40120 Certificate IV in Polymer Technology*

The *PMB40120 Certificate IV in Polymer Technology* is intended for senior operators and polymer technicians.

The senior operator or technician may be process-based and directly involved in production or they may be based elsewhere (for example, in a laboratory), although they will typically still have functions on the production floor.

The senior operator or technician will be able to apply specialised theoretical and technical knowledge and well-developed operations skills in situations that require autonomy, discretion and judgement, such as product and process improvements and trialling.

The senior operator or technician will be able to solve complex problems that require in-depth theoretical knowledge combined with an understanding of the production process and equipment.

Diploma AQF qualification type descriptor

Purpose

The Diploma qualifies individuals who apply integrated technical and theoretical concepts in a broad range of contexts to undertake advanced skilled or paraprofessional work and as a pathway for further learning.

Knowledge

Graduates of a Diploma will have technical and theoretical knowledge and concepts, with depth in some areas within a field of work and learning.

Skills

Graduates of a Diploma will have:

- cognitive and communication skills to identify, analyse, synthesise and act on information from a range of sources
- cognitive, technical and communication skills to analyse, plan, design and evaluate approaches to unpredictable problems and/or management requirements
- specialist technical and creative skills to express ideas and perspectives
- communication skills to transfer knowledge and specialised skills to others and demonstrate understanding of knowledge.

Application of skills and knowledge

Graduates of a Diploma will demonstrate the application of knowledge with depth in some areas of specialisation, in known or changing contexts, and skills to transfer and apply theoretical concepts and/or technical and/or creative skills in a range of situations with personal responsibility and autonomy in performing complex technical operations and for quantity and quality. Work involves initiative and judgement to organise their own work and the work of others and plan, coordinate and evaluate the work of teams within broad but generally well-defined parameters.

Volume of learning

The volume of learning for a Diploma is typically 1–2 years, which equates to 1200–2400 hours.

Outcomes of *PMB50120Diploma of Polymer Technology*

The *PMB50120 Diploma of Polymer Technology* is intended for technologists and similar paraprofessional roles in the plastics, rubber and cablemaking sectors.

The technologist will apply in-depth knowledge of materials, process, equipment and problem-solving to analyse performance and failure in equipment and products and to assist in the development of new/modified products. They are not required to be competent to operate production equipment but will understand the principles behind the relevant production and support processes.

The technologist may be largely based in a laboratory or office but may conduct some of their work in or through the shop floor.

Appendix 7: ACSF Core skills levels

The core skills of the ACSF are:

- learning (L)
- reading (R)
- writing (W)
- oral communication (OC) and
- numeracy (N).

The following table includes the ACSF levels that learners would be expected to perform at the end of a training program for the unit identified. The levels are not entry levels. They are noted here to assist trainers to determine the level of skill that should be addressed in training.

Unit code	Unit title	L	R	W	OC	N
PMBFIN201E	Finish components and products	1	2	2	2	2
PMBFIN202E	Fit attachments and assemble components for customised polymer products	2	2	2	2	2
PMBFIN203E	Rework product imperfections	2	2	2	2	2
PMBFIN205E	Hand decorate products	2	2	2	2	2
PMBHAN103E	Shift materials safely by hand	2	2	2	2	2
PMBPREP201E	Prepare moulds for composites production	2	2	2	2	–
PMBPREP205E	Assemble materials and equipment for production	2	2	2	2	2
PMBPREP206E	Prepare polymer materials to specified formulae	2	2	2	2	2
PMBPREP301E	Set up and prepare for batch production	3	3	2	3	2
PMBPREP303E	Set up equipment for continuous operation	3	3	2	3	2
PMBPREP304E	Set a die for injection moulding production	3	2	2	2	2
PMBPREP305E	Change extrusion die and calibrator	3	2	2	2	2

Unit code	Unit title	L	R	W	OC	N
PMBPROD206E	Operate ancillary equipment	2	2	2	2	2
PMBPROD207E	Operate rubber calendering equipment	2	2	2	2	2
PMBPROD209E	Operate cable winding equipment	2	2	2	2	2
PMBPROD210E	Operate injection moulding equipment	2	2	2	2	2
PMBPROD213E	Operate polymer extruders	2	2	2	2	2
PMBPROD216E	Operate blown film equipment	2	2	2	2	2
PMBPROD217E	Operate printing equipment	2	2	2	2	2
PMBPROD221E	Operate rotational moulding equipment	2	2	2	2	2
PMBPROD235E	Use materials and process knowledge to complete work operations	2	2	2	2	2
PMBPROD236E	Operate hand-held air or power equipment for production processes	2	2	2	2	2
PMBPROD238E	Perform creel rack operations for belting production	2	2	2	2	2
PMBPROD239E	Build fabric-reinforced conveyor belts	2	2	2	2	2
PMBPROD240E	Cut plastic materials	2	2	2	2	2
PMBPROD241E	Install rubber lining or pulley lagging using lay-up techniques	2	2	2	2	2
PMBPROD242E	Bond polymers to surfaces	2	2	2	2	2
PMBPROD243E	Cut rubber materials	2	2	2	2	2
PMBPROD245E	Fabricate products with rubber or plastics	2	2	2	2	2
PMBPROD246E	Hand mix materials	2	2	2	2	2

Unit code	Unit title	L	R	W	OC	N
PMBPROD247E	Create composite laminates using hand lay-up techniques	2	2	2	2	2
PMBPROD248E	Prepare surfaces for coating	2	2	2	2	2
PMBPROD249E	Apply liquid surface coatings	2	2	2	2	2
PMBPROD251E	Apply gel coat or other polymer surface finish	2	2	2	2	2
PMBPROD252E	Operate polymer compounding equipment	2	2	2	2	2
PMBPROD253E	Operate an internal mill blender	2	2	2	2	2
PMBPROD254E	Operate an open mill blender	2	2	2	2	2
PMBPROD255E	Operate polymer mixing equipment	2	2	2	2	2
PMBPROD261E	Operate continuous vulcanising equipment	2	2	2	2	2
PMBPROD265E	Operate portable vulcanising equipment	2	2	2	2	2
PMBPROD280E	Operate a chopper gun to lay-up composites	2	2	2	2	2
PMBPROD281E	Finish composite products	2	2	2	2	2
PMBPROD282E	Reassemble production mould components	2	2	2	2	2
PMBPROD283E	Demould polymer products	2	2	2	2	2
PMBPROD287E	Weld thermoplastic materials	2	2	2	2	2
PMBPROD293E	Create composite laminates using vacuum-assisted closed-moulding processes	2	2	2	2	2
PMBPROD300E	Produce products	3	3	2	3	3
PMBPROD301E	Draw wire	3	2	2	3	2

Unit code	Unit title	L	R	W	OC	N
PMBPROD302E	Bunch and strand wire	3	2	2	3	2
PMBPROD303E	Produce cable and tape lay-up cables	3	2	2	3	2
PMBPROD304E	Wind up wire or belts	3	2	2	3	2
PMBPROD306E	Prepare and start equipment for production	3	3	2	3	3
PMBPROD307E	Produce calendered rubber or vinyl products	3	3	2	3	3
PMBPROD308E	Take a machine out of production	3	3	2	3	3
PMBPROD310E	Produce injection moulded products	3	3	2	3	3
PMBPROD311E	Produce blow moulded products	3	3	2	3	3
PMBPROD313E	Produce extruded polymer products	3	3	2	3	3
PMBPROD316E	Produce blown film	3	3	2	3	3
PMBPROD321E	Produce rotational moulded products	3	3	2	3	3
PMBPROD325E	Lay on tyre retreads	2	2	2	3	2
PMBPROD326E	Inspect tyres	2	2	2	3	2
PMBPROD328E	Produce sheet-fed vacuum-formed products	3	3	2	3	3
PMBPROD330E	Make moulds for thermoformed products	3	3	2	3	3
PMBPROD336E	Inspect heavy off-the-road tyres	3	3	2	3	3
PMBPROD337E	Prepare heavy off-the-road tyres for repair	3	3	2	3	3
PMBPROD338E	Repair heavy off-the-road tyres	3	3	2	3	3
PMBPROD339E	Produce steel cord-reinforced conveyor belts	3	3	2	3	3

Unit code	Unit title	L	R	W	OC	N
PMBPROD340E	Cure heavy off-the-road tyre repairs	3	3	2	3	2
PMBPROD341E	Finish heavy off-the-road tyre repairs	3	3	2	3	2
PMBPROD343E	Shut down plant area	3	3	2	3	2
PMBPROD347E	Mould composites products using hand lay-up techniques	3	3	2	3	3
PMBPROD352E	Produce compounded materials	3	3	2	3	3
PMBPROD355E	Make pattern or plug for composites moulds	3	3	2	3	3
PMBPROD356E	Construct moulds for composite products	3	3	2	3	3
PMBPROD357E	Construct jigs and fixtures	3	3	2	3	3
PMBPROD358E	Develop polymer product patterns	3	3	2	3	3
PMBPROD360E	Produce polyurethane products using centrifugal casting	3	3	2	3	3
PMBPROD362E	Produce polyurethane products using gravity casting	3	3	2	3	3
PMBPROD367E	Remove and replace conveyor belts	3	3	2	3	2
PMBPROD368E	Repair conveyor belt carcasses	3	3	2	3	2
PMBPROD369E	Repair conveyor belt covers	3	3	2	3	2
PMBPROD370E	Produce injection blow moulded products	3	3	2	3	3
PMBPROD375E	Vulcanise products using an autoclave	3	3	2	3	3
PMBPROD376E	Splice steel cord conveyor belts	3	3	2	3	2
PMBPROD377E	Splice fabric ply conveyor belts	3	3	2	3	2

Unit code	Unit title	L	R	W	OC	N
PMBPROD378E	Splice solid woven conveyor belts	3	3	2	3	2
PMBPROD380E	Produce composites products using mechanised open mould wet lay-up	3	3	2	3	3
PMBPROD384E	Operate multi-axis router	3	3	2	3	3
PMBPROD385E	Program computer-controlled equipment	3	3	2	3	3
PMBPROD390E	Produce composites using filament winding	3	3	2	3	3
PMBPROD391E	Produce composites using resin infusion	3	3	2	3	3
PMBPROD392E	Produce thermoset composites using pultrusion	3	3	2	3	3
PMBPROD393E	Produce composites using vacuum bagging	3	3	2	3	3
PMBPROD394E	Produce composites using resin transfer moulding	3	3	2	3	3
PMBPROD398E	Produce composites using prepregs	3	3	2	3	3
PMBPROD430E	Trial a new injection moulding die	4	3	3	3	4
PMBPROD431E	Trial a new production mould assembly	4	3	3	3	4
PMBTECH301E	Optimise polymer processing operations	3	3	3	3	3
PMBTECH302E	Modify existing compounds	3	3	3	3	3
PMBTECH303E	Make minor modifications to products	3	3	2	3	3
PMBTECH401E	Predict polymer properties and characteristics	4	3	3	4	4

Unit code	Unit title	L	R	W	OC	N
PMBTECH402E	Set advanced or complex injection moulding dies	3	3	2	3	4
PMBTECH403E	Test thermoset composite laminates and materials	4	3	3	3	4
PMBTECH404E	Mould composites with chemically-resistant or fire-retardant properties	3	3	2	3	3
PMBTECH405E	Repair damaged fibre-composites structures	3	3	2	3	3
PMBTECH406E	Diagnose production equipment problems	4	3	3	4	4
PMBTECH407E	Produce composite products using cored-laminate techniques					
PMBTECH501E	Analyse equipment performance	4	3	3	4	4
PMBTECH502E	Analyse production trials	4	3	3	4	4
PMBTECH505E	Choose polymer materials for an application	4	3	3	4	4
PMBTECH506E	Analyse the design of products and tools for polymer injection moulding	4	3	3	4	4
PMBTECH507E	Develop fibre-composite products using cored-laminate techniques	4	3	3	4	4
PMBTECH508E	Develop a new compound	4	3	3	4	4
PMBTECH509E	Modify an existing product	4	3	3	4	4
PMBTECH601E	Develop a new product	4	4	3	4	5
PMBTECH602E	Develop a new die or tool	4	4	3	4	5

Unit code	Unit title	L	R	W	OC	N
PMBTECH603E	Design structural or mechanical polymer components	4	4	3	4	5
PMBWELD301E	Join polyethylene plastic pipelines using butt welding	3	3	2	2	3
PMBWELD302E	Join polyethylene plastic pipelines using electrofusion welding	3	3	2	2	3
PMBWELD303E	Install polyethylene plastic pipelines for non-pressure drainage	3	3	2	2	3
PMBWELD304E	Design polyethylene plastic pipelines for non-pressure drainage	3	3	2	2	3
PMBWELD305E	Install polyethylene plastic pipelines for pressurised applications	3	3	2	2	3
PMBWELD306E	Design polyethylene plastic pipelines for pressurised applications	3	3	2	2	3
PMBWELD307E	Install plastic pipelines for high temperature applications	3	3	2	2	3
PMBWELD308E	Install PVC plastic pipelines for pressurised applications	3	3	2	2	3
PMBWELD309E	Weld plastic using extrusion techniques	3	3	2	2	3
PMBWELD310E	Design PVC plastic pipelines for pressure applications	3	3	2	2	3
PMBWELD311E	Design plastic pipelines for high temperature and pressure applications	3	3	2	2	3

Appendix 8: Employability skills summaries

An employability skills summary for each qualification is provided below. Summaries are designed to assist trainers and assessors to identify and include important industry application of employability skills in training and assessment strategies.

Employability skills summaries provide examples of how each skill is applicable to the occupational outcomes covered by the qualification.

Employability skills summaries contain general information about industry context, which is further explained as measurable outcomes of performance in the units in each qualification.

The detail in each employability skills summary will vary depending on the range of occupational outcomes covered by the qualification in question.

Employability skills summaries are not exhaustive lists of qualification requirements or checklists of performance (which are separate assessment tools that should be designed by trainers and assessors after analysis at the unit level).

Employability skills summaries contain information that may also assist in building candidates' understanding of industry and workplace expectations.

PMB20120 Certificate II in Polymer Processing

Communication

complete logs, reports and plant documentation

access and interpret production plans and information

provide appropriate workplace and technical information

give and follow routine instructions

provide written and oral reports.

Teamwork

work as part of a team

identify and describe own role and role of others

identify own role and responsibility within a team.

Problem-solving

recognise known faults that occur during the operation

identify and take action on causes of routine faults

identify non-routine process and quality problems and take appropriate action

respond to routine problems.

Initiative and enterprise

suggest improvements

make adjustments to improve equipment performance

determine problems needing action

report problems outside area of responsibility

raise questions regarding requirements and expectations

distinguish between causes of faults

identify product out-of-specification

safely shut down equipment in abnormal circumstances.

Planning and organising

plan own work

identify production targets

achieve production targets

recognise hazards and follow appropriate hazard control methods.

Self-management

identify work requirements

plan own work requirements from production requests

operate within appropriate time constraints and work standards

select and use appropriate equipment, materials, processes and procedures

identify task outcomes and work role.

Learning

ask questions to gain information

seek clarification

participate in improvement procedures.

Technology

check process is operating within required limits

monitor equipment operation

monitor operation of processes

use appropriate instruments

use power tools and electrical systems

monitor and adjust machine functions

use forklift controls, instruments and indicators.

PMB30120 Certificate III in Polymer Processing

Communication

complete logs and reports

use technical information and manufacturer information

collect, analyse and organise information

communicate ideas and information

use workplace documentation effectively

maintain workplace records

Teamwork

identify and describe own role and role of others

work within a team

resolve conflicts between team members

apply teamwork strategies

Problem-solving

recognise a problem or a potential problem

determine problems needing priority action

refer problems outside area of responsibility to appropriate person, with possible causes

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

identify the most appropriate equipment

make adjustments to improve equipment performance

anticipate the impact of the process on the product

determine problems needing action

recommend required action

report problems outside area of responsibility

distinguish between causes of faults

Planning and organising

plan own work requirements

plan scope of equipment checks

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

Self-management

plan own work requirements from production requests

operate within appropriate time constraints and work standards

select and use appropriate equipment, materials, processes and procedures

plan to ensure effective production

apply workplace procedures

identify, document and monitor resource requirements

recognise limitations and seek timely advice

Learning

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

Technology

operate and adjust processes

start up and shut down equipment

set up equipment

monitor product/process quality

maintain function and operating principles of equipment and machine components

maintain workplace records

PMB40120 Certificate IV in Polymer Technology

Communication

complete logs and reports

document and record information

identify and maintain documentation

consult with key personnel

develop system for communicating

maintain document control system

record and report test results

Teamwork

work as part of a team

identify own role and responsibility within a team

contribute to development of team work plans

provide support to others in the work area

undertake appropriate and effective communication with team members

Problem-solving

recognise and diagnose problems

implement appropriate corrective action

rectify equipment and quality problems

diagnose production equipment problems

apply knowledge of materials, product purpose and processes

check performance of equipment and make approved adjustments

make adjustments to remedy faults and non-conformity

use material and process knowledge to solve problems

Initiative and enterprise

develop policies

make adjustments to improve equipment performance

anticipate the impact of the process on the product

determine problems needing action

suggest options for improvement

recommend corrective and/or optimisation actions

monitor and adjust schedules in response to operational variations

Planning and organising

plan work

organise materials, consumables and personnel

develop work plans

schedule activities

determine resources required

determine urgency and timeliness factors in planning

prepare for trial

organise polymer tests

Self-management

operate within appropriate time constraints and work standards

select and use appropriate equipment, materials, processes and procedures

demonstrate consistent performance

locate, interpret and apply relevant information

Learning

identify sources of information to expand knowledge and understanding

recognise limits of own professional expertise and consult specialists as necessary

participate in improvement procedures

participate in development of continuous improvement strategies

consult with appropriate personnel to refine performance

access manufacturer manuals/specifications to expand knowledge

Technology

interpret data and information on equipment

identify characteristics and capabilities of equipment

trial equipment, process and product

interpret polymer morphology and phase diagrams

interpret polymer tests

perform material and product tests

PMB50120 Diploma of Polymer Technology

Communication

communicate with stakeholders

complete all required reports and records

advise stakeholders of the outcome

interpret workplace procedures and work instructions

communicate information about tasks/processes/events

identify and communicate with all relevant personnel

communicate with all relevant personnel, management and administration

undertake interactive workplace communication

undertake verbal and/or written reports where required

Teamwork

work with technicians as part of a larger project

work autonomously or as part of a team

identify own role and responsibility within a team

undertake appropriate and effective communication with team members

Problem-solving

evaluate and modify as required

apply knowledge of materials, product purpose and processes

check performance of equipment and make approved adjustments

make adjustments to remedy faults and non-conformity

clarify and address potential issues

use material and process knowledge to solve problems

Initiative and enterprise

make adjustments to improve equipment performance

anticipate the impact of the process on the product

determine problems needing action

recommend required action

recognise problems in systems and documentation

critically analyse information

develop continuous improvement strategies

investigate, rectify and report non-conformances

use analytical and decision-making skills

recommend corrective and/or optimisation actions

monitor and adjust schedules in response to operational variations

Planning and organising

implement procedures relevant to the job within appropriate time constraints

organise trial

develop and monitor quality systems

monitor and maintain product quality

recognise hazards and follow appropriate hazard control methods

identify requirements for materials, quality, production and equipment checks

identify most efficient and appropriate equipment

analyse equipment performance

Self-management

operate within appropriate time constraints and work standards

select and use appropriate equipment, materials, processes and procedures

identify, document and monitor resource requirements

demonstrate consistent performance

Learning

research and evaluate equipment

ask questions to gain information

identify sources of information to expand knowledge and understanding

recognise limits of own professional expertise and consult specialists as necessary

participate in improvement procedures

access manufacturer manuals/specifications to expand knowledge

Technology

differentiate between products and compounds based on their response to applied stress/strain

analyse response to loads

apply the results of the analyses to typical applications

analyse equipment performance

determine theoretical performance

determine variation between theoretical and actual performance

apply principles to the design and use of equipment

Appendix 9: Glossary of key words or phrases

This table is intended as a guide to the way certain words have been used, and in some cases draws from generic content previously contained in the Range of Conditions section in each unit.

Verb	Meaning
Analyse	Examine information/data/systems in order to identify problems, issues and themes and their potential implications; assumes that this will inform solutions or further actions.
Apply	Put pre-defined activities into practice; these will typically be defined in procedures.
As required	Allows for situations where this may not apply or may not always apply. Where it does not apply the outcome of the competency is not diminished. It may also imply that the way this is done in one workplace may be different to the way it is done in another workplace, and that the assessment should allow it to be done 'as required' in that workplace.
Assist	Help others and/or provide specific guidance to help them achieve desired outcomes.
Consult	Communicate with relevant stakeholders/experts/advisers and draw some conclusions from that consultation.
Data	Typically numbers in a raw form that is not able to be directly used.
Demonstrate	The 'demonstration' may be achieved in various ways; for example, practical activity, presentation of workplace documentation, proof of past experience, answering written or verbal questions.
Determine	Define and select based on analysis of information. May, or may not, require calculation to be done by the individual.
Develop	Conceptualise a process, procedure or system and identify how it can be established; may include problem-solving. Develop may mean 'develop from scratch' or 'take existing and improve'.
Ensure	Allow for doing or making sure something is done; requires some follow-up/follow through to check that it has been done and respond in some way if it has not.
Equipment	See *Tools and equipment*.
Establish	Put into practice a new process, procedure or system; includes planning the steps and resources required.
Facilitate	Select and undertake activities with others (including standing or ad hoc teams) that are designed to help/enable them to achieve desired outcomes, facilitate/lead/mentor. Proactive, not just make the conditions to allow it to happen.
Forms	Paper or electronic proforma, checklist, log sheet etc. that doesn't require much free-form writing but could include dot points and simple sentences/phrases. May be simply about entering data into a provided space.
Hazards	Varies greatly depending on equipment, process, materials, environment and other factors.

Identify	Find, select and convey (already existing) information. May be conveyed in a range of ways; for example, verbally, visually, listed in note form, going and pointing.
Implement	Decide how to realise a defined outcome and put it into practice; may include coordinating input from others.
Information	Data that has been compiled, organised or otherwise arranged so that it is in a form that can be readily used.
Interpret	Examine data/information and apply it to a specific situation.
Lead	Provide information and opportunities to others (including standing or ad hoc teams) to enable them to achieve desired outcomes.
Problems	Problems include one or more of: • variations in materials • contamination of materials • variations in equipment operations • product faults • equipment breakdown, malfunction or wear and tear • variable site conditions • limitations in available data on specific job requirements • variations in quality • emergency situations • intermittent faults.
Procedures	All operations must be performed in accordance with relevant procedures. Procedures are written, verbal, visual, computer-based or in some other form, and include one or any combination of: • emergency procedures • work instructions • standard operating procedures (SOPs) • safe work method statements (SWMS) • formulas/recipes • batch sheets • temporary instructions • any similar instructions provided for the smooth running of the plant.
Process control variances	Any issues that arise that impact the aims of an operation. They may arise from any part of the operation being undertaken.
Records	Any history of what has occurred, written or electronic. Includes forms, reports, logs, electronic data and the like.

Regulatory framework	The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, that must be used. Applicable legislation, regulations, standards and codes of practice include: • work health and safety (WHS) legislation, regulations and codes of practice relevant to the workplace, manual handling and hazardous materials • Australian/international standards relevant to the materials being used and products being made • any relevant licence and certification requirements. All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and such requirements the legislative requirements take precedence.
Remedial action	Appropriate remedial action includes one or more of the following: • adjust machine to achieve requirements • report fault to supervisor/senior operator • fill out workplace documentation • follow workplace procedures.
Reports	May be written (paper or electronic) or verbal, using phrases and/or sentences and will have some overall structure and may conform to a general template, but allows for variation by the person writing/compiling the report.
Recommend	Should be based on consideration of several options and indicates a preference based on some logic or evidence. The recommendation should be made within actual or typical enterprise procedures.
Review	Examine information/data/systems to check that they meet current requirements.
Setting	Setting machine conditions for the replacement die must be relevant to the type of equipment/process being used and include one or more of the following: • mould height on the machine • clamp force • mould safety system • ejector system • mould opening and closing distances, speeds and forces • injection unit. These settings may be controlled automatically by using an electronic storage device to load settings from a previous run of the product or may be performed by manually setting controls individually.

Simple die	For the purposes of this training package a simple die is a two-plate die used to give the required shape to the product and used under pressure to produce simple, straight-drawn items. It includes any ejection system operating in the mould open axis. The following are not considered simple dies: • dies that are not subject to pressure (these are referred to as moulds in this training package) • two- or three-plate dies with one or more product-forming components that move in a direction other than the mould open axis, and which are driven by the mould rather than external actuation • moulds with molten material retained within the mould between cycles.
Tools and equipment	Tools and equipment requirements vary from unit to unit, and will generally be made clear by the workplace procedures and job specifications. However, the following list covers the typical range of tools and equipment used in the plastics, rubber and cablemaking sectors.

Appendix 10: Useful links

General

http://www.myskills.org.au/

Australian Qualifications Framework: Second edition, January 2013: https://www.aqf.edu.au

NCVER VET Information Portal, Training Authorities:
https://www.vetinformationportal.edu.au/TrainingAuthorities

National Register of VET (website for training packages, also known as TGA): https://training.gov.au/

Department of Education and Training: https://www.education.gov.au

Australian Skills Quality Authority (ASQA): https://www.asqa.gov.au

Australian Apprenticeships: https://www.australianapprenticeships.gov.au/
This site offers information about traineeships and apprenticeships and includes links to state and territory authorities (STAs) that monitor provision.

The following resources provide advice about designing assessment tools:

Guide – Developing assessment tools, ASQA, 2015: https://www.asqa.gov.au/resources/guides/guide-developing-assessment-tools

A guide to developing training package assessment materials, ANTA, 2001:
https://trove.nla.gov.au/work/16529162?selectedversion=NBD24099286f

Disability Standards for Education 2005: https://www.comlaw.gov.au/Details/F2005L00767

State Training Authorities

Australian Capital Territory: https://www.det.act.gov.au

New South Wales: https://education.nsw.gov.au/

Northern Territory: https://education.nt.gov.au/

Queensland: https://education.qld.gov.au

South Australia: https://innovationandskills.sa.gov.au/

Tasmania: https://www.education.tas.gov.au

Victoria: https://www.education.vic.gov.au/training/Pages/default.aspx

Western Australia: https://www.dtwd.wa.gov.au