

## National Certificate in Plastics Processing Technology (Production) (Level 1) with strands in General, Injection Moulding, Extrusion, Extrusion Blow Moulding, Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch-Blow Moulding, Rotational Moulding, Film Slitting, and Expanded Polystyrene Moulding

<b>Level</b>	<b>1</b>
<b>Credits</b>	<b>40</b>

This qualification has been **reviewed** and will expire without replacement. The last date to meet the requirements is 31 December 2019.

### Transition Arrangements

The last date for entry into programmes leading to this qualification is 31 December 2017. The last date for assessment against this qualification is 31 December 2019.

This qualification contained expiring classifications that have been replaced by other classifications. For the purposes of this qualification, people who have gained credit for standards in the expiring classifications are exempt from the requirement to gain credit for standards in the replacement classifications – see table below.

<b>Standards from</b>	<b>Are treated as Standards from</b>
Engineering and Technology > Motor Industry > Engine Repairs	Engineering and Technology > Motor Industry > Engines
Humanities > Languages > English for Speakers of Other Languages	Humanities > Languages > English Language
Planning and Construction > Construction Trades > Architectural Aluminium Joinery	Manufacturing > Joinery > Architectural Aluminium Joinery

It is anticipated that no existing candidates will be disadvantaged by these transition arrangements. However, anyone who feels that they have been disadvantaged may appeal to Competenz at the address below. Appeals will be considered on a case by case basis.

For detailed information see [Review Summaries](#) on the NZQA website.

### NZQF National Qualification Registration Information

<b>Process</b>	<b>Version</b>	<b>Date</b>	<b>Last Date for Assessment</b>
Registration	1	March 2008	December 2015
Revision	2	June 2013	December 2019
Review	3	October 2015	December 2019

## Standard Setting Body

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Reviewed

## **National Certificate in Plastics Processing Technology (Production) (Level 1) with strands in General, Injection Moulding, Extrusion, Extrusion Blow Moulding, Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch-Blow Moulding, Rotational Moulding, Film Slitting, and Expanded Polystyrene Moulding**

<b>Level</b>	<b>1</b>
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### **Purpose**

The National Certificate in Plastics Processing Technology (Production) (Level 1) with strands in General, Injection Moulding, Extrusion, Extrusion Blow Moulding, Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch-Blow Moulding, Rotational Moulding, Film Slitting, and Expanded Polystyrene Moulding [Ref: 1361] is an introductory qualification intended to meet the requirements of a wide range of plastics processing industries. The strands within the qualification are designed to recognise the basic skills and knowledge necessary to work in a production environment in specific sectors within the plastics industry. The General strand provides a relevant qualification for people from allied manufacturing sectors where plastics processing also takes place, or it allows people the opportunity to customise their learning more closely to their specific job roles. The Core Elective section offers significant flexibility to meet specific enterprise requirements.

Holders of this certificate are able to work under supervision, typically as production operators. People intending a career in plastics processing may commence training towards the qualification by gaining credit for selected unit standards prior to employment.

This qualification is a prerequisite for the National Certificate in Plastics Processing Technology (Production) (Level 2) with strands in General, Injection Moulding, Extrusion, Extrusion Blow Moulding, Pressure Thermoforming, Vacuum Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch-Blow Moulding, Rotational Moulding, Expanded Polystyrene Moulding and Polystyrene Pre-expansion [Ref: 1362]. Certificate holders are encouraged to undertake further training. Alternatively, career paths are available through specialised National Certificates up to Level 4 (as detailed below), for which cross crediting of unit standards is available.

The National Certificates in Plastics Processing Technology (Production) at Levels 1, 2, and 3 with strands [Refs: 1361, 1362, 1363] complement the National Certificates in Plastics Processing Technology at Levels 2, 3, and 4 with strands [Refs: 0394, 0395, 0396]. The National Certificates in Plastics Processing Technology (Production) at Levels 1, 2, and 3 [Refs: 1361, 1362, 1363] require specified and elective credits from the Plastics Processing Technology subfield and therefore share significant credits with the technically focused National Certificates in Plastics Processing Technology at the same levels [Refs: 0394, 0395]. The production focused qualifications are for hands-on production personnel, and in comparison to the technically focused qualifications the compulsory engineering content is much lower, the qualification suite has fewer levels, and they are significantly smaller in terms of credit requirements.

## Replacement Information

This qualification replaced the General strand and all the plastics strands of the National Certificate in Materials Processing (Level 1) [Ref: 1072].

### Credit Range

	Core Compulsory	Core Elective
Level 1 or above credits	5	9-26
Minimum totals	5	9-26

	General Strand		Injection Moulding Strand
	C	E	
Level 1 credits	3	0-6	10
Level 2 or above credits	-	0-6	12
Minimum totals	3	6	22

	Extrusion Strand	Extrusion Blow Moulding Strand
Level 1 credits	10	10
Level 2 credits	14	12
Minimum totals	24	22

	Thermoforming Strand	Blown Film Extrusion Strand	
		C	E
Level 1 credits	10	7	0-3
Level 2 credits	12	14	0-5
Minimum totals	22	21	3 or 5

	Film Conversion Strand		Injection Stretch-Blow Moulding Strand
	C	E	
Level 1 credits	6	0-3	11
Level 2 credits	7	0-5	12
Minimum totals	13	3 or 5	23

	Rotational Moulding Strand	Film Slitting Strand	
		C	E
Level 1 credits	12	6	0-3
Level 2 credits	14	7	0-5
Minimum totals	26	13	3 or 5

	Expanded Polystyrene Moulding Strand
Level 1 credits	23
Level 2 credits	-
Minimum totals	23

## Requirements for Award of Qualification

### Award of NZQF National Qualifications

Credit gained for a standard may be used only once to meet the requirements of this qualification.

Unit standards and achievement standards that are equivalent in outcome are mutually exclusive for the purpose of award. The table of mutually exclusive standards is provided on the New Zealand Qualifications Authority (NZQA) website: <http://www.nzqa.govt.nz/qualifications-standards/standards/standards-exclusion-list/>.

Reviewed standards that continue to recognise the same overall outcome are registered as new versions and retain their identification number (ID). Any version of a standard with the same ID may be used to meet qualification requirements that list the ID and/or that specify the past or current classification of the standard.

### Summary of Requirements

- A minimum of 40 credits
- Core Compulsory standards
- Core Elective – Balance if required

One of the following strands is required

- General Strand
- Injection Moulding Strand
- Extrusion Strand
- Extrusion Blow Moulding Strand
- Thermoforming Strand
- Blown Film Extrusion Strand
- Film Conversion Strand
- Injection Stretch-Blow Moulding Strand
- Rotational Moulding Strand
- Film Slitting Strand
- Expanded Polystyrene Moulding Strand

### Detailed Requirements

#### Core Compulsory

The following standards are required

Humanities > Communication Skills > Interpersonal Communications

ID	Title	Level	Credit
3501	Demonstrate knowledge of and apply listening techniques	1	3
3503	Participate and communicate in a team or group to complete a routine task	1	2

#### Core Elective

The balance of credits to achieve a minimum of 40 credits may come from the following:

Field	Subfield	Domain
Business	Accounting	Any
	Business Administration	Any
	Business Operations and Development	Any
Computing and Information Technology	Computing	Generic Computing
Core Generic	Core Generic	Any
Engineering and Technology	Design	Design - Computer Graphics
		Design - Graphic Communication
		Generic Design
	Electrical Engineering	Core Electrical
	Electronic Engineering	Core Electronics
		Electronic Manufacturing
	Mechanical Engineering	Engineering Core Skills
		Engineering Drawing and Design
		Engineering - Fabrication
		Engineering Machining and Toolmaking
		Engineering - Materials
		Engineering - Measurement
		Fluid Power - Hydraulics
		Fluid Power - Pneumatics
		Maintenance and Diagnostics in Mechanical Engineering
		Mechanical Assembly
		Mechanical Commissioning
		Mechanical Installation
		Welding
	Motor Industry	Automotive Workshop Engineering
Engines		
Technology	Any	
Health	Health Studies	First Aid
	Occupational Health and Safety	Occupational Health and Safety Practice
Humanities	Communication Skills	Any
	English	Any
	Languages	English Language
Manufacturing	Joinery	Architectural Aluminium Joinery
Sciences	Environment	Any
	Mathematics	Any
	Science	Chemistry

Field	Subfield	Domain
		Physics
		Science - Core
Service Sector	Cranes	Any
	Driving	Driver Licence Endorsements
	Lifting Equipment	Any
	Retail, Distribution, and Sales	Distribution
		Retail and Distribution Core Skills
	Stock Control	
	Service Sector Skills	Any

**General Strand**

Meet the requirements of all of the following sets

- General Strand - Compulsory
- General Strand - Elective

**General Strand - Compulsory**

The following standard is required

Health > Occupational Health and Safety > Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

**General Strand - Elective**

A minimum of 6 credits

Field	Subfield	Domain
Manufacturing	Plastics Processing Technology	Any

**Injection Moulding Strand**

The following standards are required

Health > Occupational Health and Safety > Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

Manufacturing > Plastics Processing Technology > Injection Moulding

ID	Title	Level	Credit
252	Perform process operations for injection moulding	1	4
253	Operate the injection moulding machine	2	6

## Manufacturing &gt; Plastics Processing Technology &gt; Plastics Materials

ID	Title	Level	Credit
23128	Demonstrate basic knowledge of plastics production processes and materials	1	3
23129	Process and use plastics materials	2	6

**Extrusion Strand**

The following standards are required

## Health &gt; Occupational Health and Safety &gt; Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

## Manufacturing &gt; Plastics Processing Technology &gt; Extrusion

ID	Title	Level	Credit
281	Perform basic extrusion process operations	1	4
282	Operate the extrusion machine	2	8

## Manufacturing &gt; Plastics Processing Technology &gt; Plastics Materials

ID	Title	Level	Credit
23128	Demonstrate basic knowledge of plastics production processes and materials	1	3
23129	Process and use plastics materials	2	6

**Extrusion Blow Moulding Strand**

The following standards are required

## Health &gt; Occupational Health and Safety &gt; Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

## Manufacturing &gt; Plastics Processing Technology &gt; Extrusion Blow Moulding

ID	Title	Level	Credit
295	Perform process operations for extrusion blow moulding	1	4
296	Operate the extrusion blow moulding machine	2	6

## Manufacturing &gt; Plastics Processing Technology &gt; Plastics Materials

ID	Title	Level	Credit
23128	Demonstrate basic knowledge of plastics production processes and materials	1	3
23129	Process and use plastics materials	2	6

**Thermoforming Strand**

The following standards are required

## Health &gt; Occupational Health and Safety &gt; Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

## Manufacturing &gt; Plastics Processing Technology &gt; Plastics Materials

ID	Title	Level	Credit
23128	Demonstrate basic knowledge of plastics production processes and materials	1	3
23129	Process and use plastics materials	2	6

## Manufacturing &gt; Plastics Processing Technology &gt; Thermoforming

ID	Title	Level	Credit
261	Perform process operations for thermoforming	1	4
262	Operate a thermoforming process	2	6

**Blown Film Extrusion Strand**

Meet the requirements of all of the following sets

- Blown Film Extrusion Strand - Compulsory
- Blown Film Extrusion Strand - Elective

**Blown Film Extrusion Strand - Compulsory**

The following standards are required

## Manufacturing &gt; Plastics Processing Technology &gt; Blown Film Extrusion

ID	Title	Level	Credit
287	Perform process operations for blown film extrusion	1	4
288	Operate a blown film extrusion machine	2	8

## Manufacturing &gt; Plastics Processing Technology &gt; Plastics Materials

ID	Title	Level	Credit
23128	Demonstrate basic knowledge of plastics production processes and materials	1	3

ID	Title	Level	Credit
23129	Process and use plastics materials	2	6

**Blown Film Extrusion Strand - Elective**

A minimum of 1 standard

Health > Occupational Health and Safety > Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

Manufacturing > Printing > Printing Production

ID	Title	Level	Credit
340	Demonstrate knowledge of safe working practices in the print industry	2	5

**Film Conversion Strand**

Meet the requirements of all of the following sets

- Film Conversion Strand - Compulsory
- Film Conversion Strand - Elective

**Film Conversion Strand - Compulsory**

The following standards are required

Manufacturing > Plastics Processing Technology > Film Conversion

ID	Title	Level	Credit
275	Perform process operations for film conversion	1	3
276	Operate a film conversion machine	2	7

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23128	Demonstrate basic knowledge of plastics production processes and materials	1	3

**Film Conversion Strand - Elective**

A minimum of 1 standard

Health > Occupational Health and Safety > Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

## Manufacturing &gt; Printing &gt; Printing Production

ID	Title	Level	Credit
340	Demonstrate knowledge of safe working practices in the print industry	2	5

**Injection Stretch-Blow Moulding Strand**

The following standards are required

## Health &gt; Occupational Health and Safety &gt; Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

## Manufacturing &gt; Plastics Processing Technology &gt; Injection Stretch-Blow Moulding

ID	Title	Level	Credit
15206	Perform basic process operations for injection stretch-blow moulding	1	5
15207	Operate injection stretch-blow moulding equipment	2	6

## Manufacturing &gt; Plastics Processing Technology &gt; Plastics Materials

ID	Title	Level	Credit
23128	Demonstrate basic knowledge of plastics production processes and materials	1	3
23129	Process and use plastics materials	2	6

**Rotational Moulding Strand**

The following standards are required

## Engineering and Technology &gt; Mechanical Engineering &gt; Engineering - Measurement

ID	Title	Level	Credit
4432	Demonstrate knowledge of, and convert, units of measure used in engineering	2	2
4433	Select, use, and care for simple measuring devices used in engineering	1	2

## Health &gt; Occupational Health and Safety &gt; Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

## Manufacturing &gt; Plastics Processing Technology &gt; Plastics Materials

ID	Title	Level	Credit
23128	Demonstrate basic knowledge of plastics production processes and materials	1	3

ID	Title	Level	Credit
23129	Process and use plastics materials	2	6

#### Manufacturing > Plastics Processing Technology > Rotational Moulding

ID	Title	Level	Credit
16116	Perform basic process operations for rotational moulding	1	4
16117	Operate the rotational moulding machine	2	6

#### Film Slitting Strand

Meet the requirements of all of the following sets

- Film Slitting Strand - Compulsory
- Film Slitting Strand - Elective

#### Film Slitting Strand - Compulsory

The following standards are required

#### Manufacturing > Plastics Processing Technology > Film Slitting

ID	Title	Level	Credit
279	Perform process operations for film slitting	1	3
280	Set up and control operations for film slitting	2	7

#### Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23128	Demonstrate basic knowledge of plastics production processes and materials	1	3

#### Film Slitting Strand - Elective

A minimum of 1 standard

#### Health > Occupational Health and Safety > Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

#### Manufacturing > Printing > Printing Production

ID	Title	Level	Credit
340	Demonstrate knowledge of safe working practices in the print industry	2	5

#### Expanded Polystyrene Moulding Strand

The following standards are required

## Core Generic &gt; Core Generic &gt; Work and Study Skills

ID	Title	Level	Credit
1978	Identify and describe basic employment rights and responsibilities, and sources of information and assistance	1	3
4249	Demonstrate care and timeliness as an employee	1	4

## Health &gt; Occupational Health and Safety &gt; Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

## Humanities &gt; Communication Skills &gt; Reading

ID	Title	Level	Credit
25060	Independently read texts for practical purposes and to gain knowledge	1	6

## Manufacturing &gt; Plastics Processing Technology &gt; Expanded Polystyrene Moulding

ID	Title	Level	Credit
17461	Perform basic process operations for expanded polystyrene moulding	1	5

## Manufacturing &gt; Plastics Processing Technology &gt; Plastics Materials

ID	Title	Level	Credit
17460	Demonstrate knowledge of expanded polystyrene materials	1	2

## Transition Arrangements

### Version 2

Version 2 of this qualification was issued following revision. It was revised to ensure it remains achievable until it is reviewed.

This qualification is due for mandatory review in 2014 as a result of the Targeted Review of Qualifications. However, the qualification includes standards that have expired or are expiring.

#### Changes to structure and content

- Standards in the *Core Health* domain have largely expired and the First Aid standards moved to a new *First Aid* domain. To reflect this, the domain *First Aid* has been added to the elective along with an exemption to allow credits from the Core Health domain to continue to be used.
- The *Composites* domain has been designated expiring with no direct replacement and so has been removed from the Elective section.

- The strand name Blow Moulding was changed to Extrusion Blow Moulding to reflect the change in domain name.
- Standards in the Extrusion Blow Moulding Strand were updated to reflect their reclassification.
- Standard 3501 was substituted for expired standard 8817 and expiring standard 2977 was replaced by standard 25060.
- Expiring standards 8489 and 8490 were removed from the Expanded Polystyrene Moulding Strand and were not replaced.

For detailed information see Review Summaries on the NZQA website.

### Transition

People currently working towards the Expanded Polystyrene Moulding Strand in version 1 of this qualification who have credit for expiring standards 8489 and 8490 may either complete that version or transfer their results to version 2.

People currently working towards the Expanded Polystyrene Moulding Strand in version 1 of this qualification who do not have credit for expiring standards 8489 and 8490 are advised to discuss their training plan with the ITO to decide whether they should transfer their results to version 2.

For those who have partially completed version 1 and wish to transfer to version 2, the following exemptions apply.

Version 2 of this qualification contains standards that replace earlier standards. For the purposes of this version of the qualification, people who have gained credit for the expiring standards are exempt from the requirement to gain credit for the replacement or substituted standards – see table below.

Credit for	Exempt from
271	23128
272	23129
8817	3501
2977	25060

Version 2 of this qualification contains classifications that replace earlier classifications. People who have gained credit for standards in the lapsed classifications may continue to use those credits to meet the qualification requirements.

Credits for standards in	Count towards qualification requirements where the following is specified
Engineering and Technology> Mechanical Engineering> Fluid Power	Engineering and Technology> Mechanical Engineering> Fluid Power - Hydraulics
Engineering and Technology> Mechanical Engineering> Fluid Power	Engineering and Technology> Mechanical Engineering> Fluid Power - Pneumatics
Service Sector> Distribution	Service Sector> Retail, Distribution and Sales
Service Sector> Storekeeping and Warehousing	Service Sector> Retail, Distribution and Sales
Engineering and Technology> Electronic Technology> Core Electronics	Engineering and Technology> Electronic Engineering > Core Electronics
Engineering and Technology> Electronic Technology> Electronic Manufacturing	Engineering and Technology> Electronic Engineering> Electronic Manufacturing
Health > Health Studies > Core Health	Health > Health Studies > First Aid

For candidates who do choose to complete Version 1 of this qualification, the following reverse transition has been included to allow existing candidates to complete the qualification by using the replacement or substitute standards as credit for the expiring and expired standards – see table below.

Credit for	Exempt from
3501	8817
25060	2977

It is anticipated that no existing candidates will be disadvantaged by these transition arrangements. However, anyone who feels that they have been disadvantaged may appeal to Competenz at the address below. Appeals will be considered on a case by case basis.

### Previous versions of the qualification

Version 1 of this qualification replaced the General strand and all the plastics strands of the National Certificate in Materials Processing (Level 1) [Ref: 1072]. The contents and requirements in the relevant strands of the replaced qualification are the same in this qualification, except for the following changes: standard 8817 moved from the strands to the Core Compulsory section; General Strand – Elective credit requirements changed, and are now confined to the Plastics Processing Technology subfield; standards 271 and 272

replaced by 23128 and 23129 respectively; domain classifications in the Plastics Processing Technology subfield updated; subfield Business Operations and Development added to the Core Elective section; and subfield Painting and Decorating removed from the Core Elective section.

Additionally, the Glass Containers strand of the National Certificates in Materials Processing at Levels 1 and 2 [Refs: 1072, 1073] was replaced by the National Certificates in Glass Container Manufacturing at Levels 1, 2, and 3 [Refs: 1358, 1359, 1360], and the Paint Manufacturing strand of the National Certificates in Materials Processing at Levels 1, 2 and 3 [Refs: 1072, 1073, 1074] was replaced by the National Certificate in Paint Manufacturing at Levels 2 and 3 [Refs: 1364, 1365].

All existing candidates were able to complete the National Certificate in Materials Processing (Level 1) [Ref: 1072] or transfer their existing achievements to this qualification. The last date for assessments to take place for the replaced qualification was 31 December 2009.

## Other standard setting bodies whose standards are included in the qualification

Competenz  
 NZQA  
 New Zealand Industry Training Organisation  
 Communications and Media Industry Training Organisation

## Certification

The certificate will display the logos of NZQA, Competenz and the organisation that has been granted consent to assess against standards that meet the requirements of the qualification (accredited).

## Classification

This qualification is classified according to the classification system listed on the Directory of Assessment Standards (DAS) and the New Zealand Standard Classification of Education (NZSCED) system as specified below.

DAS Classification		NZSCED	
Code	Description	Code	Description
190	Manufacturing > Plastics Processing Technology	030108	Engineering and Related Technologies > Manufacturing, Engineering and Technology > Plastics Processing Technology

### Quality Management Systems

Providers and Industry Training Organisations must be granted consent to assess by a recognised Quality Assurance Body before they can register credits from assessment against standards. Organisation with consent to assess and Industry Training Organisations assessing against standards must engage with the moderation system that applies to those standards. Consent to assess requirements and the moderation system are outlined in the associated Consent and Moderation Requirements (CMR) for each standard.

Reviewed