National Certificate in Plastics Processing Technology (Production) (Level 2) with strands in General, Injection Moulding, 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

Level **2**

Credits **40**

This qualification has been **reviewed**. The last date to meet the requirements is 31 December 2019.

Transition Arrangements

This qualification has been reviewed and replaced by the New Zealand Certificate in Plastics Processing (Level 3) with an optional strand in Plastics Engineering [Ref: 2974].

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

Candidates currently working towards this qualification may either complete its requirements by the date specified or transfer to the replacement qualification.

This qualification contained an expiring unit standard (414) for which a replacement unit standard has been registered (28497). For the purposes of this qualification, people who have gained credit for the expiring unit standard are exempt from the requirement to gain credit for the replacement unit standard.

Credit for	Exempt from
414	28497

This qualification also contained expiring classifications that have been replaced by other classifications.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.

Standards from	Are treated as Standards from
Engineering and Technology > Mechanical Engineering > Composites	Manufacturing > Composites
Engineering and Technology > Motor Industry > Engine Repairs	Engineering and Technology > Motor Industry > Engines
Health > Health Studies > Core Health	Community and Social Services > Health, Disability, and Aged Support > Core Health

Standards from	Are treated as Standards from
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 Registration Information

Process	Version	Date	Last Date for Assessment
Registration	1	March 2008	December 2019
Review	2	October 2015	December 2019

Standard Setting Body

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National Certificate in Plastics Processing Technology (Production) (Level 2) with strands in General, Injection Moulding, 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

Level **2**

Credits **40**

Purpose

The National Certificate in Plastics Processing Technology (Production) (Level 2) with strands in General, Injection Moulding, 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] is a qualification intended to meet the requirements of a wide range of plastics processing industries. The strands within the qualification are designed to recognise the skills and knowledge necessary to operate production processes in specific sectors within the plastics industry. The General strand provides a relevant qualification for people from allied manufacturing sectors, 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, generally as advanced production operators.

This qualification is a prerequisite for the National Certificate in Plastics Processing Technology (Production) (Level 3) with strands in General, and Expanded Polystyrene Moulding [Ref: 1363]. Certificate holders are encouraged to undertake further production related training. Alternatively there are specialised National Certificates up to Level 4 available (as detailed below). People interested in acquiring supervisory skills and knowledge, may be interested in undertaking the National Certificate in Business (First Line Management) (Level 3) [Ref: 0743] and the National Certificate in Business (First Line Management) (Level 4) [Ref: 0649].

The National Certificates in Plastics Processing Technology (Production) at Levels 1, 2, and 3 with strands [Refs: 1361, 1362, 1363] complement the following existing series of qualifications:

- The National Certificates in Plastics Processing Technology at Levels 1, 2, 3, and 4 [Refs: 0260, 0394, 0395, 0396]
- The National Certificates in Engineering and Technology (Plastics Engineering) at Levels 3 and 4 [Refs: 0477, 0478]
- The National Certificates in Manufacturing and Mechanical Engineering at Levels 1, 2, 3, and 4 [Refs: 0126, 0127, 0128, 0750].

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: 0260, 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 2) [Ref: 1073].

Credit Range

	Core Compulsory	**Core Elective**
Level 2 or above credits	9	2-21
Minimum totals	9	2-21

	General Strand	**Injection Moulding Strand**
Level 2 or above credits	10	17
Minimum totals	10	17

	Extrusion Strand	**Blow Moulding Strand**
Level 2 credits	20	18
Minimum totals	20	18

	Pressure Thermoforming Strand	**Vacuum Thermoforming Strand**
Level 2 credits	16	16
Minimum totals	16	16

	Blown Film Extrusion Strand	**Film Conversion Strand**
Level 2 credits	20	10
Minimum totals	20	10

	Injection Stretch-Blow Moulding Strand	**Rotational Moulding Strand**
Level 2 credits	17	29
Minimum totals	17	29

	Expanded Polystyrene Moulding Strand	**Polystyrene Pre-expansion Strand**
Level 2 credits	17	22
Minimum totals	17	22

Requirements for Award of Qualification

Award of NQF 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 in section 7 of the New Zealand Qualifications Authority (NZQA) *Rules and Procedures* publications available at http://www.nzqa.govt.nz/ncea/acrp/index.html.

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 at Level 2 or above
- Core Compulsory standards
- Core Elective – Balance if required

One of the following strands is required
- General Strand
- Injection Moulding Strand
- Extrusion Strand
- Blow Moulding Strand
- Pressure Thermoforming Strand
- Vacuum Thermoforming Strand
- Blown Film Extrusion Strand
- Film Conversion Strand
- Injection Stretch-Blow Moulding Strand
- Rotational Moulding Strand
- Expanded Polystyrene Moulding Strand
- Polystyrene Pre-expansion Strand

Detailed Requirements

Core Compulsory

The following standards are required

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

ID	Title	Level	Credit
21911	Demonstrate knowledge of safety on engineering worksites	2	1
21912	Apply safe working practices on an engineering worksite	2	2

Humanities > Communication Skills > Interpersonal Communications

ID	Title	Level	Credit
1277	Communicate information in a specified workplace	2	3

ID	Title	Level	Credit
9677	Participate in a group/team which has an objective(s)	2	3

Core Elective
The balance of credits, if required, to achieve
A minimum of 40 credits at Level 2 or above
May come from the following

Field	Subfield	Domain
Business	Accounting	Any
	Business Administration	Any
	Business Operations and Development	Any
	Management	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 Machining and Toolmaking
		Engineering - Materials
		Engineering - Fabrication
		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

Field	Subfield	Domain
Health	Occupational Health and Safety	Occupational Health and Safety Practice
Humanities	Communication Skills	Any
	English	Any
	Languages	English Language
Manufacturing	Any	Any
Sciences	Environment	Any
	Mathematics	Any
	Science	Chemistry
		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
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with General Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with General Strand
A minimum of 10 credits at Level 2 or above

Field	Subfield	Domain
Manufacturing	Plastics Processing Technology	Any

Injection Moulding Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Injection Moulding Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Injection Moulding Strand
The following standards are required

Manufacturing > Plastics Processing Technology > Injection Moulding

ID	Title	Level	Credit
254	Run and monitor the injection moulding production process	2	9

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23130	Classify and name plastics materials	2	8

Extrusion Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Extrusion Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Extrusion Strand
The following standards are required

Manufacturing > Plastics Processing Technology > Extrusion

ID	Title	Level	Credit
283	Run and monitor the extrusion production process	2	12

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23130	Classify and name plastics materials	2	8

Blow Moulding Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Blow Moulding Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Blow Moulding Strand
The following standards are required

Manufacturing > Plastics Processing Technology > Blow Moulding

ID	Title	Level	Credit
297	Run and monitor the blow moulding production process	2	10

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23130	Classify and name plastics materials	2	8

Pressure Thermoforming Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Thermoforming Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Thermoforming Strand
The following standards are required

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23130	Classify and name plastics materials	2	8

Manufacturing > Plastics Processing Technology > Thermoforming

ID	Title	Level	Credit
264	Run and monitor the production process for pressure thermoforming	2	8

Vacuum Thermoforming Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Thermoforming Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Thermoforming Strand
The following standards are required

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23130	Classify and name plastics materials	2	8

Manufacturing > Plastics Processing Technology > Thermoforming

ID	Title	Level	Credit
263	Run and monitor the production process for vacuum thermoforming	2	8

Blown Film Extrusion Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Blown Film Extrusion Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Blown Film Extrusion Strand
The following standards are required

Manufacturing > Plastics Processing Technology > Blown Film Extrusion

ID	Title	Level	Credit
289	Control and optimise mono-layer production process for blown film extrusion	2	12

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23130	Classify and name plastics materials	2	8

Film Conversion Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Film Conversion Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Film Conversion Strand
The following standard is required

Manufacturing > Plastics Processing Technology > Film Conversion

ID	Title	Level	Credit
277	Set up and control simple operations for film conversion	2	10

Injection Stretch-Blow Moulding Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Injection Stretch-Blow Moulding Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Injection Stretch-Blow Moulding Strand
The following standards are required

Manufacturing > Plastics Processing Technology > Injection Stretch-Blow Moulding

ID	Title	Level	Credit
15208	Set and run the injection stretch-blow moulding production process	2	9

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23130	Classify and name plastics materials	2	8

Rotational Moulding Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Rotational Moulding Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Rotational Moulding Strand
The following standards are required

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

ID	Title	Level	Credit
2395	Select, use and care for, engineering hand tools	2	4
2396	Select, use and maintain portable hand held engineering power tools	2	4
21913	Shift loads in engineering installation, maintenance, and fabrication work	2	2

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23130	Classify and name plastics materials	2	8

Manufacturing > Plastics Processing Technology > Rotational Moulding

ID	Title	Level	Credit
16120	Mount mould, set and monitor the rotational moulding production process	2	11

Expanded Polystyrene Moulding Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Expanded Polystyrene Moulding Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Expanded Polystyrene Moulding Strand
The following standards are required

Manufacturing > Plastics Processing Technology > Expanded Polystyrene Moulding

ID	Title	Level	Credit
17462	Operate and control the expanded polystyrene moulding machine	2	8
17465	Service a mould for expanded polystyrene moulding production	2	5

Service Sector > Retail, Distribution, and Sales > Distribution

ID	Title	Level	Credit
28497	Demonstrate technical knowledge of distribution facility operations	3	10

Polystyrene Pre-expansion Strand
Prior award of National Certificate in Plastics Processing Technology (Production) (Level 1) [Ref: 1361] with Expanded Polystyrene Moulding Strand **or** prior award of National Certificate in Materials Processing (Level 1) [Ref: 1072] with Expanded Polystyrene Moulding Strand
The following standards are required

Manufacturing > Energy and Chemical Plant > Operation of Energy and Chemical Plant

ID	Title	Level	Credit
21463	Operate and monitor a boiler up to 20 MW	2	6

Manufacturing > Plastics Processing Technology > Expanded Polystyrene Moulding

ID	Title	Level	Credit
17463	Operate and control pre-expansion equipment for expanded polystyrene materials	2	8

Manufacturing > Plastics Processing Technology > Plastics Materials

ID	Title	Level	Credit
23130	Classify and name plastics materials	2	8

Transition Arrangements

Version 1

This qualification replaced the General strand and all the plastics strands of the National Certificate in Materials Processing (Level 2) [Ref: 1073]. The contents and requirements in the relevant strands of the replaced qualification are the same in this qualification, except for the following changes:

Summary of differences between the qualifications

- Unit standard 273 replaced by 23130.
- Unit standard 2824 replaced by 21911 and 21912.
- Unit standard 12299 replaced by 21913.
- Unit standard 4555 replaced by 21463.
- Unit standard 9677 and the replacement standards for 2824 moved from the strands to the Core Compulsory section.
- The General Strand no longer has compulsory and elective sections, the credit requirements have changed, and elective unit standards are confined to the Plastics Processing Technology subfield.
- Domain classifications in the Plastics Processing Technology subfield updated.
- Subfield Business Operations and Development added to the Core Elective section.
- 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] has been 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] has been replaced by the National Certificate in Paint Manufacturing at Levels 2 and 3 [Refs: 1364, 1365]. Appropriate transition arrangements are detailed in each of these qualifications.

All existing candidates may complete the National Certificate in Materials Processing (Level 2) [Ref: 1073] or, where applicable, transfer their existing achievements to this qualification. The last date for assessments to take place for the replaced qualification is 31 December 2009.

For detailed information see Review Summaries on the NZQA website.

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

Credit for	Exempt from
273	23130
2824	21911, 21912
4555	21463
12299	21913

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 - Pneumatics
Service Sector> Distribution	Service Sector> Retail, Distribution and Sales
Service Sector> Storekeeping and Warehousing	
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

Competenz has endeavoured to ensure that no person has been disadvantaged by this review. Anyone who thinks that they have been disadvantaged should, in the first instance, contact the ITO at the address below.

Other standard setting bodies whose standards are included in the qualification

Competenz
NZ Extractive Industries Training Organisation
NZQA
Retail ITO

Certification

The certificate will display the logos of NZQA, the provider and Competenz.

Classification

This qualification is classified according to the NQF classification system 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 accredited by a recognised Quality Assurance Body before they can register credits from assessment against standards. Accredited providers and Industry Training Organisations assessing against standards must engage with the moderation system that applies to those standards. Accreditation requirements and the moderation system are outlined in the associated Accreditation and Moderation Action Plan (AMAP) for each standard.

Prerequisite Diagram