

Title	Service tooling for thermoforming		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to: demonstrate knowledge of the construction and operation; and perform servicing of thermoform tooling.
----------------	--

Classification	Plastics Processing Technology > Thermoforming
-----------------------	--

Available grade	Achieved
------------------------	----------

Explanatory notes

- 1 Legislation relevant to this unit standard includes but is not limited to the Health and Safety at Work Act 2015.
- 2 Definitions

Tooling – moulds and associated ancillary equipment. Examples of features are male or female mould plates, vacuum or mounting plates, back plate, vacuum holes, venting holes, cooling water systems, inserts, plug assists, clamping frames, back plate, cavity inserts, venting system, in-mould cutting components, stripper plate, ejector system, cooling systems (baffled holes, spirals, flood and tube systems), pressure box, plug assist assembly. Associated ancillary equipment is tooling for use in semi-automatic or fully automatic product trimming operations and includes steel rule knives, and punches and dies.

Workplace procedures – procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, procedures to comply with legislative and local body requirements.
- 2 All evidence requirements must be performed in accordance with workplace procedures.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of the construction and operation of thermoform tooling.

Evidence requirements

- 1.1 Mould construction is described.

1.2 Mould functions and operations are described.

Range functions and operations include – sheet clamping, mould close, forming, cooling, opening, ejection, plug actuation, undercut actuation.

1.3 Tooling construction and operation are described.

Range tooling includes – steel rule knives, punches and dies.

1.4 Workplace engineering drawings are used to interpret tooling operation and construction.

Outcome 2

Perform servicing of thermoform tooling.

Range evidence is required for two sets of tooling with different configurations.

Evidence requirements

2.1 Tooling is opened.

2.2 Tooling is inspected and cleaned and damage is reported.

2.3 All forming and product cutting surfaces are inspected for damage and wear, and results are reported.

2.4 Tooling lubrication is carried out if necessary.

2.5 Tooling storage preparation procedures are performed.

Range storage preparation procedures include – inspection, cleaning, protection, cooling water removal.

Planned review date	31 December 2021
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 April 1993	31 December 2012
Revision	2	13 February 1997	31 December 2012
Review	3	23 January 1998	31 December 2012
Review	4	27 October 2005	31 December 2012
Review	5	18 August 2011	31 December 2019
Review	6	15 September 2016	N/A

Consent and Moderation Requirements (CMR) reference	0013
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.