

Title	Produce a composite item by resin infusion		
Level	4	Credits	7

Purpose	People credited with this unit standard are able to prepare materials and equipment, and produce a composite item using resin infusion.
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Classification	Composites > Production Composites
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Available grade	Achieved
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Guidance Information

- 1 All required equipment must be set up, started up, operated, and shutdown in accordance with company policies and procedures.
- 2 All work practices must meet recognised codes of practice such as the Code of Practice for Health and Safety in the Manufacture of Composites Based on Synthetic Resins (Fibreglass), 1998, available at <http://worksafe.govt.nz>, and documented worksite health and safety procedures (where these exceed code) for personal, product, and worksite health and safety, and must meet the obligations required by legislation.
- 3 Learners undertaking assessment against this unit standards are expected to comply with the following legislation and any subsequent amendments –
 - Health and Safety at Work Act 2015
 - Health and Safety in Employment Regulations 1995
 - Resource Management Act 1991
 - Hazardous Substances and New Organism Amendment Act 2015.
- 4 Definitions

Job specifications refers to the standard requirements of the job being undertaken.

Process specifications refers to the documented instructions and method of apply the materials to manufacture the item which includes time, materials, temperature, and application rates.

Product specifications refers to the documented requirements of the manufactured item.

Workplace policies and procedures refers to the documented procedures and policies providing guidelines of the tasks and activities carried out in the workplace. This typically includes relevant health and safety policies to eliminate hazard/risk in the workplace.
- 5 The item produced for this unit standard must include external and internal angles, and concave and convex surfaces.

- 6 Assessment does not include film infusion, resin injection or resin transfer moulding light.

Outcomes and performance criteria

Outcome 1

Prepare materials and equipment for production of a composite item.

Performance criteria

- 1.1 Infusion plan is verified against job specifications.
- Range includes but is not limited to – resin input positions, resin pathways, expected infusion time, resin cure times, resin to reinforcement ratio.
- 1.2 Materials and equipment are prepared in accordance with job specifications.
- 1.3 Infusion equipment and vacuum machine are tested and calibrated in accordance with manufacturer's instructions and workplace policies and procedures.

Outcome 2

Produce a composite item using resin infusion.

Performance criteria

- 2.1 Composite item is produced in accordance with product and process specifications.
- 2.2 Finished item is checked and remedial action is taken if required to ensure product specifications are met.

Planned review date	31 December 2021
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	9 December 1994	31 December 2012
Revision	2	14 April 1997	31 December 2012
Revision	3	5 January 1999	31 December 2012
Review	4	26 September 2001	31 December 2018
Revision	5	12 February 2003	31 December 2018
Rollover and Revision	6	21 August 2009	31 December 2018
Revision	7	20 August 2010	31 December 2018
Review	8	20 April 2017	N/A

Consent and Moderation Requirements (CMR) reference

0136

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

Comments on this unit standard

Please contact the NZMAC ITO training@nzmarine.com if you wish to suggest changes to the content of this unit standard.