

Title	Interpret NZS: 3640 requirements and workplace compliance relating to wood preservation operations		
Level	3	Credits	10

Purpose	People credited with this unit standard are able to: interpret NZS 3640:2003 requirements; explain requirements for the identification of treated timber products; describe, reference and explain hazard class treatment and sampling requirements and approved preservatives; demonstrate familiarity with the workplace quality management system and related documentation requirements; reference and explain product specification requirements; reference and explain workplace quality management system plant and equipment requirements; match the NZS 3640:2003 and workplace quality management system requirements against workplace applications; and reference workplace health and safety compliance requirements.
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Classification	Solid Wood Manufacturing > Timber Drying and Treatment
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Available grade	Achieved
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Guidance Information

- 1 Reference
NZS 3640:2003 *Chemical Preservation of Round and Sawn Timber*.
- 2 Definitions
Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider wood manufacturing industry as examples of best practice.
Workplace procedures refer to documented policies and procedures set by the organisation carrying out the work, and to documented or other directions provided to staff, and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor’s instructions, and procedures to comply with legislative and local body requirements relevant to the industry sector.
- 3 Assessment information
 - a Competence in this unit standard requires knowledge of the NZS 3640:2003 *Chemical Preservation of Round and Sawn Timber*.

- b All activities and evidence must meet NZS 3640:2003 requirements, workplace procedures and accepted industry practice.
- 4 Recommended unit standards for entry: Unit 159, *Demonstrate knowledge of environmental issues in wood manufacturing industries*; and Unit 8339, *Demonstrate knowledge of the principles of wood preservation and antisapstain treatment*.
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Outcomes and performance criteria

Outcome 1

Interpret NZS 3640:2003 requirements

Performance criteria

- 1.1 Scope of NZS 3640:2003 is explained.
- 1.2 Knowledge of key definitions applicable to NZS 3640:2003 are demonstrated.
- Range includes but is not limited to – basic density, borings, core, concentration, ground line area, hazard class, identification marks and brands, on-site treatment, retention, retention zone, samples, technical advisor, quality assurance plan; evidence of six definitions are required.
- 1.3 Requirements for registered treatment plants are referenced and explained.
- 1.4 Advisory information and recommendations for treated products are referenced and explained.
- Range care of treated timber, drying, machining, related documents and standards.

Outcome 2

Explain requirements for the identification of treated timber products.

Performance criteria

- 2.1 Components of the treated timber brand mark are identified and interpreted.
- 2.2 Branding methods and requirements in relation to product type, packet or unit characteristics and remote locations are identified and explained.

Outcome 3

Describe, reference and explain hazard class treatment and sampling requirements and approved preservatives.

Performance criteria

- 3.1 Hazard classification criteria for each hazard class are described.
- Range H1.1, H1.2, H2, H3.1, H3.2, H4, H5, H6.
- 3.2 Hazard classes and treatment requirements appropriate to product type and end use situation are referenced and explained.
- Range H1.1, H1.2, H2, H3.1, H3.2, H4, H5, H6;
evidence is required of three product examples for each hazard class.
- 3.3 Timber products requiring special treatment considerations are identified in accordance with hazard class guidelines.
- Range products – treated in final shape and form, selected sapwood only, beams.
- 3.4 Hazard class requirements are referenced and explained.
- Range penetration, preservative retentions, retention and wood density relationships.
- 3.5 Penetration and retention sampling requirements and tolerances are referenced and explained.
- 3.6 Management of sub-standard treated timber is referenced and explained.
- 3.7 Information relating to approved preservatives is referenced and explained.
- Range includes but is not limited to – fixed and non-fixed waterborne preservatives, oil-borne preservatives, insecticides, light organic solvent preservatives (LOSP), on-site treatments.
- 3.8 Individual hazard class specification requirements are referenced and explained.

Outcome 4

Demonstrate familiarity with the workplace quality management system and related documentation requirements.

Performance criteria

- 4.1 Workplace quality management system is described.
- Range relationship, responsibilities, authorities, requirements for preservation quality, structure, layout, content.
- 4.2 NZS 3640:2003 standards are referenced against relevant workplace documentation requirements.

- 4.3 Documentation requirements related to the workplace quality management system are identified and their use and relationship is explained.
- Range may include but is not limited to – quality documents, process manuals and procedures, standard operating procedures, work instructions, plant and equipment calibration and maintenance schedules, non-conformance and corrective action records, training records, audit records.
- 4.4 Purpose of documentation common to all preservation processes is described.
- Range may include but is not limited to – charge sheets, reconciliation summaries, sampling summaries, sampling tests and results, laboratory analytical results.

Outcome 5

Reference and explain product specification requirements.

Performance criteria

- 5.1 Species approved for treatment are matched with treatment processes.
- Range treatment processes may include but are not limited to – Bethell, alternating pressure method (APM), empty cell processes, boron diffusion, vacuum, Q Method.
- 5.2 Sampling prescription requirements are referenced and explained, and minimum requirements are identified.
- Range evidence is required of two hazard classes and process types.
- 5.3 Sampling requirements and sample results are interpreted and explained.
- Range may include but is not limited to – roundwood sawn timber, specific hazard class requirements, preservative type, load samples (light organic solvent preservatives (LOSP) only).
- 5.4 Requirements for treated product identification and traceability are referenced and explained.
- 5.5 Requirements for custom treating client products are referenced and explained.

Outcome 6

Reference and explain workplace quality management system plant and equipment requirements.

Performance criteria

- 6.1 Calibration requirements for preservation plant and equipment are referenced and matched against the calibration status of the on-site treatment plant.
- 6.2 Procedures for extending or varying current plant approvals are referenced and explained.

Outcome 7

Match NZS 3640:2003 and workplace quality management system requirements against workplace applications.

Performance criteria

- 7.1 NZS 3640:2003 and the workplace quality management system requirements are matched against current preservation plant compliance.

Outcome 8

Reference workplace health and safety compliance requirements.

Performance criteria

- 8.1 Operational and design requirements and safeguards for preservation plants are referenced for compliance.
- 8.2 Safety and health requirements for preservation plants are referenced for compliance.
- 8.3 Risks and safeguards associated with preservation treatment operations are referenced for compliance.
- 8.4 Preservatives used on site are identified by type and brand name and requirements are referenced.
- 8.5 Supply, handling, and mixing of preservative chemicals, and the disposal of contaminated waste, residues or materials are referenced.
- 8.6 Risks associated with the handling or disposal of treated timber products and machine waste is referenced.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	10 February 1999	31 December 2013
Review	2	18 December 2006	31 December 2014
Review	3	18 April 2013	N/A
Review	4	28 May 2020	N/A

Consent and Moderation Requirements (CMR) reference

0013

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

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.