
WOOD MANUFACTURING
Explain procedures to add value to
wood products

level:	5
credit:	10
planned review date:	September 2005
sub-field:	Wood Processing Technology
purpose:	People credited with this unit standard are able to: explain criteria that enable wood improvement; explain the use of chemical enhancement techniques in wood products; explain adhesive technologies applied in wood product manufacturing; and explain coating technologies used in wood product manufacturing.
entry information:	Open.
accreditation option:	Evaluation of documentation and visit by NZQA and industry.
moderation option:	A centrally established and directed national moderation system has been set up by Forest Industries Training.
special notes:	<ol style="list-style-type: none">1 Definitions <i>Wood product manufacturing</i> includes: finger jointing, face and edge laminating of wood and other materials. <i>Added value</i> means chemical enhancement, combination of materials and through processing stages reduce variability and improve durability and predictability.2 All performance criteria must be demonstrated and assessed in accordance with the reference text <i>Enhancing Wood Properties</i> (Forest Industries Training: Rotorua, 2003).

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Elements and Performance Criteria

element 1

Explain criteria that enable wood improvement.

performance criteria

- 1.1 Explanation identifies the structure of wood and the impacts this has on the ability of wood to be enhanced.
- Range: lignin, cell types, corewood, outerwood, early/ late wood, juvenile wood, extractives.
- 1.2 Explanation identifies the impact of moisture content on wood added value processes.
- Range: processes include but are not limited to - wood preservation, hardening and colourisation, finger jointing, laminating, coating, overlaying, wrapping, gluing, pressing, compacting.
- 1.3 Explanation covers the importance of size control and its achievement to ensure final wood product integrity.
- Range: achievement of size control includes - sawing, machining, sanding, peeling.

element 2

Explain the use of chemical enhancement techniques in wood products.

performance criteria

- 2.1 Explanation covers the methods, characteristics and standards applied in preservation techniques to enhance wood products.
- Range: preservation includes but is not limited to - Light Organic Solvent Preservation (LOSP), pressure treatment, diffusion.
- 2.2 Explanation covers the methods and characteristics applied in colourisation and hardening techniques to enhance wood products.

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element 3

Explain adhesive technologies applied in wood product manufacturing.

performance criteria

- 3.1 Explanation identifies the chemistry of major adhesive categories, and matches these with materials and product performance requirements.
- Range: adhesive categories - thermoplastic, thermoset.
- 3.2 Explanation identifies techniques used to effect correct bonding.
- Range: techniques include but are not limited to - sawing, machining, sanding, glue application, raw material quality, curing, heat and pressure.
- 3.3 Explanation identifies relevant standards and how they apply to glued wood products.
- Range: standards include but are not limited to – national, international, customer specifications.

element 4

Explain coating technologies used in wood product manufacturing.

performance criteria

- 4.1 Explanation identifies techniques used to coat wood products.
- Range: techniques include but are not limited to - brushing, spraying, applying wood and other material laminates.
- 4.2 Explanation covers products, their characteristics and associated standards applied in coated wood products.

Comments on this unit standard

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

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Please Note

Providers must be accredited by the Qualifications Authority or a delegated inter-institutional body before they can register credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for providers wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

This unit standard is covered by AMAP 0173 which can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.