

<b>Title</b>	<b>Apply bonding agents for wood panel manufacture</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to, for wood panel manufacture: demonstrate knowledge of the fundamentals of bonding and bonding agents used; monitor bonding agent mixing; apply bonding agents to wood panels using appropriate equipment; monitor application of bonding agents to wood panels; and explain and complete maintenance and documentation requirements.
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<b>Classification</b>	Wood Manufacturing - Generic Skills > Wood Panel Manufacturing Skills
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 This unit standard is not relevant to people in the medium density fibre board sector, for whom the relevant unit standard is Unit 720, *Refine wood chips and glue fibre*.
- 2 Legislation  
Health and Safety at Work Act 2015.  
Resource Management Act 1991.
- 3 Definitions  
*Accepted industry practice* refers to approved codes of practice and standardised procedures accepted by the wider wood manufacturing industry as examples of best practice.  
*Corrective action* may include actions such as communication to management, communication to on-site technical support person, communication to off-site technical support person, cleaning, communication with maintenance staff, recalibration, or changes made to the operating system in accordance with workplace procedures.  
*Preventative maintenance* refers to the care and servicing of equipment and machinery. This may include periodic checks and inspections, testing, measurements, adjustments, or parts replacement as required in accordance with worksite policies and procedures for the purpose of preventing faults or failures and to maintain production requirements.  
*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 wood manufacturing industry sector.

4 Range

Wood panels may include but are not limited to – plywood, particleboard, strandboard, fibre-faced strandboard, laminated veneer lumber (LVL); evidence is required for one type of wood panel.

5 Assessment information

All activities and evidence must meet workplace procedures and accepted industry practice.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of the fundamentals of bonding and bonding agents used in wood panel manufacture.

#### Performance criteria

1.1 Adhesives used in wood panel manufacturing are identified in terms of their applications.

Range may include but are not limited to – urea formaldehyde, melamine-fortified urea resins, isocyanate resins, phenolic resins, resorcinol adhesives, tannin.

1.2 The purpose of introducing additives to synthetic resins is explained in terms of the additives' effect on curing time and pot life.

Range additives may include but are not limited to – curing agents, hardeners, buffers.

1.3 The chemical reaction that is heat-activated in the press is described.

1.4 The consequences of non-conformance with quality and safety standards are described.

1.5 Physical factors affecting the bonding of wood are explained.

Range may include but are not limited to – wood moisture content, glue type and mix, pressing time and temperature, wood fibre.

1.6 Safety data sheets are explained in terms of their location, chemical content, and potential hazards.

**Outcome 2**

Monitor bonding agent mixing in wood panel manufacture.

Range bonding agents may include but are not limited to – curing agents, hardeners, waxes, scavengers, dyes.

**Performance criteria**

- 2.1 Recipes are selected for given products.
- 2.2 Mixing operations are monitored to ensure the prescribed ratios are being maintained.

**Outcome 3**

Apply bonding agents to wood panels using appropriate equipment.

Range equipment may include but is not limited to – glue blender, spreader, injection nozzles, glue curtain;  
evidence of one equipment is required.

**Performance criteria**

- 3.1 Adhesives are applied to wood furnish.
- 3.2 Hazards associated with bonding and bonding agents are identified and managed.
- 3.3 Adhesive application is synchronised to wood flow.
- 3.4 Equipment is set up, started, operated, and shut down.
- 3.5 Any glue application errors are identified, and corrective action is taken.

Range out-of-specification applications, incorrect formulations.

**Outcome 4**

Monitor application of bonding agents to wood panels.

**Performance criteria**

- 4.1 Monitoring and adjustment of control parameter to enable process requirements, plant performance, and bonding is explained.
- 4.2 Wood panel product are monitored and checked for compliance with bonding specifications.

**Outcome 5**

Explain and complete maintenance and documentation requirements.

**Performance criteria**

- 5.1 Preventative maintenance and cleaning requirements are explained and completed.
- 5.2 Production, maintenance, and quality records are explained and completed.

<b>Planned review date</b>	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	25 January 1995	31 December 2012
Review	2	24 November 1995	31 December 2012
Revision	3	12 February 1998	31 December 2012
Review	4	25 March 1999	31 December 2012
Review	5	29 March 2005	31 December 2012
Rollover and Revision	6	23 February 2007	31 December 2013
Review	7	19 April 2012	N/A
Review	8	23 April 2020	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
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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](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.