

## Modification history

Release	Comments
Release 2	This version released with FWP Forest and Wood Products Training Package Version [4.0]  Version created to update workplace health and safety requirements in performance criteria and clarify intent of unit and assessment requirements.
Release 1	This version replaces equivalent unit FPIWPP3209B Prepare resin and additives, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2.  This is the first release of this unit in the new standards format.

UNIT CODE	FWPWPP3209 Prepare resin and additives
<b>Application</b>	<p>This unit of competency describes the skills and knowledge required to mix glue, resin and additives for use in the production of <u>raw board engineered wood panels, timber veneer panels and laminated timber products. Work also involves operator maintenance.</u></p> <p>The unit applies <u>individuals who work as to</u>-production operators and technicians <u>in an engineered wood products facility. Operators generally work under broad or limited direction to complete routine activities related to own work and take responsibility for their work.</u></p> <p><u>All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.who prepare resin and additives in a forest and wood products factory setting and includes operator maintenance.</u></p> <p>No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.</p>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	Wood Panel Products

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for mixing <u>resin and additives</u>	<p>1.1 Review work order and where required check with appropriate personnel</p> <p><u>1.2 Follow workplace health and safety requirements, environmental protection practices and emergency procedures and use personal protective equipment (PPE) in line with operational requirements throughout mixing operation</u></p> <p><u>1.3 Identify and report hazards, accidents, incidents and/or near misses in line with operational requirements and health and safety legislative requirements to maintain safe work practices</u></p> <p><del>1.2 Select appropriate personal protective and check for operational effectiveness</del></p> <p><del>1.3</del> <u>4</u> Obtain type and quantity of glue or resin to be mixed from storage location</p> <p><del>1.4</del> <u>5</u> Select mixing process and plan in line with work order</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Mix glue	2.1 Use equipment in line with <del>organisational safety</del> <u>workplace health and safety</u> procedures, manufacturer instructions and environmental protection practices 2.2 Measure and mix glue or resin ingredients and additives to ensure minimum wastage 2.3 Transfer mix to appropriate storage location or production equipment through transfer lines without contaminating 2.4 Monitor rate that glue or resins and additives are being added and where required adjust pumps 2.5 Test mix samples regularly in line with manufacturer instructions
3. Maintain and clean equipment	<del>3.1 Follow organisational safety procedures throughout all maintenance and cleaning processes</del> 3.2 <u>1</u> Clean mixing, storage and transfer equipment 3.3 <u>2</u> Turn off pumps and flush equipment in line with manufacturer recommendations 3.4 <u>4</u> Dispose of excess glue or resin and additives in line environmental protection practices and store equipment 3.5 <u>4</u> Record and report production outcomes and equipment faults to appropriate personnel

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<b>Foundation Skills</b>	
<i>This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.</i>	
<b>Skill</b>	<b>Description</b>
Numeracy	<ul style="list-style-type: none"> <li>calculate quantity of glue or resin to meet work order production requirements</li> <li>calculate routine mixing ratios for glue or resin and additives</li> <li>interpret numerical data from test samples</li> </ul>
Oral communication	<ul style="list-style-type: none"> <li>ask questions and actively listen to clarify contents of work orders</li> </ul>
Reading	<ul style="list-style-type: none"> <li>interpret:                             <ul style="list-style-type: none"> <li>workplace health and safety and other organisational procedures</li> <li>work orders</li> <li>safety data sheets for glue, resins and additives</li> <li>manufacturer instructions and maintenance recommendations</li> </ul> </li> </ul>
Writing	<ul style="list-style-type: none"> <li>complete accurate basic records for production outcomes and equipment faults</li> </ul>
Plan and organise	<ul style="list-style-type: none"> <li>efficiently and logically sequence the stages of preparation, production and maintenance using work order to guide activities</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>identify processing problems and faulty equipment and resolve by reporting or rectifying</li> </ul>
Technology	<ul style="list-style-type: none"> <li>select and use relevant personal protective equipment for preparing resin and additives</li> <li>efficiently and safely use mixing systems</li> </ul>

<b>Unit Mapping Information</b>			
<b>Code and title current version</b>	<b>Code and title previous version</b>	<b>Comments</b>	<b>Equivalence status</b>
FWPWPP3209 Prepare resin and additives	FWPWPP3209 Prepare resin and additives	Updated workplace health and safety requirements in performance criteria and clarified intent of unit and assessment requirements	Equivalent unit

<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</a>
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<b>TITLE</b>	<b>Assessment requirements for FWPWPP3209 Prepare resin and additives</b>
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**Performance Evidence**

An individual demonstrating competency must satisfy all of the elements, performance criteria and foundation skills of this unit. There must be evidence that, on at least one occasion, the individual has:

- [followed workplace health and safety requirements and environmental protection procedures for mixing resins and additives used in the production of engineered wood products](#)
- prepared glues and resins in line with individual work orders for each mix, prescribing different quantities for each job; types of glues and resins include:
  - synthetic or animal based adhesives
  - rubber based adhesives
  - poly vinyl acetate
  - epoxy resins
  - formaldehydes
- for the above jobs, taken samples and tested mix for:
  - mix quantities
  - setting speed
  - how weather conditions may be affecting the process.

**Knowledge Evidence**

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- [health and operational hazards or risks related to mixing resins and additives for the production of engineer wood products as identified through risk assessments, manufacturer technical information, regulations and industry health and safety guides](#)
- organisational procedures specific to mixing glue, resin and additives:
  - workplace health and safety with particular emphasis on equipment lock out, [emergency procedures](#), use of personal protective equipment and handling hazardous substances
  - [use of equipment](#)
  - communication reporting lines
  - [recording and reporting production outcomes and equipment faults](#)
- environmental protection practices for preparing resins and additives:
  - reducing water and energy use
  - cleaning plant, tools and equipment
  - disposing of hazardous substances
- storage layout and categories for:
  - raw materials
  - finished mixes
- typical flow of material supply in and out of the mixing area
- typical work flow processes for mixing glue, resins and additives
- properties, at a basic level of understanding, of glue and resin types and their uses:
  - synthetic or animal based adhesives
  - rubber based adhesives
  - poly vinyl acetate
  - epoxy resins
  - formaldehydes
- properties, at a basic level of understanding, of additive types and their uses
- effects of weather conditions on bonding times
- methods used to:
  - mix glues, resins and additives
  - test samples of mix
  - safely store glues, resins and additives
- purpose, features, operation and basic non-specialist maintenance of mixing systems used to mix glue, resin and additives:
  - mixers with manually controlled feed
  - mixers with pre-programmed mix quantities.

<b>Assessment Conditions</b>	
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> <li>• physical conditions:                             <ul style="list-style-type: none"> <li>• skills must be demonstrated in an environment that accurately represents workplace conditions</li> </ul> </li> <li>• resources, equipment and materials:                             <ul style="list-style-type: none"> <li>• mixing system with transfer pumps</li> <li>• personal protective equipment suitable for mixing glue, resin and additives</li> <li>• glue and resin which must include one or more of the following:                                     <ul style="list-style-type: none"> <li>• synthetic or animal based adhesives</li> <li>• rubber based adhesives</li> <li>• poly vinyl acetate</li> <li>• epoxy resins</li> <li>• formaldehydes</li> <li>• additives</li> </ul> </li> </ul> </li> <li>• specifications:                             <ul style="list-style-type: none"> <li>• recipes for mixing glues, resin and additives</li> <li>• manufacturer safety data sheets for glues, resins and additives, instructions for equipment use, recommendations for maintaining equipment</li> <li>• work order with specific instructions for mixing glue, resins and additives</li> <li>• template documents for recording production outcomes and equipment faults</li> <li>• <a href="#">workplace health and safety and emergency procedures</a></li> <li>• <a href="#">environmental protection procedures</a></li> <li>• organisational procedures for mixing glue, resin and additives</li> </ul> </li> <li>• relationships:                             <ul style="list-style-type: none"> <li>• relevant personnel for the purposes of communicating information.</li> </ul> </li> </ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</a>