

Modification history

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 8.0.

FWPTMM3XXX	Develop knowledge of plywood or laminated veneer lumber production
Application	<p>This unit of competency describes the skills and knowledge required to recognise the products and processes involved in plywood or laminated veneer lumber (LVL) production, including the species and characteristics of logs used in plywood or LVL, the stages in plywood or LVL production and the adhesive and adhesive application systems used in plywood or LVL production.</p> <p>The unit applies to operational staff who are engaged in a range of work roles in plywood or LVL production.</p> <p>No licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil
Unit Sector	Timber Manufactured Products (TMM)

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. Recognise the properties and uses of plywood or LVL	1.1 Identify the Australian Standards relevant to LVL or plywood production 1.2 Distinguish between the types of LVL or structural and non-structural plywood products 1.3 Recognise timber species used in LVL or structural and non-structural plywood production 1.4 Assess the physical and mechanical properties of plywood or LVL 1.5 Identify end-applications of LVL or plywood in building and construction
2. Research the manufacturing processes in plywood or LVL production	2.1 Identify the characteristics of logs suitable for use in plywood or LVL production 2.2 Identify the workflow in plywood or LVL production 2.3 Recognise the manufacturing processes involved in plywood or LVL production 2.4 Recognise the main differences in the manufacturing processes for plywood and LVL 2.5 Identify quality checks conducted during plywood or LVL production 2.6 Assess factors that impact on quality and workflow in plywood or LVL production 2.7 Assess safety and environmental hazards associated with plywood or LVL production
3. Recognise adhesives and adhesive application systems used in plywood or LVL production	3.1 Identify the types, properties, uses and hazards associated with adhesives used in plywood or LVL production as specified in the relevant Australian Standards 3.2 Recognise factors that impact on the bonding of wood with adhesives used in plywood or LVL production 3.3 Distinguish between thermoset and thermoplastic adhesives 3.4 Identify the processes and quality checks that apply in adhesive preparation 3.5 Identify the types, uses and advantages and disadvantages of adhesive application systems used in plywood or LVL production

Foundation Skills

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.

Skill	Description
Reading	<ul style="list-style-type: none"> Read material safety sheets on adhesives used in plywood or LVL production

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPTMM3XXX Develop knowledge of plywood or laminated veneer lumber production	FWPWPP3201 Produce veneer from debarked logs	The unit has been redeveloped to address a skill or task required by industry that is not covered by an existing unit.	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet:
<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

TITLE	Assessment requirements for Apply knowledge of plywood or laminated veneer lumber production
Performance Evidence	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has researched either plywood or laminated veneer lumber (LVL) production and identified:</p> <ul style="list-style-type: none"> • recognised the timber species and characteristics of logs used in plywood or LVL production • identified two different end applications of either plywood or LVL products • described the workflow in plywood or LVL production • described the production processes for either plywood or LVL production • recognised one factor that may impact on quality and workflow in plywood or LVL production • recognised the properties and one potential hazard of one adhesive product used in plywood or LVL production • identified one type of adhesive application system used in plywood or LVL production. 	
Knowledge Evidence	
<p>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:</p> <ul style="list-style-type: none"> • types and uses of plywood or LVL: <ul style="list-style-type: none"> • structural plywood • concrete formwork plywood • marine plywood • non-structural interior and exterior plywood • timber species used in plywood or LVL production: <ul style="list-style-type: none"> • softwood - radiata pine, hoop pine, slash pine • hardwood - eucalypt • physical and mechanical properties of LVL or plywood: <ul style="list-style-type: none"> • cross lamination • dimensional stability • thermal properties • acoustic properties • electrical properties • chemical resistance • workability and bending ratio • plywood density • end applications of plywood or LVL in building and construction: <ul style="list-style-type: none"> • plywood - panel product • LVL - framing member • characteristics of logs from suitable timber species selected for use in plywood or LVL production: <ul style="list-style-type: none"> • size • straightness • nature and quantity of defects • plywood or LVL production process: <ul style="list-style-type: none"> • log storage • log debarking and bucking • conditioning • peeling • drying • grading • layup and bonding • pressing • sanding, trimming and branding • main differences in the manufacturing process for plywood and LVL: <ul style="list-style-type: none"> • grading stage 	

Knowledge Evidence	
<ul style="list-style-type: none"> • lay-up stage • pressing stage • quality checks conducted during plywood or LVL production • factors impacting on quality and workflow in plywood or LVL production: <ul style="list-style-type: none"> • availability of suitable timber species and quality • veneer quality • adhesives • bonding • operational, supervisory and management skills • access to and maintenance of plant and equipment • safety and environmental hazards associated with plywood or LVL production • types, properties, uses and hazards of adhesives specified in Australian Standards for plywood or LVL production: <ul style="list-style-type: none"> • Type A bonds - produced from phenol formaldehyde (PF) resin • Type B Bonds - produced from melamine fortified urea formaldehyde resin (MUF) • Type C and D bonds - produced from urea formaldehyde resin (UF) • factors that impact on the bonding of wood with adhesives used in plywood or LVL production • types and uses of adhesive application systems: <ul style="list-style-type: none"> • hard rolls • air curtain • spray • extrusion. 	
Assessment Conditions	
<p>Assessment of the skills in this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> • physical conditions: <ul style="list-style-type: none"> • skills must be demonstrated in a work environment or an environment that accurately represents workplace conditions • resources, equipment and materials: <ul style="list-style-type: none"> • reference materials on plywood or LVL production processes and adhesive and adhesive application systems used in plywood or LVL production • Internet access and computer software and hardware for accessing technical information on plywood or LVL production • specifications: <ul style="list-style-type: none"> • Australian Standards relevant to plywood or LVL production. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
Links	Companion Volume implementation guides are found in VETNet - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47