



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **FPISAW2205B Assemble materials using nail plates**

**Release: 1**

## **FPISAW2205B Assemble materials using nail plates**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit descriptor**

This unit describes the outcomes required to prepare and assemble materials with the installation of nail plates in readiness for transport to a construction site

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2205A Assemble materials using nail plates

### **Application of the Unit**

#### **Application of the unit**

The unit involves assembling materials using nail plates in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

### **Licensing/Regulatory Information**

Refer to Unit Descriptor

### **Pre-Requisites**

#### **Prerequisite units**

## **Employability Skills Information**

**Employability skills**            This unit contains employability skills

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to assembling <i>materials</i> using nail plates are identified and followed</p> <p>1.2. <i>Work order</i> and construction plans are reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> and <i>nail plates</i> to be assembled are collected</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Set-up jigs</i> required for construction are specified and prepared</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Assemble materials	<p>2.1. <i>Timber components</i> are selected from pre-cut material in line with the cutting list and design specifications</p> <p>2.2. Allowable number and position of joints is interpreted from the construction plan</p> <p>2.3. Components are positioned and clamped in jigs ready for joining with allowable faults, joints and grain in line with construction standards and grading rules</p> <p>2.4. <i>Defective components</i> are rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.5. Components are stapled to maintain temporary alignment during assembly</p>
3. Install nail plates	<p>3.1. Nail plates are located and selected in line with the construction plans and standards</p> <p>3.2. Material and nail plate press are positioned over joints</p> <p>3.3. Nail plates are positioned on joints and installed in line with the construction plan</p> <p>3.4. Sub-standard nail plates and nail plates damaged during the process are <i>dealt with</i> in line with site procedures and environmental requirements</p> <p>3.5. <i>Assembly faults</i> are corrected in line with site procedures</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
4. Prepare material for despatch and report outcomes	<p>4.1. Finished material is checked and labelled in line with work order</p> <p>4.2. Components are removed from jigs and safely <i>stacked</i> in a designated location in line with work order requirements</p> <p>4.3. Finished material is <i>strapped</i>, packed and labelled ready for transportation</p> <p>4.4. <i>Equipment faults</i> are recognised and reported in line with site procedures</p> <p>4.5. <i>Records and reports</i> are accurately completed, processed and maintained in line with workplace procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

#### Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely assemble materials using nail plates
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

#### Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assembling materials using nail plates
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for assembling materials using nail plates
- Environmental risks and hazards

**REQUIRED SKILLS AND KNOWLEDGE**

- Characteristics of timber and timber defects
- Types of materials for assembling with nail plates and their purpose
- Assembly sequences and jigs, componentry and construction standards
- Industry standard cross-sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

# Evidence Guide

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely assemble materials using nail plates within organisational requirements

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to assembling materials using nail plates
- following organisational policies and procedures relevant to assembling materials using nail plates
- assembling materials using nail plates in line with work order and construction plans to follow construction standards
- stacking and strapping bundles of completed products in line with organisational requirements and OHS regulations

### Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
  - workplace location or simulated workplace
  - materials and equipment relevant to undertaking work applicable to this unit
  - specifications and work instructions

### Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package

## EVIDENCE GUIDE

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**OHS** requirements: are to be in line with applicable Commonwealth,



## RANGE STATEMENT

State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

**Environmental requirements** may include:

**Legislative requirements:**

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

**Organisational requirements** may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

## RANGE STATEMENT

- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

**Materials** may include:

- components
- beams
- other solid lengths of timber joined at the ends with the aid of nail plates

**Work order** is to include:

- instructions for the assembly and despatch of materials from the work site

and may include:

- construction plans or drawings
- type of product
- size
- quantity
- grade

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

**Appropriate personnel** may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

**Material** may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber

**Nail plates**

are (usually) galvanised plates of varying size with a multitude of protruding points (nails) which hold the components together

**Equipment** may include:

- measuring equipment

## RANGE STATEMENT

- assembly jigs
  - nail plate presses
  - staple guns
  - nail guns
  - compressor or compressed air supply
  - marking equipment
  - strapping equipment
- Set-up jigs** may include:
- enterprise manufactured templates which assist in the positioning of components during the assembly process
- Communication** may include:
- verbal and non-verbal language
  - constructive feedback
  - active listening
  - questioning to clarify and confirm understanding
  - use of positive, confident and cooperative language
  - use of language and concepts appropriate to individual social and cultural differences
  - control of tone of voice
  - body language
- Timber components** are the sections of timber or timber product which have been pre-cut in readiness for assembly and have been cut to follow the construction plans and cutting list
- Defective components** may include:
- components with an unacceptable level of:
    - warp
    - wane
    - cupping
    - shakes
    - insect defects
    - knots
    - resin pockets
- Disposing of** may include:
- recycling defective components
  - re-using defective components
- Dealing with** may include:
- repairing nail plates damaged during the process
  - disposing of sub-standard nail plates and nail plates that cannot be repaired

## RANGE STATEMENT

- Assembly faults** may include:
- incorrectly positioned joints
  - timber splits from nailing
  - incorrectly positioned nail plates
- Stacked** may include:
- preparing for transport categorising in common size, shape
  - marking lots in line with work order and site requirements
  - locating as not to block access or passage
- Strapped** may include:
- securing bundles with metal or plastic strap to prevent slippage without risk of strap breakage or damage to products
  - tightening and tensioning using hand-held equipment to prevent slippage without risk of strap breakage or damage to products
- Equipment faults** may include:
- damaged equipment components
  - electrical faults
- Records and reports** may include:
- product type
  - size
  - inspection
  - grading and labelling outcomes
  - storage locations
  - quality outcomes
  - hazards
  - incidents
  - equipment malfunctions
- and may be:
- manual
  - using a computer-based system or other appropriate organisational communication system

## Unit Sector(s)

**Unit sector** No sector assigned

## Co-requisite units

## **Co-requisite units**

## **Competency field**

**Competency field**            Sawmilling and Processing