

**Domain**  
**Title:**  
**Level: 1**

**CARPENTRY**  
**Select material for products**

**Unit ID: 1575**

**Credits: 3**

**Purpose**

This unit standard specifies the competencies required to select material for products. It includes describing the properties of timber, identifying the types, causes and remedies for common timber defects and diseases, handling and storing methods of sawn timber, explaining the uses of veneers and manufactured boards, identifying and describing other materials used and determining the material requirements of products.

This unit standard is intended for those who work as carpenters.

**Special Notes**

1. Entry information:

Prerequisite:

- *1157-Demonstrate basic knowledge of workplace health and safety or demonstrated equivalent knowledge and skills.*

2. This unit standard is to be delivered and assessed in the context of carpentry operations and should be assessed in conjunction with other relevant technical unit standards selected from this domain.

3. To demonstrate competence, at a minimum, evidence is required of the selection of material for production in undertaking a range of tasks.

4. Assessment evidence may be collected from a real workplace or simulated workplace in which carpentry operations is carried out.

5. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' and company guidelines, instructions, and reasonable flat rate time.

6. Regulations and legislation relevant to this unit standard include the following:

- Labour Act No 11, 2007 as amended;
- Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments.

**Quality Assurance Requirements**

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment

arrangements are available from the Namibia Qualifications Authority on [www.namqa.org](http://www.namqa.org) and the Namibia Training Authority on [www.nta.com.na](http://www.nta.com.na).

## **Elements and Performance Criteria**

### **Element 1: Describe the properties of timber**

#### **Range**

Properties of timber may include but not limited to colour, type, annual rings, grain, durability, softness and hardness, strength, brittleness, indigenous and foreign timber.

Types of timbers may include but not limited to saligna, sapele, beech, dolf, pine, oak, teak, meranti, imbuia and mahogany.

#### **Performance criteria**

- 1.1 Types, classification and growth of timber are explained.
- 1.2 Felling and conversion method are explained.
- 1.3 Effects of moisture and moisture control on different types of timber are identified.
- 1.4 Timber seasoning methods are explained.
- 1.5 Common indigenous and foreign timber types and their common uses are identified.
- 1.6 Properties of timber are identified in line with established industry standards.
- 1.7 Standard timber sizes are identified in line with established industry standards.

### **Element 2: Identify the types, causes and remedies for timber defects**

#### **Range**

Types of defects may include but not limited to natural and artificial defects.

Natural defects may include but not limited to knots, blue stain and shakes (thunder, heart, cup, star and radial).

Artificial defects may include but not limited to case hardening, blue stain, honeycomb and checks (surface, internal, ray, through, heart and end), collapse, warping, bowing, cupping, twist, spring, waney edges, bruises, short grain, upsets, sloping grain and common cracks.

#### **Performance criteria**

- 2.1 Common types of timber defects are identified.
- 2.2 Common causes of timber defects are explained.
- 2.3 Remedies for common timber defects are explained.

- 2.4 Effects of moisture and moisture control on different types of timber are explained.

### **Element 3: Identify the types, causes and remedies for timber diseases**

#### **Range**

Types of diseases may include but not limited to fungi (wet and dry rot) and insect attack.

#### **Performance criteria**

- 3.1 Common timber diseases are identified.
- 3.2 Causes of timber disease are explained.
- 3.3 Remedies for common timber diseases are explained.

### **Element 4: Handle and store methods of sawn timber**

#### **Performance criteria**

- 4.1 Effects of improper handling are explained.
- 4.2 Effects of improper storage of timber are explained.
- 4.3 Handling sawn timber is applied in line with workplace requirements.
- 4.4 Methods for storing sawn timber are explained and demonstrated.

### **Element 5: Explain the uses of veneers and manufactured boards**

#### **Range**

Manufactured boards may include but not limited to plywood (shutter board), medium density fibre boards (supawood), melamine boards, veneer boards, chip/particle board, hard board, block board, batten board and composite board.

#### **Performance criteria**

- 5.1 Different manufactured boards and veneers are identified and manufacturing process explained.
- 5.2 Size and applications of boards are explained.
- 5.3 Advantages and disadvantages of boards over timber are explained.
- 5.4 Cutting method of boards is explained.
- 5.5 Handling and storing of boards are explained.

### **Element 6: Identify and describe other materials used**

### **Range**

Materials may include but not limited to glass, plastic, fibre glass, leather, marble, asbestos, ceramic, porcelain, rubber, asphalt, fabric and metals.

### **Performance criteria**

- 6.1 Materials used are identified.
- 6.2 Applications of materials are explained.
- 6.3 Advantages and disadvantages of other materials used over timber are explained.
- 6.4 Jointing, cutting and handling of materials according to industry standards are explained.

## **Element 7: Determine the material requirements of products**

### **Range**

Selection criteria may include but are not limited to the appearance, cost, volume and required characteristics of the material.

### **Performance criteria**

- 7.1 Material requirements are determined from workplace documentation.
- 7.2 Material is assessed for suitability in accordance with selection criteria.

## **Registration Data**

<b>Subfield:</b>	General Construction
<b>Date first registered:</b>	08 June 2016
<b>Date this version registered:</b>	08 June 2016
<b>Anticipated review:</b>	2021
<b>Body responsible for review:</b>	Namibia Training Authority