



**THE REPUBLIC OF KENYA**

**NATIONAL OCCUPATIONAL STANDARDS  
FOR  
BUILDING TECHNICIAN**

**KNQF LEVEL 6  
ISCED PROGRAM CODE: 0732 554B**



**TVET CDACC  
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NAIROBI**

## PRODUCE MASONRY UNITS

**UNIT CODE:** CON/OS/BUT/CR/03/6

### UNIT DESCRIPTION

This unit describes the competences required to manufacture masonry units. It involves producing masonry bricks, preparing concrete and clay products and dressing building stones

### ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA <i>(Bold and italicized terms are elaborated in the Range)</i>
1. Produce masonry bricks	1.1. Bricks moulds are prepared as per client specification 1.2. Brick earth /clay is prepared as per <b><i>building code</i></b> 1.3. Bricks are moulded depending on the <b><i>prescribed size</i></b> and customer specifications. 1.4. Bricks are dried as per the building codes 1.5. Bricks are baked/fired as per <b><i>baking procedures</i></b>
2. Prepare concrete products	2.1 Concrete moulds are prepared as per the customer specifications. 2.2 <b><i>concrete constituents</i></b> are gathered as per concrete mix design 2.3 Concrete constituent are batched as per <b><i>batching methods</i></b> 2.4 Concrete ingredients are mixed as per ASTM standards 2.5 Concrete mix is placed in moulds as per placing convections 2.6 Concrete is cured as per laid down procedures 2.7 Moulds are dismantled and stored as per laid down procedures.
3. Dress building stones	1.1 Building stones are acquired as per prescribed size and quality. 1.2 Stones surfaces are dressed as per the <b><i>method and type of dressing.</i></b>
4. Prepare clay products	4.1 <b><i>Clay products</i></b> are produced as per manufactures guidelines/specification. 4.2 Clay products are tested as per manufactures standards. 4.3 Clay products are packaged according to type, size, shape, quantity and environmental requirements.

### RANGE

Variable	Range
1. Building code may include but is not limited to:	<ul style="list-style-type: none"> <li>• BS 8110</li> </ul>
2. Prescribed size may include but is not limited to:	<ul style="list-style-type: none"> <li>• 225x102.5x65mm</li> </ul>
3. Baking procedure may include but is not limited to:	<ul style="list-style-type: none"> <li>• Dehydration</li> <li>• oxidation</li> <li>• Vitrification</li> <li>• Burning</li> <li>• Cooling</li> </ul>
4. Concrete constituents may include but is not limited to:	<ul style="list-style-type: none"> <li>• Fine Aggregates</li> <li>• Coarse Aggregates</li> <li>• Cement</li> <li>• Water</li> <li>• Admixtures</li> </ul>
5. batching methods may include but is not limited to:	<ul style="list-style-type: none"> <li>• batching by weight</li> <li>• batching by volume</li> </ul>
6. Method of stone dressing may include but is not limited to:	<ul style="list-style-type: none"> <li>• Manual dressing</li> <li>• Mechanical dressing</li> </ul>
7. Type of stone finish may include but is not limited to:	<ul style="list-style-type: none"> <li>• Combed finish</li> <li>• Punched finish</li> <li>• Tooled finish</li> <li>• Bush finish</li> </ul>
8. Clay products may include but is not limited to:	<ul style="list-style-type: none"> <li>• Tiles</li> <li>• Bricks</li> <li>• Cills</li> <li>• Ventilators</li> </ul>

## REQUIRED KNOWLEDGE

- Concrete and mortar mix ratios
- Soil testing
- Curing
- strength of materials
- use of building tools and equipment
- concrete aggregate
- Basic arithmetics
- Batching

- packaging

## SKILLS

- moulding
- concrete mixer operation
- dressing
- Batching
- Measuring
- Modelling

## EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Prepared brick moulds.</li> <li>1.2 Moulded bricks</li> <li>1.3 Dried bricks</li> <li>1.4 Burned bricks</li> <li>1.5 Prepared concrete moulds</li> <li>1.6 Mixed concrete constituents</li> <li>1.7 Placed concrete mix</li> <li>1.8 Cured concrete</li> <li>1.9 Dismantled and stored concrete moulds</li> <li>1.10 Dressed stones</li> <li>1.11 Prepared clay</li> <li>1.12 Produced clay products</li> <li>1.13 Packaged clay products</li> </ul>
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 ASTM document</li> <li>2.2 Desktop PCs</li> <li>2.3 Printer/plotting device</li> <li>2.4 Calculator</li> <li>2.5 Calibration tools</li> <li>2.6 Internet</li> <li>2.7 Operations Manuals</li> <li>2.8 Concrete and clay moulds</li> <li>2.9 Water</li> <li>2.10 Stone blocks</li> <li>2.11 Wheel barrows</li> </ul>

	2.12 Building tools and equipment 2.13 Qualified trainers
3. Methods of Assessment	Competency may be assessed through: 1.1 Written Test 1.2 Practical assignment 1.3 Interview/Oral Questioning
2. Context of Assessment	Competency may be assessed in an off and on the job setting
3. Guidance information for assessment	Holistic assessment with other units relevant to the building sector, workplace and job role is recommended.