

Domain	BRICKLAYING	Unit ID: 29
Title:	Lay wall and floor tiles	
Level: 3		Credits: 8

Purpose

This unit standard specifies the competencies required to fix wall and floor tiles to different substrates using mortar or adhesive. It includes the preparation, cutting, fixing and grouting of tiles for floors and walls. This unit standard is intended for those who work as bricklayers and plasterers.

Special Notes

1. Entry information
 - Prerequisite:
 - Unit 3 - *Apply safety rules and regulations in bricklaying operations* or demonstrated equivalent knowledge and skills.
2. Assessment evidence may be collected from a real workplace or a simulated real workplace or an appropriate simulated realistic environment in which bricklaying operations are carried out.
3. Glossary of terms
 - *'surfaces'* refers to walls, and floors of brick, concrete, concrete block, fibre cement sheet, timber, wallboards, and painted surfaces.
 - *'risers'* means each of the vertical boards closing the spaces between the treads of stairways.
 - *'treads'* refers to the horizontal board in a stairway on which the foot is placed.
4. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' guidelines and instructions.
5. *'Specifications'* refers to any, or all of the following: manufacturers' specifications and/or recommendations, site and/or workplace specific requirements.
6. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act No 6, 1992
 - 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 and the Namibia Training Authority on www.nta.com.na

Elements and Performance Criteria

Element 1: Plan and prepare for work

Range

Planning and preparation is to include but is not limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements.

Tools and equipment are to include tile cutters and scribes, hammers, saws, wet and dry diamond saws, power drills, power leads, cement sheet cutters, measuring tapes/rules, straight edges, levelling equipment, string lines, brushes, wire brushes, brooms, sanding blocks, scrapers, shovels, wooden floats, trowels, shovels, wheelbarrows, spacers/wedges, squares, buckets, mortar boards, sponges, rags, rubber mallets, lump hammers, ladders, hose and water sprays, caulking guns, nippers, squeegees, pointed grouters, concrete mixers and power grinders.

Materials are to include tiles, adhesives, cement mortar (with and without additives), caulking compound and grout.

Performance Criteria

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied.
- 1.2 Safety requirements are followed in accordance with safety plans and policies.
- 1.3 Sign and barricade requirements are identified and implemented.
- 1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement.
- 1.5 Material quantity requirements are calculated in accordance with plans and/or specifications.
- 1.6 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.
- 1.7 Environmental protection requirements for the project are identified and applied in line with environmental plans and regulatory obligations.

Element 2: Set out tiling job

Range

Types of tiles may include but are not limited to ceramic, marble, stone, granite, terracotta, glass and porcelain.

Performance Criteria

- 2.1 Area to be tiled is prepared to requirements of job specification in accordance with workplace procedures.
- 2.2 Tiles are checked for conformity to size, patterns, colours and characteristics in accordance with plans and specifications.
- 2.3 Tile work is set out to be symmetrical, balanced and produces minimal waste in accordance with specifications and standards.
- 2.4 Waterproof membrane is fitted and laid in wet areas to conform to manufacturers' specifications and regulatory requirements.

Element 3: Cut tiles as required

Performance Criteria

- 3.1 Tiles are cut without jagged, flayed edges or damage to tile surfaces or finish in accordance with workplace procedures and manufacturers' recommendations.
- 3.2 Recess hole or curve is cut by hand or machine to shape and size to specified tolerance.
- 3.3 Tile jolly is edged to form a mitre so that biscuit is not exposed at the joint in accordance with workplace procedures and manufacturers' recommendations.

Element 4: Lay floor tiles

Range

Floor substrates may include fibre cement sheeting, concrete, timber, rendered concrete and waterproof substrates.

Tiles may be fixed by adhesives, cement mortar and cement mortar with adhesive additive.

Fixings and fasteners may include but are not limited to plasterboard nails, clouts, soft sheet nails, self tapping screws and wall board adhesive.

To demonstrate competence, at a minimum, requires evidence of tiling 4m² of a concrete floor using a sand and cement mortar mix; tile 4m² of a timber floor, laid on the diagonal with a half tile border, using adhesive and tile a minimum of three steps of 900mm width and 115mm risers and treads including an expansion joint. Perform these tasks ensuring correct identification of requirements and finishing of tasks, correct selection and use of processes, tools and equipment and completing all work to specification.

Performance Criteria

- 4.1 Floor is checked for level/falls and square and membranes/underlay are installed in accordance with workplace procedures and manufacturers' recommendations.

- 4.2 Substrate surface is prepared free from contaminants and residues to receive adhesive/screeded mortar in accordance with plans and specifications.
- 4.3 Tiles are checked for conformity to size, patterns, colours and characteristics in accordance with plans and specifications.
- 4.4 Adhesive is matched with tile and substrate material and mixed according to usage, climatic conditions and manufacturers' specifications.
- 4.5 Cement mortar is prepared to appropriate consistency and floor slurried and screeded to specifications.
- 4.6 Tiles are laid in conformance to standards and specifications, maintaining bond with joints, uniform in size and surface flat and smooth or to fulls.
- 4.7 Control joints are inserted in accordance with manufacturers' specifications.
- 4.8 Step rises and goings are determined from formed concrete steps/stairs.
- 4.9 Steps are set out for uniform rise and make even cut on both sides of steps.
- 4.10 Step riser packing or render support is fixed where applicable and riser tiles are fixed to true alignment and uniform set out.
- 4.11 Treads infill and thresholds are fixed in line with the top edge of risers within specified tolerances.

Element 5: Fix wall tiles

Range

Wall substrate may include fibre cement sheet, brickwork, block work, concrete, timber, rendered surfaces and approved waterproof substrates.

Fixings and fasteners may include but are not limited to plasterboard nails, clouts, soft sheet nails, self tapping screws and wall board adhesive.

To demonstrate competence, at a minimum, evidence is required of tiling 4m² of two wall surfaces of which one is solid and one is flexible.

Performance Criteria

- 5.1 Mortar and/or adhesive is prepared and applied to tile surface in accordance with manufacturers' recommendations.
- 5.2 Tiles are prepared and fixed with pad tiles set to level alignment.
- 5.3 Horizontal joint is checked for straightness and tile edges and surface alignment are checked for conformity.
- 5.4 Tiles are fixed to alignment maintaining designed pattern to specification.
- 5.5 Even margins are shown around openings, frames and fittings to specification.

- 5.6 Bottom course is cut and fixed to create a rake or square corner in accordance with drawings and specifications.
- 5.7 Splayed, manufactured, formed coves are fixed in accordance with drawings and specifications.
- 5.8 All vertical tiles are finished plumb and true to square corners.
- 5.9 All joints are maintained straight and uniform in width with due allowance for tolerance of tile sizes.
- 5.10 Control joints are built in, in accordance with specifications and manufacturers' recommendations.
- 5.11 Mitre joints are made, maintaining glazing on mitre without damage to tile surfaces or finish and maintaining uniformity of mitre in accordance with company procedures and manufacturers' recommendations.
- 5.12 Internal and external corners are constructed within specified tolerance and finish to specifications.

Element 6: Grout and seal tiles

Range

Grout may be cementitious or epoxy.

Performance Criteria

- 6.1 All joints are cleaned and prepared to receive grout according to manufacturers' specifications.
- 6.2 Grout is mixed and applied in accordance with workplace and manufacturers' specifications and to meet job requirements.
- 6.3 Tiles are cleaned and polished with dry cloth to specifications, removing all dust from surface and joints.
- 6.4 Tiles are sealed and protected, where appropriate, in accordance with manufacturers' instructions and job specifications.

Element 7: Clean up

Performance Criteria

- 7.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations and job specifications.
- 7.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices.

Registration Data

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