



National Occupational Standards

Sector	Building & Construction
Job Family	Tile Laying
Job Title	Tile Layer
MQF	Level 3

Mandatory Competences

TLY: 301	Apply Occupational Health and Safety and Working Practices
TLY: 302	Identify Systems, Equipment and Components
TLY: 303	Calculating, Positioning and Drawing
TLY: 304	Identifying and Applying Systems, Equipment and Components

TLY: 301

Apply Occupational Health and Safety and Working Practices

Description of Unit	<p>This unit is about being able to use safe procedures and safe work practices. The persons carrying out this work must possess the necessary knowledge and skills to ensure that their actions do not create health and safety risks to others, identify risks and hazards associated with the working environment, tools and equipment and materials and substances used.</p>
Performance Criteria	<p>The candidate must have the necessary knowledge and skills to:</p> <ol style="list-style-type: none">1. Carry out safe working practices to prevent hazards and to ensure the safety of workers and members of the public.2. Carry out safe working practices using appropriate equipment and materials to prevent damages to work areas.3. Carry out the safe erection, use and dismantling of simple scaffold platforms less than 2m high.4. Set up safety barriers around a work environment hazard to protect workers and members of the public.5. Use protective clothing and safety equipment to according to specific tasks.6. Use and store materials hazardous to health in a safe manner.

**Required
Knowledge**

1. Understands the roles and responsibilities of themselves and others under the Health and Safety Act.
2. Knows the health and safety risks associated with their role which include tools, materials and equipment used and working practices and procedures.
3. Recognises potential hazardous material at the workplace.
4. Understands the procedures for dealing with potential hazardous material in the place of work.
5. Understands health concerns associated with the workplace and safe practices when carrying out work.
6. Seeks expert assistance when help is needed.
7. Acknowledges hazards and potential hazards at the place of work (such as electricity, slippery and uneven surfaces, dust and fumes, handling and transporting, contaminants and irritants, fire, heights, improper use of tools and equipment).
8. Understands the importance of being alert to the presence of hazards in the place of work.
9. Knows the responsible persons to whom to report health and safety matters.
10. Knows the emergency procedures in the place of work.
11. Knows the first aid facilities that exist within the work area.
12. Understands the use of barriers and warning signs.
13. Knows and understands the method used to protect work areas from damage due to portable heating equipment.
14. Understands and explains how to safely use scaffold platforms (less than 2m).
15. Understands the necessary safety precautions including the use of protective clothing and equipment for a range of applications.

<p>Required Knowledge</p>	<p>16. Knows and understands the methods used for protecting customers' property.</p> <p>17. Knows and understand when it is required to isolate domestic water services from the main water supply.</p> <p>18. Describe any toxic effect of materials used.</p> <p>19. Outlines the preventative and remedial actions to be taken in the case of exposure to materials hazardous to health.</p>
<p>Required Skills</p>	<ol style="list-style-type: none"> 1. Identifies which health and safety procedures are relevant to the working environment. 2. Ensures compliance with duties and obligations as defined by the Occupational Health and Safety Act 2000. 3. Follows workplace policies and employers instructions for the safe use and maintenance of tools and equipment. 4. Controls health and safety hazards within the job responsibility. 5. Reports any hazards which may present risk to relevant persons. 6. Follows correct procedures in the event of injuries to themselves or others. 7. Takes remedial action where work methods are not in line with control measures resulting from relevant risk assessment. 8. Adheres to work production and installation processes as officially instructed by the employer. 9. Applies the necessary skills to erect, use and dismantle access equipment (at height less than 2m). 10. Complies with warning signs and sets up safety barriers around working area. 11. Equips oneself with the appropriate protective clothing and safety equipment for specific tasks.

**Required
Skills**

12. Uses and stores materials hazardous to health in a safe manner.
13. Monitor the work place whilst keeping it free from hazards.
14. Communicates complex information in unfamiliar and unpredictable contexts to colleagues
15. Advocates appropriate health and safety procedures.

TLY: 302

Identify Systems, Equipment and Components

Description of Unit	<p>This unit is about applying the necessary preparations prior to work being conducted. This unit is also about identifying the different materials used for both installation and service and maintenance work.</p>
Performance Criteria	<p>The candidate must have the necessary knowledge and skills to:</p> <ol style="list-style-type: none"> 1. Identify and select tile laying materials from given specifications. 2. Identify and select floor and wall tiles from given specifications. 3. Identify and select grades of sands, cements, aggregates, limes and plasticisers for specific applications based on their technical properties. 4. Explain possible environmental issues resulting from tile manufacturing techniques and tile laying materials.
Required Knowledge	<ol style="list-style-type: none"> 1. Knows and understands the range of materials, products and procedures applicable to the relevant work and their benefits. 2. Knows and understands the basic functions of tile laying. 3. Knows and understands the basic functions and types of tile laying. 4. Defines the technical characteristics and understands the basic properties of natural, crushed rock, manufactured, lightweight, dense aggregates. 5. Defines and understands the basic properties of cement ordinary, rapid hardening, high alumina. 6. Defines and understands the types of lime; hydraulic, non-hydraulic.

<p>Required Knowledge</p>	<ol style="list-style-type: none"> 7. Defines and understands the various floor and wall tiles from given specifications: ceramic, concrete. 8. States the basic properties of fixings including masonry, concrete and timber. 9. Identify and describe the availability, suitability and relative costs of trowel based materials available locally. 10. Know the importance of damp-proof courses, its purpose and function. 11. Report on environmental issues caused by tile wastage.
<p>Required Skills</p>	<ol style="list-style-type: none"> 1. Identifies the different types of materials, products, methods and procedures applicable to the relevant work. 2. Identifies the relevant materials required for the required job. 3. Confirms that all materials, tools and equipment necessary for the installation process are available as required. 4. Confirms that all material, tools and equipment are fit for their intended purpose. 5. Identifies and selects materials according to the surfaces. 6. Distinguishes between the different types of materials. 7. Identifies and selects various fixings from given specifications. 8. Ensures good work practice. 9. Identify and select sands and aggregates for specific applications based on their technical properties. 10. Identify and select cements, limes and plasticizers for specific applications based on their properties.

TLY: 303

Calculating, Positioning and Drawing

Description of Unit	<p>This unit is about understanding and applying dimensions from drawings and calculating quantities in the preparation, costing and estimation.</p>
Performance Criteria	<p>The candidate must have the necessary knowledge and skills to:</p> <ol style="list-style-type: none"> 1. Obtain and apply accurate dimensions from drawings of linear, rectangular, circular and triangular configuration. 2. Compile and apply overall linear dimensions from drawings. 3. Calculate volumes from dimensions obtained from drawings. 4. Measure and calculate as fitted work.
Required Knowledge	<ol style="list-style-type: none"> 1. Comprehends calculations. 2. Comprehends compilations of overall linear dimensions from drawings. 3. Comprehends calculations involving quantities and costs of materials. 4. Defines which tools and equipment are used to set out domestic pipe work systems. 5. Knows and explains the correct procedure for setting out work systems. 6. Understands and identifies scale working drawings from plans.

Required Skills

1. Translates drawings of linear and rectangular structures to accurate dimensions.
2. Translates and calculates areas obtained from drawings.
3. Calculates the quantity and cost of materials needed from set drawings.
4. Translates measurements from drawings and sets out work systems.
5. Calculate areas from dimensions taken off drawings of circular, semicircular and triangular structures.
6. Calculate volumes from dimensions taken off drawings of circular, semicircular and triangular structures.
7. Calculate the quantity and cost of materials required from drawings of circular, semicircular and triangular structures.
8. Measure and set out tile patterns from drawings.
9. Delegates site work needs in a timely manner.
10. Take off accurate dimensions from drawings of circular, semi-circular and triangular structures.
11. Calculate quantity of materials using mix ratios.

TLY: 304

Identifying and Applying Systems, Equipment and Components

Description of Unit	<p>This Unit is about selecting and using hand tools in a correct and safe manner.</p>
Performance Criteria	<p>The candidate must have the appropriate knowledge and skills to:</p> <ol style="list-style-type: none"> 1. Prepare and compact sub grade and sub base material. 2. Clean manually and neatly floor and wall tiles. 3. Grout floor and wall tiles neatly and with a uniform grouted seams ready for commissioning. 4. Lay wall and floor tiles to high degree of flatness and leveled seams. 5. Lay and compact concrete in-situ flooring and finish surface. 6. Cut a chase and a pipe hole in a brick or block wall using hand power tools. 7. Cut accurately wall and floor tiles of different materials by hand using the correct hand and power tools. 8. Calculate the quantity and cost of materials required from drawings of linear and rectangular. 9. Calculate rectangular volumes from dimensions taken off drawings of linear and rectangular configuration. 10. Calculate areas from dimensions taken off drawings of linear and rectangular configuration. 11. Advice customers on type of tiles, fixing methods and quantity of materials required.

<p>Required Knowledge</p>	<ol style="list-style-type: none"> 1. Identify tiling equipment. 2. Explains how to use and maintain equipment. 3. Names the types of tiles. 4. Understands manufacturers' instructions and the use of the various types of equipment. 5. Identifies and understands the range of floor, wall and ceiling building materials used in dwellings buildings.
<p>Required Skills</p>	<ol style="list-style-type: none"> 1. Confirms that materials, tools and equipment required are fit for their intended purpose. 2. Identifies, use, clean and store the basic hand tools used to install tiles. 3. Identifies, use, clean and store portable power tools. 4. Transfer building datum lines to establish tile floor levels 5. Use a set of rods to maintain the gradient of a floor 6. Set up sight rails for the levels and centre lines of open ducks in floors (trench shape). 7. Use traditional and contemporary instruments to establish floor levels and angles. 8. Use a set of chalk lines and straight edges to set inclined floors. 9. Prepare a wall surface ready for plastering. 10. Apply appropriate layers of plastering to set a good surface for tiles. 11. Hand trowel finish internal and external rendered angles. 12. Fix and grout wall and floor tiles using manufactured tile adhesive, grout and sealants.

Required Skills

13. Set out lines and levels for paved areas and paths to ensure required falls.
14. Prepare and compact sub base material.
15. Spread, level and compact bedding on prepared sub base.
16. Drill and cut tiles to fit around fittings.
17. Identify a range of plastering and tile-laying tools and equipment.
18. Carry out appropriate tool cleaning, preserving and storing procedures after use.
19. Interpret building drawings.
20. Identify a range of wall and floor tiles, fixatives and grouts – to shift to materials.
21. Background surface preparation before plastering – see above.
22. Test background surface for suction and adhesion.
23. Mix and gauge plastering materials.
24. Identify appropriate cutting procedures for different types of tiles.
25. Draw and trace templates.
26. Setting out wall datum lines to various Building locations.
27. Identify the plumb point of a wall using straight edges and spirit levels.
28. Place tiles to walls using appropriate adhesives.
29. Lay down sealant beads and expanding sealant strips neatly.
30. Identify and use special pieces of contemporary tiles.
31. Identify, select and use borders, PVC tile beading, removable and contemporary spacers.
32. Read and interpret manufacturer's instructions.
33. Grout floor and wall tiles neatly.

