

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR CONSTRUCTION INDUSTRY

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding



Contents

1. Introduction and Contacts.....P1
2. Qualifications Pack.....P2
3. Glossary of Key TermsP4
4. OS Units.....P6
5. Assessment Criteria.....P34

INTRODUCTION

Qualifications Pack – Mason Tiling

SECTOR: CONSTRUCTION

SUB-SECTOR: Real Estate and Infrastructure Construction

OCCUPATION: MASONRY

REFERENCE ID: CON/Q0104

ALIGNED TO: NCO-2004/7132.10

The job role carries out tiling works on various surfaces.

Brief Job Description: The job role is responsible for identifying, cutting, grinding, shaping, laying, fixing and finishing the tiles on floors, walls using appropriate tools and equipment and as per the specified standards, patterns and within dimensional accuracy.

Personal Attributes: The individual is expected to be physically fit and should be able to work across various locations in withstanding extreme weather/site conditions while working at any construction site. The person must be able to perform efficiently within a team and handle the various tiling tools and materials and work responsibly.

Job Details	Qualifications Pack Code	CON/Q0104		
	Job Role	Mason - Tiling		
	Credits(NSQF)	TBD	Version number	1.0
	Sector	Construction	Drafted on	07/03/2015
	Sub Sector	Real Estate and Infrastructure Construction	Last reviewed on	23/03/2015
	Occupation	Masonry	Next review date	23/03/2017
	NSQC Clearance on	19/05/2015		

Job Role	Mason - Tiling
Role Description	Responsible for performing tiling works on various surfaces.
NSQF Level	4
Minimum Educational Qualifications*	Preferably 5 th standard
Maximum Educational Qualifications*	N.A
Training (Suggested but not mandatory)	Recommended training period of 8-12 weeks as per QP of Mason Tiling Normal literacy of reading, writing and understanding
Minimum Job Entry Age	18 years
Experience	Desirable: <ol style="list-style-type: none"> 1. Non trained worker : 8 years site experience in same occupation 2. Trained worker: 2 years site experience as a certified General Mason
Applicable National Occupational Standards (NOS)	Compulsory: <ol style="list-style-type: none"> 1. CON/N0115: Lay and fix tiles both horizontally and vertically on wall and floor 2. CON/N0116: Apply grouts and sealants for flooring and cladding works 3. CON/N8001: Work effectively in a team to deliver desired results at the workplace 4. CON/N8002: Plan and organize work to meet expected outcomes 5. CON/N9001: Work according to personal health, safety and environment protocol at construction site

	<p>Optional:</p> <p>N.A</p>
<p>Performance Criteria</p>	<p>As described in the relevant OS units</p>

Keywords / Terms

Description

Sector	Sector is conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-Sector	Sub-Sector is derived from a further breakdown based on the characteristics and interests of its components
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet the standard consistently. Occupational Standards are applicable both in the Indian contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
Qualifications Pack (QP)	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualification Pack is assigned a unique qualification pack code
Qualification Pack Code	Qualification Pack Code is a unique reference code that identifies a qualifications pack.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills / Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.

Acronyms

Keywords /Terms	Description
CON	Construction
NSQF	National Skill Qualifications Framework
QP	Qualification Pack
OS	Occupational Standards
TBD	To Be Decided

CON/N0115

Lay and fix tiles both horizontally & vertically on wall and floor

National Occupational Standard



Overview

This NOS covers the skill and knowledge required by a workman to lay and fix natural and processed tiles both horizontally and vertically on wall and floor.

CON/N0115

Lay and fix tiles both horizontally & vertically on wall and floor

National Occupational Standard

Unit Code	CON/N0115
Unit Title (Task)	Lay and fix tiles both horizontally and vertically on wall and floor
Description	This unit describes the skills and knowledge required to lay and fix both natural and processed tiles on floor, wall and roof surfaces.
Scope	<p>This scope covers the following:</p> <ul style="list-style-type: none"> Carry out preparatory work prior to fixing of tiles Check the materials used for tiling Measure & cut tiles as per the design, shape and size requirements. Lay and fix both natural and processed tiles on wall & floors Check for line, level and alignment
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Carry out preparatory work prior to fixing of tiles	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. read and interpret working sketches prior to laying of tiles</p> <p>PC2. install button marks / level pads as per the tiling requirements using common reference line</p> <p>PC3. check the basic attributes of the base surface for:</p> <ul style="list-style-type: none"> compactness squareness or right angle slope or fall (in case of floors) surface plane hacking on surfaces (in case of RCC structure & walls) completion of embedded surfaces (including MEP) <p>PC4. clean and wet base surfaces with water jets (except wood/vinyl) for better adhesion of tiles</p> <p>PC5. soak tiles in water as per manufacturer's specification, if required</p> <p>PC6. prepare various surfaces as per requirement for different types of tiles such as:</p> <ul style="list-style-type: none"> Masonry plastered surface Reinforced concrete surface High Precision Concrete Block Timber/vinyl surface
Check the materials used for tiling	<p>PC7. check for basic attributes of the tiles like color, shade, size and squareness before commencement of work</p> <p>PC8. check batch number of all tiles to be used in order to avoid variations in shade, color or pattern</p>

CON/N0115

Lay and fix tiles both horizontally & vertically on wall and floor

	<p>PC9. ensure that any protective layer on the tiles is removed prior to use</p> <p>PC10. check for any damages / cracks on the tiles prior to use</p> <p>PC11. ensure tiles are cleaned appropriately prior to fixing</p>
Measure & cut tiles as per the design, shape and size requirements	<p>PC12. carry out proper marking before cutting tiles to required shape and size</p> <p>PC13. cut tiles as per the design /pattern specifications using appropriate tools to fit around obstacles & into odd spaces & corners</p> <p>PC14. minimize wastage of tiles</p>
Lay and fix both natural and processed tiles on wall & floors	<p>PC15. specify the centre-point or starting point of the surface for tiling as per working drawings/sketches</p> <p>PC16. ensure the following is prepared as per specifications / requirements of tiling works:</p> <ul style="list-style-type: none"> • bed mortar (as per specification) • cement slurry • cement paste • adhesives <p>PC17. identify the laying position of tiles as per arrow marks on the tile box</p> <p>PC18. maintain consistency of batch number of all tiles</p> <p>PC19. prepare a bedding of appropriate thickness to act as base for fixing tiles</p> <p>PC20. apply & spread cement mortar, mastic, glue or other adhesives on the base of tile using appropriate tools for fixing tiles</p> <p>PC21. install roof tiles by bedding and pointing in cement mortar or by mechanical means</p> <p>PC22. check for hollowness of tiled surface using wooden mallet</p> <p>PC23. put spacers between tiles (if required) to minimize imperfections</p> <p>PC24. protect the tiled area from damage during & after fixing of tiles</p> <p>PC25. provide tile trims and strips at corner joints as per requirement</p>
Check for line, level and alignment	<p>PC26. check and provide required level and specified slope prior to and after tiling</p> <p>PC27. check vertical and horizontal alignment using appropriate tools during and after tiling</p> <p>PC28. set out 90° corners using builders square or 3-4-5 method and check right angle</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. standard practices for tiling work</p> <p>KA2. safety rules and regulation for handling and storing tools, equipments and materials</p> <p>KA3. personal protection including the use of the related safety gears & safety equipment</p> <p>KA4. how to request tools and materials as per set procedures</p>

CON/N0115

Lay and fix tiles both horizontally & vertically on wall and floor

	<p>KA5. maintenance of tools and equipments</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. sketches of the area / surface on which tiles are to be laid</p> <p>KB2. basic principles of measurement</p> <p>KB3. different types of tiles, their sizes, shapes properties and their use, application for industrial , commercial and residential purpose including:</p> <ul style="list-style-type: none"> • Ceramic (Glazed) tiles • Clay tiles • Quarry (Unglazed) tiles • Porcelain tiles • Terrazzo tiles • Mosaic tiles • Vitrified tiles • Natural tiles • Different types of adhesives (Flexible or waterproof) for different surfaces <p>KB4. how to identify the correct color, shade of tiles, differentiate between identical shades and basic knowledge of color coding</p> <p>KB5. different procedure / process for laying tile on floor, wall & roof</p> <p>KB6. standard specification of all tiling tools and equipments and their care and maintenance</p> <p>KB7. how to select and use basic tools and tackles for laying tiles such as</p> <ul style="list-style-type: none"> • measuring tape/rule, hammers, mallets, wedges, power wet saws, tile scribes or hand held tile cutters. <p>KB8. various techniques / procedures for cutting different types of tiles to size and shape as per design requirements</p> <p>KB9. basic surface preparation methods for different type of surfaces</p> <p>KB10. basic methods and techniques of preparing bed mortar, cement slurry and cement paste as per applicability</p> <p>KB11. different type of spacers and method of fixing and removing spacers</p> <p>KB12. different types of tile trims/strips & their uses</p>
<p>Skills (S)</p>	
	<p>Writing Skills</p>

CON/N0115

Lay and fix tiles both horizontally & vertically on wall and floor

A. Core Skills/ Generic Skills	The user/ individual on the job needs to know and understand how to: SA1. write in one or more language, preferably the local language at the site
	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA2. read in one or more or more language, preferably the local language at the site SA3. read sketches provided by the supervisor If required SA4. read instructions, guidelines, sign boards, safety rules and safety tags SA5. read instructions and exit routes during emergency
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA6. speak in one or more language, preferably one of the local language at the site SA7. listen and follow instructions given by supervisor SA8. orally and effectively communicate with team members
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. identify the right tools, tackles & materials for cutting, laying and fixing of tiles SB2. identify the right patterns / design before laying of the tiles SB3. decide on whether workplace is safe for working and also ensure that relevant work is not creating hazardous conditions for others SB4. decide whether work is adequately defined for the day , work front is clear , and adequate materials and tools are available for performing work
	Plan and Organise
	The user/individual on the job needs to know and understand how to: SB5. plan work and organize resources in coordination with team members and supervisors
	Customer centricity
	The user/individual on the job needs to know and understand how to: SB6. complete work as per the agreed time schedule & quality
Problem solving	

CON/N0115

Lay and fix tiles both horizontally & vertically on wall and floor

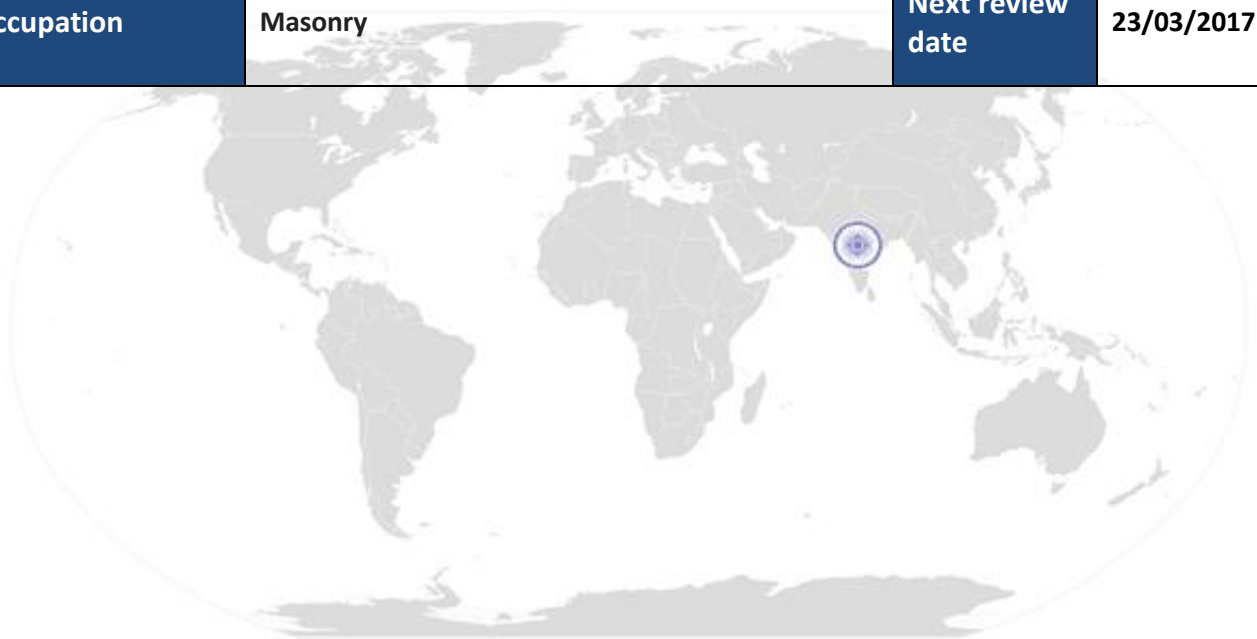
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB7. rectify the workability of cement mortar mix SB8. ensure minimum cutting & finishing of tiles at the edges as per the size / area requirement SB9. rectify the setting/alignment of tiled surface SB10. resolve and solve any conflict within the team
	<p>Analytical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB11. ensure that proper openings are kept for electrical / plumbing fittings in advance before the laying of stone tiles (preferably at the edge of the tiles) SB12. ensure proper grouting and sealing of tile SB13. ensure estimation of starting and finishing levels for day work SB14. assess quantity and quality of materials for day work SB15. optimize resources efficiently SB16. minimize wastage in the workplace SB17. reconcile material consumption
	<p>Critical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB18. evaluate the complexity while during laying of tiles in the pre-decided size / pattern to determine if any assistance is required from the superiors SB19. evaluate the area requirements and ensure minimum cutting of tiles SB20. ensure proper marking & cutting of tiles around obstacles SB21. fix tile trims/strips at sloped/curved surfaces SB22. identify and assess how violation of any safety norms may lead to accidents SB23. check for quality of scaffolding/working platform from all aspects of safety

CON/N0115

Lay and fix tiles both horizontally & vertically on wall and floor

NOS Version Control

NOS Code	CON/N0115		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	Real Estate and Infrastructure Construction	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



CON/N0116

Apply grouts and sealants for flooring and cladding works

National Occupational Standard



Overview

This NOS covers the skills and knowledge required by a workman to be proficient in using grouts to seal joints for tile, stone, marble and granite for flooring and cladding works.

CON/N0116

Apply grouts and sealants for flooring and cladding works

National Occupational Standard	Unit Code	CON/N0116
	Unit Title (Task)	Apply grouts and sealants for flooring and cladding works
	Description	This unit describes the skills & knowledge required to check for voids and use of grouts to seal joints for tile, stone, marble and granite for flooring and cladding works
	Scope	<p>This scope covers the following:</p> <ul style="list-style-type: none"> • Carry out preparatory work for grouting of tile, stone, marble and granite works • Check the materials used for grouting and sealing • Apply grout and sealant to seal the void or gap between the tiles, stones, marble & granite • Check for line, level & alignment
Performance Criteria (PC) w.r.t. the Scope		
	Element	Performance Criteria
	Carry out preparatory work for grouting of tile, stone, marble and granite works	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. read and interpret the working drawings / sketches prior to commencement of work</p> <p>PC2. ensure curing of placed stone, marble & granite tiles</p> <p>PC3. ensure joints of tiles are free from debris & carry out vacuum cleaning of the grout lines</p> <p>PC4. remove thoroughly old grouting compound with appropriate tools prior to re-grouting on old surface</p> <p>PC5. prepare different types of grouts as per surface requirements and manufacturer's specifications</p>
	Check the materials used for grouting and sealing	<p>PC6. check grout material is of approved color and shade & as per pattern</p> <p>PC7. check that grout material is of approved type (sanded, un sanded,) as per design/pattern requirements</p>
	Apply grout and sealant to seal the void or gap between the tiles, stones, marble & granite	<p>PC8. apply the grout between grout lines/joints using appropriate tool</p> <p>PC9. press the grout into the joint using appropriate tools and technique</p> <p>PC10. handle grout float edge appropriately & prevent it from digging into grout lines</p> <p>PC11. use appropriate amount of penetrating sealant on the stones prior to fixing as per applicability</p> <p>PC12. remove excess grout from the surface to avoid any grout haze on the surface</p> <p>PC13. check & ensure that the grout was cured prior to application of sealant</p> <p>PC14. polish the surface after application of grout in case of epoxy grouts for better aesthetics and smoother joints</p>

CON/N0116

Apply grouts and sealants for flooring and cladding works

	<p>PC15. add additive to cementations grouts as a substitute for water as per specification</p> <p>PC16. ensure proper care is taken for moisture sensitive and light colored natural stones to prevent stain ingress</p> <p>PC17. ensure proper protective layer at the corners(tile trims/strips) of tiled surfaces</p>
Check for line , level & alignment	<p>PC18. check and provide required level and specified slope</p> <p>PC19. check vertical and horizontal alignment using appropriate tools</p>
Knowledge and Understanding (K)	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. standard practices grouting works</p> <p>KA2. safety rules and regulation for handling and storing required grouting tools, equipment and materials</p> <p>KA3. personal protection including the use of related safety gears & equipments</p> <p>KA4. how to request tools and materials as per set procedures</p> <p>KA5. maintenance of tools and equipments</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. simple sketches for tiling works</p> <p>KB2. basic principles of measurement</p> <p>KB3. standard specification of all grouting tools and materials along with their care and maintenance</p> <p>KB4. manufacturers' instructions on grout suitability, mixing, curing and application to ensure optimum performance</p> <p>KB5. how to select and use tools and equipment such as:</p> <ul style="list-style-type: none"> • measuring tape/rule, trowels, grout floats, surface cleaning sponges <p>KB6. different types of grouts used for respective tiles /stones including:</p> <ul style="list-style-type: none"> • cement based grout : Sanded / Non Sanded • epoxy based grout <p>KB7. different types of process used to prepare the respective grouts for tiles and stones</p> <p>KB8. standard procedure applicable for the application of grouts on the vertical or the horizontal surface</p> <p>KB9. different types of liquid polymeric additives (mostly blends of acrylics and latex) added to cementations grout and their effect</p> <p>KB10. how to match grout with approved color and shades, as per design</p>
Skills (S)	
	Writing Skills

CON/N0116

Apply grouts and sealants for flooring and cladding works

A. Core Skills/ Generic Skills	The user/ individual on the job needs to know and understand how to: SA1. write in one or more language, preferably the local language at the site
	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA2. read in one or more language, preferably the local language at the site SA3. read sketches provided by the superior to do grouting work SA4. read instructions, guidelines, sign boards, safety rules and safety tags SA5. read instructions and exit routes during emergency
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA6. speak in one or more language, preferably one of the local language at the site SA7. listen and follow instructions communicated by supervisors SA8. orally and efficiently communicate with team member
B. Professional Skills	Decision Making
	The user/ individual on the job needs to know and understand how to: SB1. decide whether work place is safe for working and also relevant task is not creating hazardous condition for others SB2. decide whether work is adequately defined for the day, work front is clear, and adequate material and tools are available for performing the work
	Plan and Organise
	The user/individual on the job needs to know and understand how to: SB3. plan work & organize required resource in coordination with team members and superior
	Customer centricity
	The user/individual on the job needs to know and understand how to: SB4. complete work as per agreed time schedule and quality
	Problem solving
	The user/individual on the job needs to know and understand how to: SB5. rectify the setting/alignment or level of surface post completion of grouting works SB6. resolve and solve any conflict within the team SB7. highlight to the superiors in case any corrective action is required during the grouting work
Analytical Thinking	

CON/N0116

Apply grouts and sealants for flooring and cladding works

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB8. optimize resources efficiently SB9. minimize wastage in the workplace SB10. reconcile material consumption SB11. assess quantity and quality of materials for day work
	<p>Critical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB12. evaluate the complexity of the task and seek assistance and support wherever required SB13. bring to the notice of the superiors any requirement of the requisite resources SB14. bring to the notice of the superiors violation of any safety norms which may lead to accidents SB15. check the quality of scaffolding/working platform from all aspects of safety

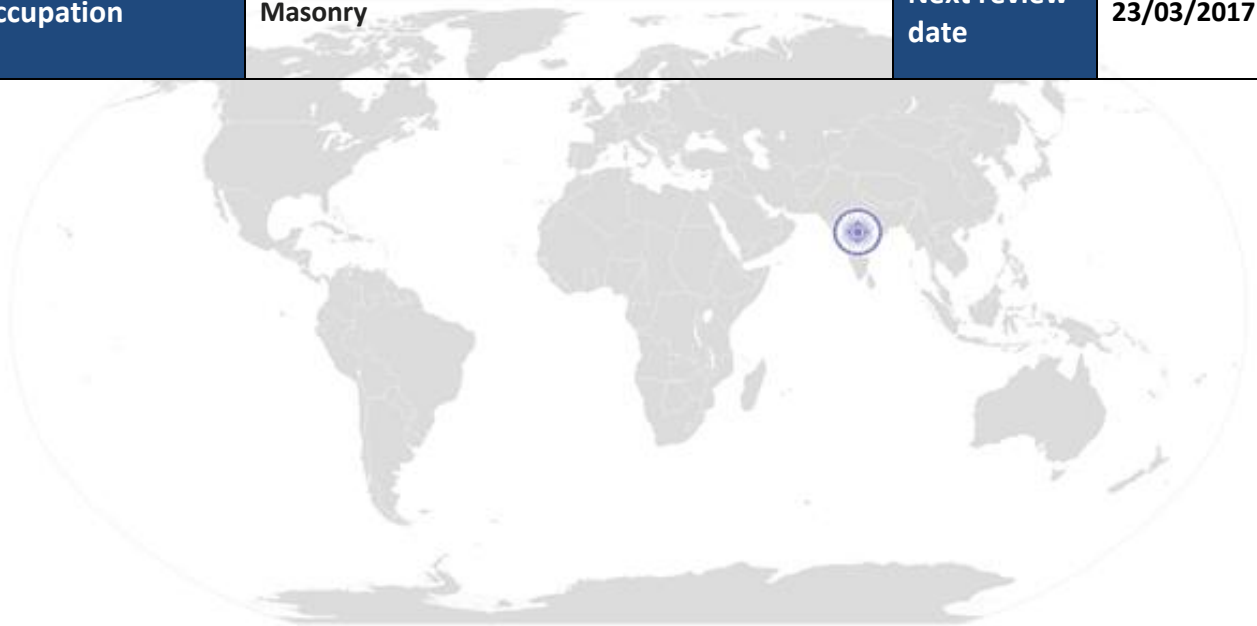


CON/N0116

Apply grouts and sealants for flooring and cladding works

NOS Version Control

NOS Code	CON/N0116		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	Real Estate and Infrastructure Construction	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



CON/N8001

Work effectively in a team to deliver desired results at the workplace

National Occupational Standard



Overview

This NOS covers the skill and knowledge required to work effectively within a team to achieve the desired results.

CON/N8001

Work effectively in a team to deliver desired results at the workplace

National Occupational Standard

Unit Code	CON/N8001
Unit Title (Task)	Work effectively in a team to deliver desired results at the workplace
Description	This unit describes the skills and knowledge required to work effectively within a team to achieve the desired results.
Scope	The scope covers the following: <ul style="list-style-type: none"> Interact and communicate effectively with co-workers, superiors and sub-ordinates across different teams Support co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Interact and communicate in effective and conclusive manner	To be competent, the user / individual on the job must be able to: <ul style="list-style-type: none"> PC1. pass on work related information/ requirement clearly to the team members PC2. inform co-workers and superiors about any kind of deviations from work PC3. address the problems effectively and report if required to immediate supervisor appropriately PC4. receive instructions clearly from superiors and respond effectively on same PC5. communicate to team members/subordinates for appropriate work technique and method PC6. seek clarification and advice as per requirement and applicability
Support co-workers to execute project requirements	<ul style="list-style-type: none"> PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams PC8. work together with co-workers in a synchronized manner
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. own roles and responsibilities KA2. importance of effective communication and establishing strong working relationships with co-workers KA3. risks of a failure in teamwork in terms of effects on project outcomes, timelines, safety at the construction site, etc. KA4. different modes of communication, and its appropriate usage KA5. importance of creating healthy and cooperative work environment among the gangs of workers

CON/N8001

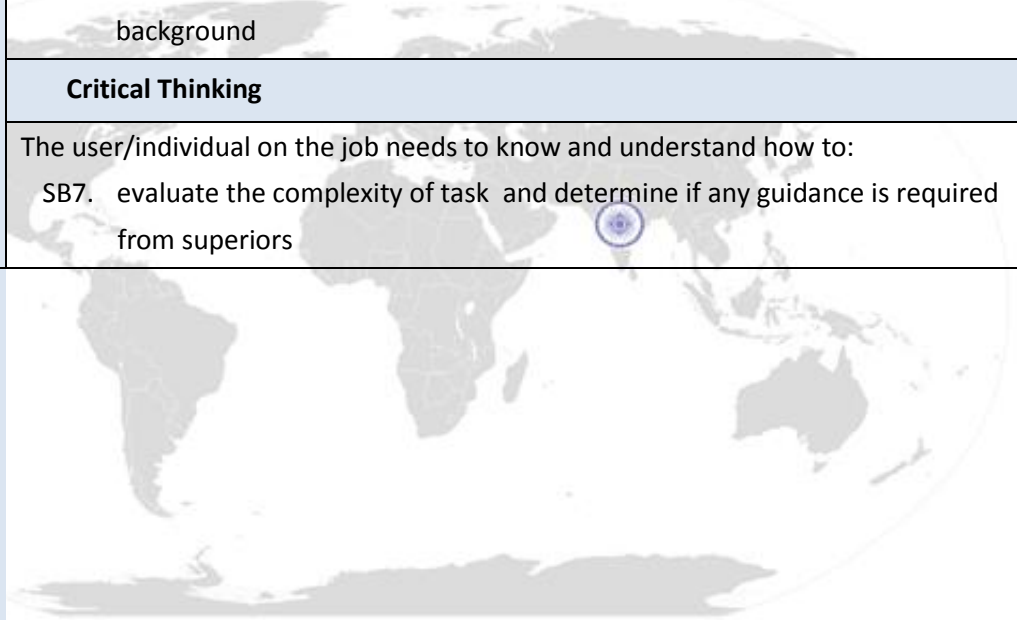
Work effectively in a team to deliver desired results at the workplace

B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. different activities within his work area where an interaction with other workers is required</p> <p>KB2. applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement</p> <p>KB3. importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timelines, safety, risks at the construction project site</p> <p>KB4. importance and need of supporting co-workers facing problems for smooth functioning of work</p>
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. write in one or more languages, preferably the local language at the site
	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA2. read in one or more languages, preferably the local language at the site SA3. read communication from team members regarding work completed, materials used, tools and tackles used, support required
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA4. speak in one or more languages, preferably one of the local language at the site SA5. listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes SA6. orally communicate with co-workers regarding support required to complete the respective work
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. decide on what information is to be shared with co-workers within the team or from interfacing gang of workers
	Plan and Organise
	The user/individual on the job needs to know and understand how to: SB2. plan work and organize required resources in coordination with team members

CON/N8001

Work effectively in a team to deliver desired results at the workplace

	Customer centricity
	The user/individual on the job needs to know and understand how to: SB3. complete all assigned task in coordination with team members
	Problem solving
	The user/individual on the job needs to know and understand how to: SB4. take initiative in resolving issues among co-workers or report the same to superiors
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB5. ensure best ways of coordination among team members SB6. communicate with co-workers considering their educational / social background
	Critical Thinking
The user/individual on the job needs to know and understand how to: SB7. evaluate the complexity of task and determine if any guidance is required from superiors	

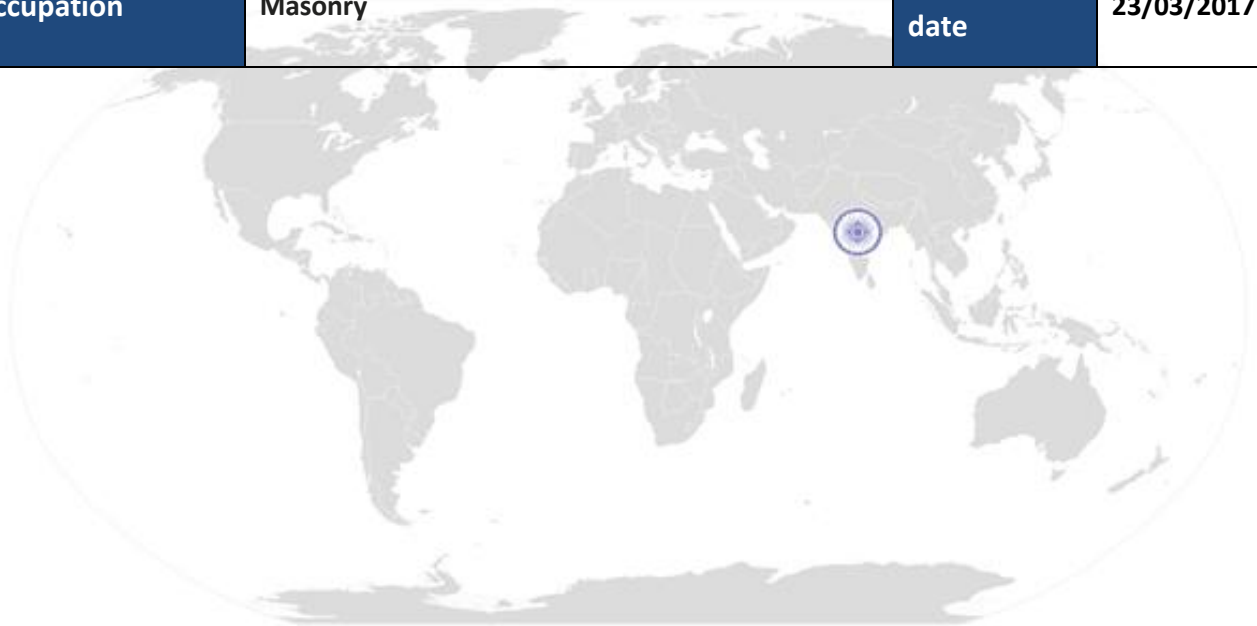


CON/N8001

Work effectively in a team to deliver desired results at the workplace

NOS Version Control

NOS Code	CON/N8001		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	Real Estate and Infrastructure Construction	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



CON/N8002

Plan and organize work to meet expected outcomes

National Occupational Standard



Overview

This NOS covers the skills and knowledge required to plan and organize work in order to meet expected quality in established time frame.

CON/N8002

Plan and organize work to meet expected outcomes

National Occupational Standard

Unit Code	CON/N8002
Unit Title (Task)	Plan and organize work to meet expected outcomes
Description	This unit describes the knowledge and the skills required for an individual to plan and organize own work in order to meet expected outcome.
Scope	This scope covers the following: <ul style="list-style-type: none"> Prioritize work activities to achieve desired results Organize desired resources prior to commencement of work
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Prioritize work activities to achieve desired results	To be competent, the user / individual on the job must be able to: PC1. understand clearly the targets and timelines set by superiors PC2. plan activities as per schedule and sequence PC3. provide guidance to the subordinates to obtain desired outcome PC4. plan housekeeping activities prior to and post completion of work
Organize desired resources prior to commencement of work	PC5. list and arrange required resources prior to commencement of work PC6. select and employ correct tools, tackles and equipment for completion of desired work PC7. complete the work with allocated resources PC8. engage allocated manpower in an appropriate manner PC9. use resources in an optimum manner to avoid any unnecessary wastage PC10. employ tools, tackles and equipment with care to avoid damage to the same PC11. organize work output, materials used, tools and tackles deployed, PC12. processes adopted to be in line with the specified standards and instructions
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. importance of proper housekeeping KA2. policies, procedures and work targets set by superiors KA3. roles and responsibilities in executing the work for subordinates and self
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. standard practices of work to be adopted for assigned task KB2. how to use available resources in a judicious and appropriate manner to minimize wastages or damage

CON/N8002

Plan and organize work to meet expected outcomes

Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. write in one or more language, preferably the local language at the site SA2. list out the assigned works and targets
	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA3. read in one or more language, preferably the local language at the site SA4. read communication from co-workers, superiors and notices from other departments as per requirement of the level
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA5. speak in one or more language, preferably one of the local language at the site SA6. listen and follow communication shared by co-workers regarding standard work processes, resources available, timelines, etc. SA7. communicate effectively with co-workers and subordinates
	B. Professional Skills
The user/individual on the job needs to know and understand how to: SB1. decide on what sequence is to be adopted for execution of work	
Plan and Organise	
The user/individual on the job needs to know and understand how to: SB2. plan and organize the materials, tools, tackles and equipment required to execute the work	
Customer centricity	
The user/individual on the job needs to know and understand how to: SB3. complete all assigned task with proper planning and organizing	
Problem solving	
The user/individual on the job needs to know and understand how to: SB4. arrange or seek help to arrange for material, tools and tackles in case of shortfall	
Analytical Thinking	
The user/individual on the job needs to know and understand how to: SB5. analyze areas of work which could result in a delay of work, wastage of	

CON/N8002

Plan and organize work to meet expected outcomes

	material or damage to tools and tackles
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB6. evaluate potential solutions to minimize avoidable delays and wastages at the construction site

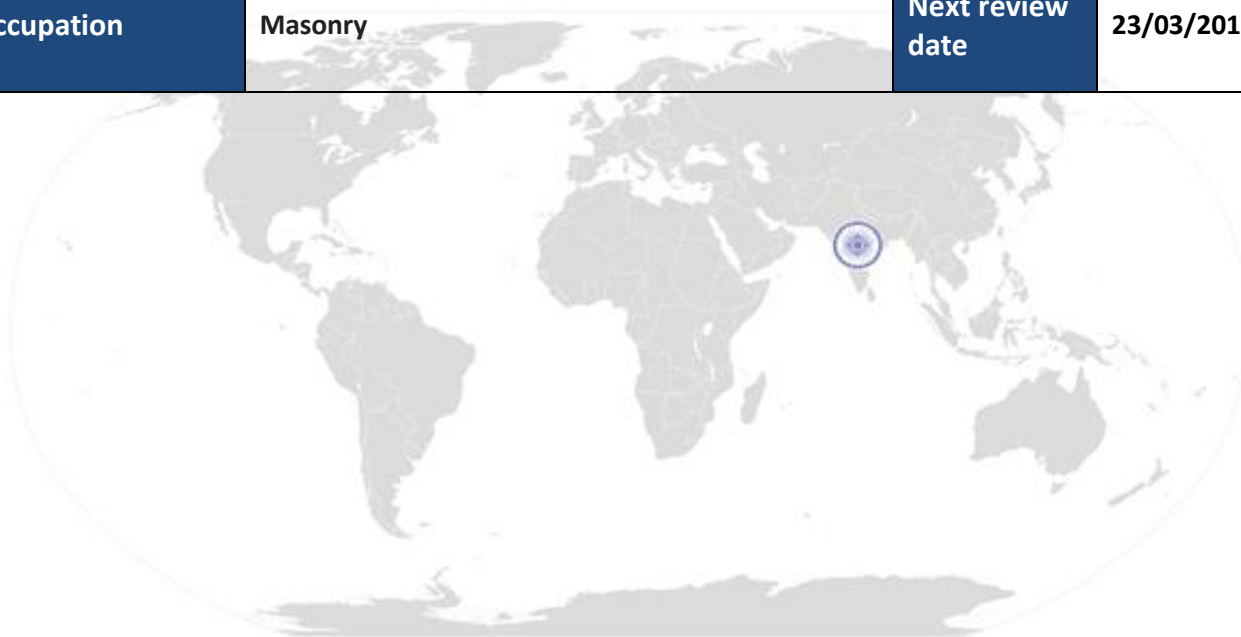


CON/N8002

Plan and organize work to meet expected outcomes

NOS Version Control

NOS Code	CON/N8002		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	Real Estate and Infrastructure Construction	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



National Occupational Standard



Overview

This NOS covers the skill and knowledge required for an individual to work according to personal health, safety and environmental protocol at construction site.

CON/N9001

Work according to personal health, safety and environment protocol at construction site

National Occupational Standard

Unit Code	CON/N9001
Unit Title (Task)	Work according to personal health, safety and environment protocol at construction site
Description	This NOS covers the skill and knowledge required for an individual to work according to personal health, safety and environmental protocol at construction site
Scope	<p>The scope covers the following:</p> <ul style="list-style-type: none"> • Follow safety norms as defined by organization • Adopt healthy & safe work practices • Implement good housekeeping and environment protection process and activities
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Follow safety norms as defined by organization	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority</p> <p>PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities</p> <p>PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable</p> <p>PC4. participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site</p> <p>PC5. identify near miss , unsafe condition and unsafe act</p>
Adopt healthy & safe work practices	<p>PC6. use appropriate Personal Protective Equipment (PPE) as per work requirements including:</p> <ul style="list-style-type: none"> • Head Protection (Helmets) • Ear protection • Fall Protection • Foot Protection • Face and Eye Protection, • Hand and Body Protection • Respiratory Protection (if required) <p>PC7. handle all required tools, tackles , materials & equipment safely</p> <p>PC8. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines</p> <p>PC9. install and apply properly all safety equipment as instructed</p> <p>PC10. follow safety protocol and practices as laid down by site EHS department</p>

CON/N9001

Work according to personal health, safety and environment protocol at construction site

Implement good housekeeping practices	<p>PC11. collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes</p> <p>PC12. apply ergonomic principles wherever required</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines</p> <p>KA2. types of safety hazards at construction sites</p> <p>KA3. basic ergonomic principles as per applicability</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. the procedure for responding to accidents and other emergencies at site</p> <p>KB2. appropriate personal protective equipment to used based on various working conditions</p> <p>KB3. importance of handling tools, equipment and materials as per applicable</p> <p>KB4. health and environments effect of construction materials as per applicability</p> <p>KB5. various environmental protection methods as per applicability</p> <p>KB6. storage of waste including the following at appropriate location:</p> <ul style="list-style-type: none"> • non-combustible scrap material and debris • combustible scrap material and debris • general construction waste and trash (non-toxic, non-hazardous) • any other hazardous wastes • any other flammable wastes <p>KB7. how to use hazardous material, in a safe and appropriate manner as per applicability</p> <p>KB8. safety relevant to tools, tackles, & requirement as per applicability</p> <p>KB9. housekeeping activities relevant to task</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. write in one or more language, preferably the local language at the site</p> <p>SA2. fill safety formats for near miss, unsafe conditions and safety suggestions</p>
	Reading Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA3. read in one or more language, preferably the local language at the site</p> <p>SA4. read sign boards, notice boards relevant to safety</p>

CON/N9001

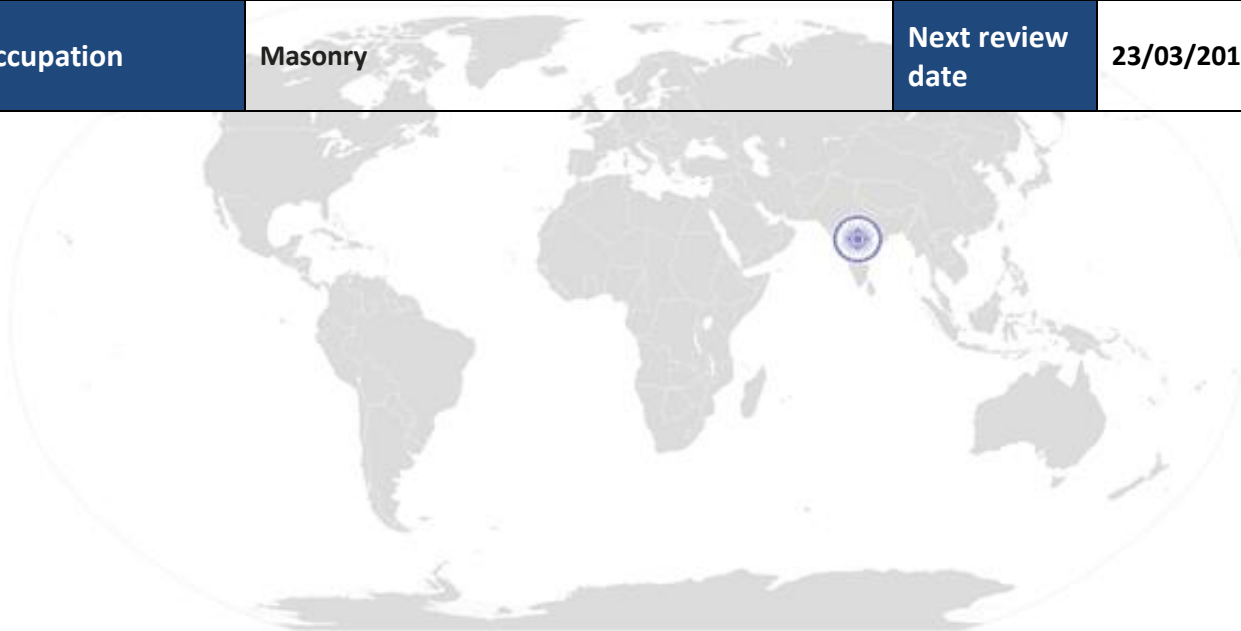
Work according to personal health, safety and environment protocol at construction site

	Oral Communication (Listening and Speaking skills)
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA5. speak in one or more language, preferably one of the local language at the site</p> <p>SA6. listen instructions / communication shared by site EHS and superiors regarding site safety, and conducting tool box talk</p> <p>SA7. communicate reporting of site conditions, hazards, accidents, etc.</p>
B. Professional Skills	Decision Making
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. not create unsafe conditions for others</p> <p>SB2. keep the workplace clean and tidy</p>
	Plan and Organise
	N.A
	Customer centricity
	N.A
	Problem solving
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. identify safety risks that affect the health, safety and environment for self and others working in the vicinity, tackle it if within limit or report to appropriate authority</p>
	Analytical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB4. assess and analyze areas which may affect health, safety and environment protocol on the site</p>
	Critical Thinking
<p>The user/individual on the job needs to know and understand how to:</p> <p>SB5. ensure personal safety behavior</p> <p>SB6. respond to emergency</p>	

CON/N9001 Work according to personal health, safety and environment protocol at construction site

NOS Version Control

NOS Code	CON/N9001		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	Real Estate and Infrastructure Construction	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



Assessment Criteria for Mason Tiling

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Mason Tiling

Qualification Pack CON/Q0104

Sector Skill Council Construction

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by SSC
3. Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.
5. The passing percentage for each QP will be 70%. To pass the Qualification Pack, every trainee should score a minimum of 70% individually in each NOS.
6. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.
7. The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
8. After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
9. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

		Marks Allocation			
		Total Mark	Out Of	Theory	Skills Practical
CON/N0115: Lay and fix tiles both horizontally & vertically on wall,	PC1. read and interpret working sketches prior to laying of tiles		2.5	0.5	2
	PC2. install button marks / level pads as per the tiling requirements using common reference line		1.25	0.25	1

Assessment Criteria for Mason Tiling

floor and roof surfaces	PC3. check the basic attributes of the base surface for: <ul style="list-style-type: none"> • compactness • squareness or right angle • slope or fall (in case of floors) • surface plane • hacking on surfaces (in case of RCC structure & walls) • completion of embedded surfaces (including MEP) 	100	1.25	0.25	1
	PC4. clean and wet base surfaces with water jets (except wood/vinyl)for better adhesion of tiles		1.25	0.25	1
	PC5. soak tiles in water as per manufacturer's specification, if required		1.25	0.25	1
	PC6. prepare various surfaces as per requirement for different types of tiles such as: <ul style="list-style-type: none"> • Masonry plastered surface • Reinforced concrete surface • High Precision Concrete Block • Timber/vinyl surface 		2.25	0.5	2
	PC7. check for basic attributes of the tiles like color, shade, size and squareness before commencement of work		2.5	0.5	2
	PC8. check batch number of all tiles to be used in order to avoid variations in shade, color or pattern		1.25	0.25	1
	PC9. ensure that any protective layer on the tiles is removed prior to use		1.25	0.25	1
	PC10. check for any damages / cracks on the tiles prior to use		2.5	0.5	2
	PC11. ensure tiles are cleaned appropriately prior to fixing		2.5	0.5	2
	PC12. carry out proper marking before cutting tiles to required shape and size		5	1	4
	PC13. cut tiles as per the design /pattern specifications using appropriate tools to fit around obstacles & into odd spaces & corners		10	2	8
	PC14. minimize wastage of tiles		5	1	4
	PC15. specify the centre-point or starting point of the surface for tiling as per working drawings/sketches		4	1	3
	PC16. ensure the following is prepared as per specifications / requirements of tiling works: <ul style="list-style-type: none"> • bed mortar (as per specification) • cement slurry 		4	1	3

Assessment Criteria for Mason Tiling

	<ul style="list-style-type: none"> • cement paste • adhesives 				
	PC17. identify the laying position of tiles as per arrow marks on the tile box		2.5	0.5	2
	PC18. maintain consistency of batch number of all tiles		2.5	0.5	2
	PC19. prepare a bedding of appropriate thickness to act as base for fixing tiles		5	1	4
	PC20. apply & spread cement mortar, mastic, glue or other adhesives on the base of tile using appropriate tools for fixing tiles		5	1	4
	PC21. install roof tiles by bedding and pointing in cement mortar or by mechanical means		5	1	4
	PC22. check for hollowness of tiled surface using wooden mallet		3.5	0.5	3
	PC23. put spacers between tiles (if required) to minimize imperfections		3.5	0.5	3
	PC24. protect the tiled area from damage during & after fixing of tiles		1.5	0.5	1
	PC25. provide tile trims and strips at corner joints as per requirement		3.5	0.5	3
	PC26. check and provide required level and specified slope prior to and after tiling		5.25	1.25	4
	PC27. check vertical and horizontal alignment using appropriate tools during and after tiling		10	2	8
	PC28. set out 90° corners using builders square or 3-4-5 method and check right angle		5	1	4
		Total	100	20	80
CON/N0116: Apply grouts and sealants for flooring and cladding works	PC1. read and interpret the working drawings / sketches prior to commencement of work		3	1	2
	PC2. ensure curing of placed stone, marble & granite tiles		1.5	0.5	1
	PC3. ensure joints of tiles are free from debris & carry out vacuum cleaning of the grout lines		2.5	0.5	2
	PC4. remove thoroughly old grouting compound with appropriate tools prior to re-grouting on old surface		3.5	0.5	3
	PC5. prepare different types of grouts as per surface requirements and manufacturer's specifications		4.5	0.5	4
	PC6. check grout material is of approved color and shade & as per pattern		7.5	1.5	6
	PC7. check that grout material is of approved type (sanded, un sanded,) as per design/pattern requirements		1.5	1.5	6

Assessment Criteria for Mason Tiling

	PC8. apply the grout between grout lines/joints using appropriate tool	100	8	4	4
	PC9. press the grout into the joint using appropriate tools and technique		8	4	4
	PC10. handle grout float edge appropriately & prevent it from digging into grout lines		5	1	4
	PC11. use appropriate amount of penetrating sealant on the stones prior to fixing as per applicability		5	1	4
	PC12. remove excess grout from the surface to avoid any grout haze on the surface		5	1	4
	PC13. check & ensure that the grout was cured prior to application of sealant		5	1	4
	PC14. polish the surface after application of grout in case of epoxy grouts for better aesthetics and smoother joints		5	1	4
	PC15. add additive to cementations grouts as a substitute for water as per specifications		5	1	4
	PC16. ensure proper care is taken for moisture sensitive and light colored natural stones to prevent stain ingress		5	1	4
	PC17. ensure proper protective layer at the corners(tile trims/strips) of tiled surfaces		5	1	4
	PC18. check and provide required level and specified slope		10	2	8
	PC19. check vertical and horizontal alignment using appropriate tools		10	2	8
	Total		100	20	80
CON/N8001: Work effectively in a team to deliver desired results at the workplace	PC1. pass on work related information/ requirement clearly to the team members	100	10	2	8
	PC2. inform co-workers and superiors about any kind of deviations from work		5	1	4
	PC3. address the problems effectively and report if required to immediate supervisor appropriately		5	1	4
	PC4. receive instructions clearly from superiors and respond effectively on same		5	1	4
	PC5. communicate to team members/subordinates for appropriate work technique and method		5	1	4
	PC6. seek clarification and advice as per requirement and applicability		10	2	8
	PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams		30	6	24
	PC8. work together with co-workers in a synchronized manner		30	6	24
	Total	100	20	80	
CON/N8002: Plan and organize work to meet	PC1. understand clearly the targets and timelines set by superiors		10	2	8

Assessment Criteria for Mason Tiling

expected outcomes	PC2. plan activities as per schedule and sequence		10	2	8
	PC3. provide guidance to the subordinates to obtain desired outcome		10	2	8
	PC4. plan housekeeping activities prior to and post completion of work		10	2	8
	PC5. list and arrange required resources prior to commencement of work		10	2	8
	PC6. select and employ correct tools, tackles and equipment for completion of desired work		10	2	8
	PC7. complete the work with allocated resources		10	2	8
	PC8. engage allocated manpower in an appropriate manner		10	2	8
	PC9. use resources in an optimum manner to avoid any unnecessary wastage		5	1	4
	PC10. employ tools, tackles and equipment with care to avoid damage to the same		5	1	4
	PC11. organize work output, materials used, tools and tackles deployed		5	1	4
	PC12. processes adopted to be in line with the specified standards and instructions		5	1	4
			Total	100	20
CON/N9001: Work according to personal health, safety and environment protocol at construction site	PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority		5	1	4
	PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities		5	1	4
	PC3. follow recommended safe practices in handling construction materials including chemical and hazardous material whenever applicable		10	2	8
	PC4. participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site		5	1	4
	PC5. identify near miss , unsafe condition and unsafe act		5	1	4
	PC6. use appropriate Personal Protective Equipment (PPE) as per work requirements including: <ul style="list-style-type: none"> • Head Protection (Helmets) • Ear protection • Fall Protection • Foot Protection • Face and Eye Protection, • Hand and Body Protection • Respiratory Protection (if required) 		10	2	8
	PC7. handle all required tools, tackles , materials & equipment safely		5	1	4

Assessment Criteria for Mason Tiling

	PC8. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines		5	1	4
	PC9. install and apply properly all safety equipment as instructed		15	3	12
	PC10. follow safety protocol and practices as laid down by site EHS department		15	3	12
	PC11. collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes		10	2	8
	PC12. apply ergonomic principles wherever required		10	2	8
		Total	100	20	80