



Mason Tiling

QP Code: CON/Q0104

Version: 2.0

NSQF Level: 4

Construction Skill Development Council of India || Construction Skill Development CPB 103 & 104 (1st Floor),Block 4B,DLF Corporate Park,Phase III,MG Road,Gurgaon-122002

Telephone:0124-4513915to 18





Contents

CON/Q0104: Mason Tiling	3
Brief Job Description	3
Applicable National Occupational Standards (NOS)	
Compulsory NOS	
Qualification Pack (QP) Parameters	3
CON/N0115: Lay and fix tiles both horizontally and vertically on wall and floor	5
CON/N0116: Apply grouts and sealants for flooring and cladding works	12
CON/N8001: Work effectively in a team to deliver desired results at the workplace	
CON/N8002: Plan and organize work to meet expected outcomes	22
CON/N9001: Work according to personal health, safety and environment protocols at co	nstruction site
	27
Assessment Guidelines and Weightage	
Assessment Guidelines	
Assessment Weightage	33
Acronyms	34
Glossary	



CON/Q0104: Mason Tiling

Brief Job Description

Mason tiling is responsible for identifying, cutting, grinding, shaping, laying, fixing and finishing the tiles on floors, walls using appropriate tools and equipment, as per the specified standards, patterns, and within dimensional accuracy.

Personal Attributes

The mason tiling is expected to be physically fit to work across various locations with varied environmental conditions. The person should be organized, diligent, methodical, safety-conscious, and a prompt decision-maker. In addition to being a team player, the individual should have good communication skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 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. <u>CON/N9001</u>: Work according to personal health, safety and environment protocols at construction <u>site</u>

Qualification Pack (QP) Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Masonry
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7122.0100





Minimum Educational Qualification & Experience	5th Class with 2 Years of experience (as certified brick mason NSQF level-4) OR 5th Class with 8 Years of experience (a non-trained worker should have minimum 8 years site experience in masonry occupation)
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NIL
Minimum Job Entry Age	18 Years
Last Reviewed On	23/06/2021
Next Review Date	23/06/2025
Deactivation Date	23/06/2025
NSQC Approval Date	
Version	2.0





CON/N0115: 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

The scope covers the following:

- Carry out preparatory work prior to fixing of tiles
- Check that the tiles are as per the specifications
- 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

Elements and Performance Criteria

Carry out preparatory work prior to fixing of tiles

To be competent, the user/individual on the job must be able to:

- **PC1.** read and interpret working sketches prior to laying of tiles
- PC2. install button marks / level pads as per the tiling requirements using common reference line
- **PC3.** check the basic attributes of the base surface such as compactness, squareness or rightangle slope or fall (in case of floors surface), hacking on surfaces (in case of RCC structure & walls), and completion of embedded surfaces (including MEP)
- **PC4.** clean and wet base surfaces with water jets (except wood/vinyl)for better adhesion of tiles
- **PC5.** soak tiles in water as per manufacturers specification, if required
- **PC6.** prepare various surfaces as per requirement for different types of tiles such as masonry plastered surface, reinforced concrete surface, concrete block timber, and vinyl surface

Check that the tiles are as per the specifications

To be competent, the user/individual on the job must be able to:

- **PC7.** check for basic attributes of the tiles like color, shade, size and squareness before commencement of work
- **PC8.** check batch number of all tiles to be used in order to avoid variations in shade, color or pattern
- **PC9.** ensure that any protective layer on the tiles is removed prior to use
- **PC10.** check for any damages / cracks on the tiles prior to use
- **PC11.** ensure tiles are cleaned appropriately prior to fixing

Measure & cut tiles as per the design, shape and size requirements

To be competent, the user/individual on the job must be able to:

- **PC12.** carry out proper marking before cutting tiles to required shape and size
- **PC13.** cut tiles as per the design /pattern specifications using appropriate tools to fit around obstacles & into odd spaces & corners





PC14. minimize wastage of tiles

Lay and fix both natural and processed tiles on wall & floors

To be competent, the user/individual on the job must be able to:

- **PC15.** specify the centre-point or starting point of the surface for tiling as per working drawings/sketches
- **PC16.** ensure the preparation of bed mortar, cement slurry, cement paste and adhesives is as per specifications / requirements of tiling works
- **PC17.** identify the laying position of tiles as per arrow marks on the tile box
- PC18. maintain consistency of batch number of all tiles
- **PC19.** prepare a bedding of appropriate thickness to act as base for fixing tiles
- **PC20.** apply & spread cement mortar, mastic, glue or other adhesives on the base of tile using appropriate tools for fixing tiles
- PC21. install roof tiles by bedding and pointing in cement mortar or by mechanical means
- PC22. check for hollowness of tiled surface using wooden mallet
- **PC23.** put spacers between tiles (if required) to minimize imperfections
- **PC24.** protect the tiled area from damage during & after fixing of tiles
- **PC25.** provide tile trims and strips at corner joints as per requirement

Check for line, level and alignment

To be competent, the user/individual on the job must be able to:

- **PC26.** check and provide required level and specified slope prior to and after tiling
- **PC27.** check vertical and horizontal alignment using appropriate tools during and after tiling
- PC28. set out 90-degree angle at corners using builders square or 3-4-5 method

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** standard practices for tiling work
- **KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials for relevant works in accordance with organizational norms
- **KU3.** importance of personal protection including the use of related safety gears & equipment in accordance with organizational norms
- **KU4.** service request procedures for tools, materials and equipment as per organizational norms
- **KU5.** procedure for maintenance of tools and equipment
- **KU6.** sketches of the area / surface on which tiles are to be laid
- **KU7.** basic principles of measurement
- **KU8.** different types of tiles, their sizes, shapes, properties, and application for industrial, commercial and residential purpose
- **KU9.** how to identify the correct color, shade of tiles, different identical shades and color coding
- **KU10.** different procedure / process for laying tile on floor, wall & roof
- **KU11.** standard specification of all tiling tools and equipments and their care and maintenance
- **KU12.** how to select and use basic tools and tackles for laying tiles such as measuring tape/rule, hammers, mallets, wedges, power wet saws, tile scribes or hand held tile cutters





- **KU13.** various techniques / procedures for cutting different types of tiles to size and shape as per design requirements
- **KU14.** use of electronic devices like laser level, machine, laser distance meter like Bosch GLL3 professional, Hilti laser PD-E, Bosch GTL 3 tile laser
- **KU15.** basic surface preparation methods for different type of surfaces
- **KU16.** basic methods and techniques of preparing bed mortar, cement slurry and cement paste as per applicability
- KU17. different types of spacers and method of fixing and removing spacers
- KU18. different types of tile trims/strips & their uses

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** write in at least one language, preferably in the local language of the site
- **GS2.** read sketches/routine work drawings, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- **GS3.** speak in one or more language, preferably one of the local language at the site
- **GS4.** communicate orally and effectively with team members
- GS5. analyze the safety aspects of the workplace
- **GS6.** plan work and organize required resource effectively
- **GS7.** complete work as per agreed time schedule and quality parameters
- **GS8.** resolve any conflict within the teammates
- **GS9.** evaluate the complexity of the tasks
- **GS10.** identify any violation of safety norms during the work





Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Carry out preparatory work prior to fixing of tiles	3	7	-	-
PC1. read and interpret working sketches prior to laying of tiles	-	-	-	-
PC2. install button marks / level pads as per the tiling requirements using common reference line	-	-	-	-
PC3. check the basic attributes of the base surface such as compactness, squareness or right-angle slope or fall (in case of floors surface), hacking on surfaces (in case of RCC structure & walls), and completion of embedded surfaces (including MEP)	-	-	-	-
PC4. clean and wet base surfaces with water jets (except wood/vinyl)for better adhesion of tiles	-	-	-	-
PC5. soak tiles in water as per manufacturers specification, if required	-	-	-	-
PC6. prepare various surfaces as per requirement for different types of tiles such as masonry plastered surface, reinforced concrete surface, concrete block timber, and vinyl surface	-	-	-	-
Check that the tiles are as per the specifications	3	7	-	-
PC7. check for basic attributes of the tiles like color, shade, size and squareness before commencement of work	-	-	-	-
PC8. check batch number of all tiles to be used in order to avoid variations in shade, color or pattern	-	-	-	-
PC9. ensure that any protective layer on the tiles is removed prior to use	-	-	-	-
PC10. check for any damages / cracks on the tiles prior to use	-	-	-	-
PC11. ensure tiles are cleaned appropriately prior to fixing	-	-	-	-
Measure & cut tiles as per the design, shape and size requirements	6	14	-	-



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. carry out proper marking before cutting tiles to required shape and size	-	-	-	-
PC13. cut tiles as per the design /pattern specifications using appropriate tools to fit around obstacles & into odd spaces & corners	-	-	-	-
PC14. minimize wastage of tiles	-	-	-	_
Lay and fix both natural and processed tiles on wall & floors	12	28	-	_
PC15. specify the centre-point or starting point of the surface for tiling as per working drawings/sketches	-	-	-	-
PC16. ensure the preparation of bed mortar, cement slurry, cement paste and adhesives is as per specifications / requirements of tiling works	-	-	-	-
PC17. identify the laying position of tiles as per arrow marks on the tile box	-	-	-	-
PC18. maintain consistency of batch number of all tiles	-	-	-	-
PC19. prepare a bedding of appropriate thickness to act as base for fixing tiles	_	-	-	-
PC20. apply & spread cement mortar, mastic, glue or other adhesives on the base of tile using appropriate tools for fixing tiles	-	-	-	-
PC21. install roof tiles by bedding and pointing in cement mortar or by mechanical means	_	-	-	-
PC22. check for hollowness of tiled surface using wooden mallet	_	-	-	-
PC23. put spacers between tiles (if required) to minimize imperfections	-	-	-	-
PC24. protect the tiled area from damage during & after fixing of tiles	-	-	<u>-</u>	_
PC25. provide tile trims and strips at corner joints as per requirement	-	-	-	-
Check for line, level and alignment	6	14	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC26. check and provide required level and specified slope prior to and after tiling	-	-	-	-
PC27. check vertical and horizontal alignment using appropriate tools during and after tiling	-	-	-	-
PC28. set out 90-degree angle at corners using builders square or 3-4-5 method	-	-	-	-
NOS Total	30	70	-	-





National Occupational Standards (NOS) Parameters

NOS Code	CON/N0115
NOS Name	Lay and fix tiles both horizontally and vertically on wall and floor
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Masonry
NSQF Level	4
Credits	TBD
Version	2.0
Last Review Date	23/06/2021
Next Review Date	23/06/2025





CON/N0116: Apply grouts and sealants for flooring and cladding works

Description

This unit describes the skills & knowledge required to check for voids and uses grouts to seal joints for tile, stone, marble, and granite for flooring and cladding works

Scope

The scope covers the following:

- Carry out preparatory work for grouting of tile, stone, marble, and granite works
- Apply grout and sealant to seal the void or gap between the tiles, stones, marble, and granite
- Check for line, level & alignment

Elements and Performance Criteria

Carry out preparatory work for grouting of tile, stone, marble and granite works

To be competent, the user/individual on the job must be able to:

- **PC1.** read and interpret the working drawings / sketches prior to commencement of work
- **PC2.** ensure curing of placed stone, marble & granite tiles
- PC3. ensure joints of tiles are free from debris & carry out vacuum cleaning of the grout lines
- **PC4.** remove thoroughly old grouting compound with appropriate tools prior to re-grouting on old surface
- **PC5.** prepare different types of grouts as per surface requirements and manufacturers specifications
- **PC6.** check grout material is of approved color and shade & as per pattern
- **PC7.** check that grout material is of approved type (sanded, un sanded,) as per design/pattern requirements

Apply grout and sealant to seal the void or gap between the tiles, stones, marble & granite

To be competent, the user/individual on the job must be able to:

- **PC8.** apply the grout between grout lines/joints using appropriate tool
- **PC9.** press the grout into the joint using appropriate tools and technique
- **PC10.** handle grout float edge properly and prevent it from digging out the grout lines
- **PC11.** use appropriate amount of penetrating sealant on the stones prior to fixing as per applicability
- **PC12.** remove excess grout from the surface to avoid any grout haze on the surface
- **PC13.** check and ensure that the grout was cured prior to application of sealant
- **PC14.** polish the surface after application of grout in case of epoxy grouts for better aesthetics and smoother joints
- **PC15.** add additive to cementations grouts as a substitute for water as per specifications
- **PC16.** ensure proper care is taken for moisture sensitive and light colored natural stones to prevent strain ingress
- PC17. ensure proper protective layer at the corners(tile trims/strips) of tiled surfaces

Check for line, level & alignment





To be competent, the user/individual on the job must be able to:

- **PC18.** check and provide required level and specified slope
- **PC19.** check vertical and horizontal alignment using appropriate tools

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** standard practices for grouting works
- **KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials for relevant works in accordance with organizational norms
- **KU3.** importance of personal protection including the use of related safety gears & equipment in accordance with organizational norms
- **KU4.** service request procedures for tools, materials and equipment as per organizational norms
- **KU5.** procedure for maintenance of tools and equipment
- **KU6.** simple sketches for tiling works
- **KU7.** basic principles of measurement
- **KU8.** standard specification of all grouting tools and materials along with their care and maintenance
- **KU9.** manufacturers instructions on grout suitability, mixing, curing and application to ensure optimum performance
- **KU10.** how to select and use tools and equipment such as: measuring tape/rule, trowels, grout floats, surface cleaning sponges
- **KU11.** different types of grouts used for respective tiles /stones including: cement based grout : Sanded / Non Sanded epoxy based grout
- **KU12.** different types of process used to prepare the respective grouts for tiles and stones
- **KU13.** standard procedure applicable for the application of grouts on the vertical or the horizontal surface
- **KU14.** different types of liquid polymeric additives (mostly blends of acrylics and latex) added to cementations grout and their effect
- **KU15.** how to match grout with approved color and shades, as per design

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** write in at least one language, preferably in the local language of the site
- **GS2.** read sketches/routine work drawings, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- **GS3.** speak in one or more language, preferably one of the local language at the site
- **GS4.** communicate orally and effectively with team members
- **GS5.** analyze the safety aspect of the workplace
- **GS6.** plan work and organize required resource effectively
- **GS7.** complete work as per agreed time schedule and quality parameters





GS8. resolve any conflict within the teammates

GS9. evaluate the complexity of the tasks

GS10. identify any violation of safety norms during the work





Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Carry out preparatory work for grouting of tile, stone, marble and granite works	6	14	-	-
PC1. read and interpret the working drawings / sketches prior to commencement of work	-	-	-	-
PC2. ensure curing of placed stone, marble & granite tiles	-	-	-	-
PC3. ensure joints of tiles are free from debris & carry out vacuum cleaning of the grout lines	-	-	-	-
PC4. remove thoroughly old grouting compound with appropriate tools prior to re-grouting on old surface	-	-	-	-
PC5. prepare different types of grouts as per surface requirements and manufacturers specifications	-	-	-	-
PC6. check grout material is of approved color and shade & as per pattern	-	-	-	-
PC7. check that grout material is of approved type (sanded, un sanded,) as per design/pattern requirements	-	-	-	-
Apply grout and sealant to seal the void or gap between the tiles, stones, marble & granite	15	35	-	-
PC8. apply the grout between grout lines/joints using appropriate tool	-	-	-	-
PC9. press the grout into the joint using appropriate tools and technique	-	-	-	-
PC10. handle grout float edge properly and prevent it from digging out the grout lines	-	-	-	-
PC11. use appropriate amount of penetrating sealant on the stones prior to fixing as per applicability	-	-	-	-
PC12. remove excess grout from the surface to avoid any grout haze on the surface	-	-	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. check and ensure that the grout was cured prior to application of sealant	-	-	-	-
PC14. polish the surface after application of grout in case of epoxy grouts for better aesthetics and smoother joints	-	-	-	-
PC15. add additive to cementations grouts as a substitute for water as per specifications	-	-	-	-
PC16. ensure proper care is taken for moisture sensitive and light colored natural stones to prevent strain ingress	-	-	-	-
PC17. ensure proper protective layer at the corners(tile trims/strips) of tiled surfaces	-	-	-	-
Check for line , level & alignment	6	14	-	-
PC18. check and provide required level and specified slope	_	-	-	-
PC19. check vertical and horizontal alignment using appropriate tools	-	-	-	-
NOS Total	27	63	-	-





National Occupational Standards (NOS) Parameters

NOS Code	CON/N0116
NOS Name	Apply grouts and sealants for flooring and cladding works
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Masonry
NSQF Level	4
Credits	TBD
Version	2.0
Last Review Date	23/06/2021
Next Review Date	23/06/2025





CON/N8001: 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:

- Interact and communicate in an effective manner
- Support co-workers to execute the project requirements
- Practice inclusion

Elements and Performance Criteria

Interact and communicate in an effective manner

To be competent, the user/individual on the job must be able to:

- **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.** report any unresolved problem to the supervisor immediately
- **PC4.** obtain instructions from superiors and respond on the same
- **PC5.** communicate to team members/subordinates for appropriate work technique and method
- **PC6.** seek clarification and advice as per the requirement

Support co-workers to execute the project requirements

To be competent, the user/individual on the job must be able to:

- **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

Practice inclusion

To be competent, the user/individual on the job must be able to:

- **PC9.** maintain cultural inclusivity at work place
- PC10. maintain disability friendly work practices
- PC11. follow gender neutral practices at workplace
- **PC12.** address discriminatory and offensive behaviour in a professional manner as per organizational policy

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** own roles and responsibilities
- **KU2.** importance of effective communication





- **KU3.** the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc.
- **KU4.** different modes of communication used at workplace
- **KU5.** importance of creating healthy and cooperative work environment among the gangs of workers
- **KU6.** different activities within the work area where interaction with other workers is required
- **KU7.** applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement
- **KU8.** importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timeliness, safety, risks at the construction project site
- **KU9.** importance and need of supporting co-workers facing problems for the smooth functioning of work
- **KU10.** the fundamental concept of gender equality
- **KU11.** how to recognise and be sensitive to issues of disability, culture and gender
- **KU12.** legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** write in at least one language, preferably in the local language of the site
- **GS2.** read the communication regarding work completion, materials used, tools and tackles used, the resource required, etc,
- **GS3.** speak in one or more languages, preferably in one of the local language of the site
- **GS4.** listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes
- **GS5.** communicate orally and effectively with co-workers considering their educational and social background
- **GS6.** decide on what information is to be shared with co-workers within the team or to the interfacing gang of workers
- **GS7.** plan work and organize the required resources in coordination with team members
- **GS8.** complete all assigned task in coordination with team members
- **GS9.** take initiative in resolving issues among co-workers or report the same to superiors
- **GS10.** ensure best ways of coordination among team members
- **GS11.** evaluate the complexity of task and determine if any guidance is required from superiors





Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Interact and communicate in an effective manner	18	42	-	-
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. report any unresolved problem to the supervisor immediately	-	-	-	-
PC4. obtain instructions from superiors and respond on the same	-	-	-	-
PC5. communicate to team members/subordinates for appropriate work technique and method	-	-	-	-
PC6. seek clarification and advice as per the requirement	-	-	-	-
Support co-workers to execute the project requirements	6	14	-	-
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	-	-	-	-
Practice inclusion	6	14	-	-
PC9. maintain cultural inclusivity at work place	-	-	-	_
PC10. maintain disability friendly work practices	-	-	-	-
PC11. follow gender neutral practices at workplace	-	-	-	-
PC12. address discriminatory and offensive behaviour in a professional manner as per organizational policy	-	-	-	-
NOS Total	30	70	-	-





National Occupational Standards (NOS) Parameters

NOS Code	CON/N8001
NOS Name	Work effectively in a team to deliver desired results at the workplace
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic 2
NSQF Level	4
Credits	TBD
Version	6.0
Last Review Date	16/12/2020
Next Review Date	16/12/2024





CON/N8002: 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

The scope covers the following:

- Plan and prepare for work
- Organise required resources as per work plan
- Complete work as per the plan

Elements and Performance Criteria

Plan and prepare for work

To be competent, the user/individual on the job must be able to:

- **PC1.** identify the targets and timelines set by superiors
- **PC2.** determine the work requirements corresponding to task(drawings/schedules/instructions/methodology), safety, tools and equipment prior to commencement of task
- **PC3.** plan the work by analyzing the required outcomes, work procedures, allotted time, resource availability and known priorities
- **PC4.** prepare the work areas in coordination with team members
- **PC5.** plan for waste collection and disposal prior to and after completion of work

Organise required resources as per work plan

To be competent, the user/individual on the job must be able to:

- **PC6.** arrange the required manpower prior to commencement of work
- **PC7.** organize the required materials, tools and tackles required for the task

Complete work as per the plan

To be competent, the user/individual on the job must be able to:

- **PC8.** engage allocated manpower in an appropriate manner
- **PC9.** employ correct tools, tackles and equipment for the desired work
- **PC10.** provide guidance to the subordinates to obtain desired outcome
- **PC11.** use resources in an optimum manner to avoid any unnecessary wastage
- **PC12.** use tools, tackles and equipment carefully to avoid damage
- **PC13.** ensure the work processes adopted are in line with the specified standards and instructions
- **PC14.** complete the work with the allocated resources within specified time
- PC15. clean and organise the workplace after completion of task

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:





- **KU1.** importance of proper housekeeping including safe waste disposal
- KU2. policies, procedures and work targets set by superiors
- **KU3.** how to identify work activities that need to be planned and organized
- **KU4.** how to determine the task requirements
- **KU5.** how to determine the quality requirements related to the task
- **KU6.** how to undertake all aspect of planning and organizing the task, including interpretation of task, reading drawing/schedules, arranging resources, reporting problems etc.
- **KU7.** how to implement the planned activities
- **KU8.** how to use available resources in a judicious and appropriate manner to minimize wastages or damage

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** write in one or more language, preferably the local language at the site
- **GS2.** read communication from co-workers, superiors and notices from other departments as per requirement of the level
- **GS3.** speak in one or more language, preferably one of the local language at the site
- **GS4.** follow communication shared by co-workers regarding standard work processes, resources available, timelines, etc.
- **GS5.** communicate effectively with co-workers and subordinates
- **GS6.** decide on what sequence is to be adopted for execution of work
- **GS7.** plan and organize the materials, tools, tackles and equipment required to execute the work
- GS8. complete all assigned task with proper planning and organizing
- **GS9.** analyze areas of work which could result in a delay of work, wastage of material or damage to tools and tackles
- **GS10.** evaluate potential solutions to minimize avoidable delays and wastages at the construction site





Assessment Criteria

Assessment Criteria for Outcomes		Practical Marks	Project Marks	Viva Marks
Plan and prepare for work		21	-	-
PC1. identify the targets and timelines set by superiors	-	-	-	-
PC2. determine the work requirements corresponding to task(drawings/schedules/instructions/methodology), safety, tools and equipment prior to commencement of task	-	-	-	-
PC3. plan the work by analyzing the required outcomes, work procedures, allotted time, resource availability and known priorities	-	-	-	-
PC4. prepare the work areas in coordination with team members	-	-	-	-
PC5. plan for waste collection and disposal prior to and after completion of work	-	-	-	-
Organise required resources as per work plan		14	-	-
PC6. arrange the required manpower prior to commencement of work		-	-	-
PC7. organize the required materials, tools and tackles required for the task	-	-	-	-
Complete work as per the plan	15	35	-	-
PC8. engage allocated manpower in an appropriate manner	-	-	-	-
PC9. employ correct tools, tackles and equipment for the desired work	-	-	-	-
PC10. provide guidance to the subordinates to obtain desired outcome	-	-	-	-
PC11. use resources in an optimum manner to avoid any unnecessary wastage	-	-	-	-
PC12. use tools, tackles and equipment carefully to avoid damage	-	-	-	-
PC13. ensure the work processes adopted are in line with the specified standards and instructions	-	-	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. complete the work with the allocated resources within specified time	-	-	-	-
PC15. clean and organise the workplace after completion of task	-	-	-	-
NOS Total	30	70	-	-





National Occupational Standards (NOS) Parameters

NOS Code	CON/N8002
NOS Name	Plan and organize work to meet expected outcomes
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic 2
NSQF Level	4
Credits	TBD
Version	5.0
Last Review Date	16/12/2020
Next Review Date	16/12/2024





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

Description

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

Scope

The scope covers the following:

- Follow safety norms as defined by organization
- Adopt healthy & safe work practices
- Implement good housekeeping and environment protection process and activities
- Follow infection control guidelines as per applicability

Elements and Performance Criteria

Follow safety norms as defined by the organization

To be competent, the user/individual on the job must be able to:

- **PC1.** identify and report any hazards, risks or breaches in site safety to the appropriate authority
- **PC2.** follow emergency and evacuation procedures in case of accidents, fires, natural calamities
- **PC3.** follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable
- **PC4.** follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site
- **PC5.** select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline
- **PC6.** identify near miss, unsafe condition and unsafe act

Adopt healthy & safe work practices

To be competent, the user/individual on the job must be able to:

- **PC7.** use appropriate Personal Protective Equipment (PPE) as per work requirements for : Head Protection, Ear protection, Fall Protection ,Foot Protection, Face and Eye Protection, Hand and Body Protection , and Respiratory Protection (if required)
- **PC8.** handle all required tools, tackles, materials and equipment safely
- **PC9.** follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines
- **PC10.** check and install all safety equipment as per standard guidelines
- **PC11.** follow safety protocols and practices as laid down by site EHS department
- PC12. obtain "height pass" clearance for working at heights

Implement good housekeeping practices

To be competent, the user/individual on the job must be able to:

- **PC13.** collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature
- **PC14.** apply ergonomic principles wherever required





Follow infection control guidelines as per applicability

To be competent, the user/individual on the job must be able to:

- PC15. follow recommended personal hygiene, workplace hygiene and sanitization practices
- **PC16.** clean and disinfect all materials, tools and supplies before and after use
- **PC17.** report immediately to concerned authorities regarding signs and symptoms of illness of self and others

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines
- **KU2.** types of safety hazards at construction sites
- **KU3.** basic ergonomic principles as per applicability
- **KU4.** the procedure for responding to accidents and other emergencies at site
- **KU5.** use of appropriate personal protective equipment based on various working conditions
- **KU6.** importance of handling tools, equipment, and materials as per applicable norms
- **KU7.** effect of construction material on health and environments as per applicability
- **KU8.** various environmental protection methods as per applicability
- **KU9.** storage of waste including non-combustible scrap material and debris, combustible scrap material and debris, general construction waste and trash (non-toxic, non-hazardous), any other hazardous wastes and any other flammable wastes at the appropriate location
- **KU10.** how to keep the workplace neat and tidy so as to be safe
- **KU11.** how to use hazardous material in a safe and appropriate manner as per applicability
- **KU12.** types of fire
- **KU13.** procedure of operating different types of fire extinguishers
- **KU14.** safety relevant to tools, tackles, and equipment as per applicability
- **KU15.** housekeeping activities relevant to task
- KU16. ways of transmission of infection
- **KU17.** ways to manage infectious risks at the workplace
- **KU18.** different methods of cleaning, disinfection, sterilization, and sanitization
- **KU19.** symptoms of infection like fever, cough, redness, swelling, and inflammation

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** write in at least one language, preferably in the local language of the site
- GS2. fill safety formats for near miss, unsafe conditions and safety suggestions
- **GS3.** read in one or more language, preferably in the local language of the site
- **GS4.** speak in one or more language, preferably in one of the local language of the site
- **GS5.** listen to instructions/communication shared by site EHS and superiors regarding site safety, and conducting the toolbox talk





- **GS6.** identify potential safety risks and report to the appropriate authority
- **GS7.** assess and analyze areas which may affect health, safety and environment protocol on the site





Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Follow safety norms as defined by the organization	6	14	-	-
PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority	-	-	-	-
PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities	-	-	-	-
PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable	-	-	-	-
PC4. follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site	-	-	-	-
PC5. select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline	-	-	-	-
PC6. identify near miss, unsafe condition and unsafe act	-	-	-	-
Adopt healthy & safe work practices	15	35	-	-
PC7. use appropriate Personal Protective Equipment (PPE) as per work requirements for : Head Protection, Ear protection, Fall Protection ,Foot Protection, Face and Eye Protection, Hand and Body Protection , and Respiratory Protection (if required)	-	-	-	-
PC8. handle all required tools, tackles, materials and equipment safely	-	-	-	-
PC9. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	-	-	-	-
PC10. check and install all safety equipment as per standard guidelines	-	-	-	-
PC11. follow safety protocols and practices as laid down by site EHS department	-	-	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. obtain "height pass" clearance for working at heights	-	-	-	-
Implement good housekeeping practices	6	14	-	-
PC13. collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature	-	-	-	-
PC14. apply ergonomic principles wherever required	-	-	-	-
Follow infection control guidelines as per applicability	3	7	-	-
PC15. follow recommended personal hygiene, workplace hygiene and sanitization practices	-	-	-	-
PC16. clean and disinfect all materials, tools and supplies before and after use	-	-	-	-
PC17. report immediately to concerned authorities regarding signs and symptoms of illness of self and others	-	-	-	-
NOS Total	30	70	-	-





National Occupational Standards (NOS) Parameters

NOS Code	CON/N9001
NOS Name	Work according to personal health, safety and environment protocols at construction site
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic Safety
NSQF Level	4
Credits	TBD
Version	6.0
Last Review Date	16/12/2020
Next Review Date	16/12/2024

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

- 1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC)/ Element 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/ Element.
- 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.

Minimum Aggregate Passing % at QP Level: 70

(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N0115.Lay and fix tiles both horizontally and vertically on wall and floor	30	70	0	0	100	40
CON/N0116.Apply grouts and sealants for flooring and cladding works	27	63	0	0	90	25
CON/N8001.Work effectively in a team to deliver desired results at the workplace	30	70	-	-	100	10
CON/N8002.Plan and organize work to meet expected outcomes	30	70	-	-	100	10
CON/N9001.Work according to personal health, safety and environment protocols at construction site	30	70	-	-	100	15
Total	147	343	0	0	490	100





Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training





Glossary

Sector	Sector is a 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 organisation.
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 (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a 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 quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.





Organisational Context	Organisational context includes the way the organisation 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 (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment 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.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.