

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR PLUMBING

### 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

#### Contact Us:

Indian Plumbing Skills Council  
B/ 168-169, DDA Complex  
Okhla, Phase 1  
New Delhi 110020, India  
Phone: +91-11-41513580  
+91-11-41400556  
E-mail: [ipssc@ipssc.co.in](mailto:ipssc@ipssc.co.in)



### Contents

1. [Introduction and Contacts.....1](#)
2. [Qualifications Pack.....2](#)
3. [OS Units.....2](#)
4. [Glossary of Key Terms .....3](#)
5. [Annexure: Nomenclature for QP & OS.....17](#)

## Introduction

### Qualifications Pack – Plumbing Mason

**SECTOR:** PLUMBING INDUSTRY

**SUB-SECTOR:** Contractors

**OCCUPATION:** Plumbing

**REFERENCE ID:** PSC/Q0106

**ALIGNED TO:** NCO-2004/7122.20

**Plumbing Mason:** Plumbing Mason is an important job role in the masonry work related to plumbing in 'contractors' segment.

**Brief Job Description:** Plumbing Mason is responsible for making masonry manholes, laying pipes in masonry works and other earth work related to plumbing.

**Personal Attributes:** He should be able to work independently on his assignment. He should be comfortable in performing laborious work. He should be a good listener. He should be good at taking and following instructions. He should be a good team player. He should be result oriented and positive in attitude.

Job Details	Qualifications Pack Code	PSC/Q0106		
	Job Role	Plumbing Mason		
	Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	0.1
	Sector	Plumbing	Drafted on	15/07/13
	Sub-sector	Contractors	Last reviewed on	30/07/13
	Occupation	Plumbing	Next review date	31/01/14

<b>Job Role</b>	<b>Plumbing Mason</b>
<b>Role Description</b>	Plumbing Mason is responsible for making masonry manholes, laying pipes in masonry works and other earth work related to plumbing.
<b>NVEQF/NVQF level</b>	3
<b>Minimum Educational Qualifications*</b>	5 <sup>th</sup> (To be revised to 10 <sup>th</sup> post 31 <sup>st</sup> December, 2017)
<b>Maximum Educational Qualifications*</b>	N.A.
<b>Training</b> (Suggested but not mandatory)	On-the-job training.
<b>Experience</b>	In lieu of minimum qualification the employee has worked as a semi-skilled helper for minimum 2 years in the same role.
<b>Applicable National Occupational Standards (NOS)</b>	<p><b>Compulsory:</b></p> <ol style="list-style-type: none"> <li>PSC/ N 0104 (<a href="#">Masonry work related to plumbing systems</a>)</li> <li>PSC/ N 0108 (<a href="#">Coordinating with the senior and other working team</a>)</li> <li>PSC/ N 0109 (<a href="#">Maintain a healthy, safe and secure working environment</a>)</li> </ol> <p><b>Optional:</b></p> <ol style="list-style-type: none"> <li>N.A.</li> </ol>
<b>Performance Criteria</b>	As described in the relevant OS units

Definitions

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses 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.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
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 that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification 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.
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 or 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.

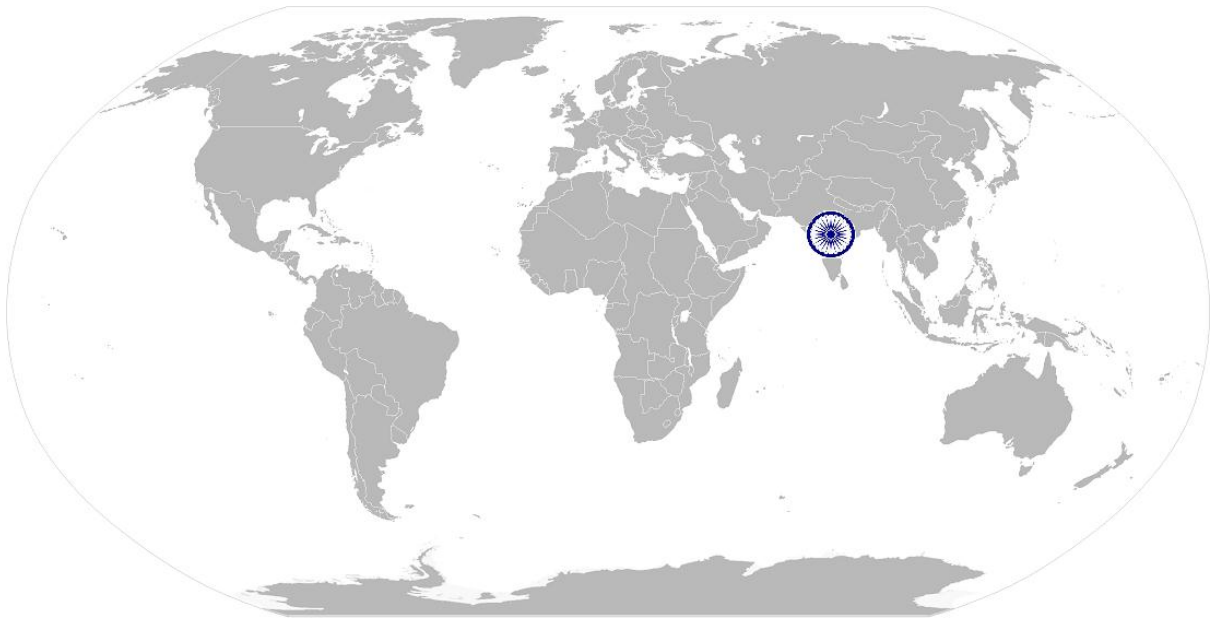
Acronyms	Keywords /Terms	Description
	IPSC	Indian Plumbing Skills council
	NOS	National Occupational Standards
	NSQF	National Skills Qualification Framework
	NVEQF	National Vocational Educational Qualification Framework
	NVQF	National Vocational Qualification Framework
	OS	Occupational Standards
	PC	Performance Criteria
	QP	Qualification Pack
SSC	Sector Skills Council	



PSC/N0104 Masonry work related to plumbing systems

---

# National Occupational Standard



## Overview

This unit is about carrying out all kinds of masonry works related to plumbing in housing, commercial and institutional setups.



**PSC/N0104 Masonry work related to plumbing systems**

National Occupational Standard	<b>Unit Code</b>	<b>PSC/N0104</b>
	<b>Unit Title (Task)</b>	<b>Masonry work related to plumbing systems</b>
	<b>Description</b>	This OS unit is about carrying out all kinds of masonry works related to plumbing in housing, commercial and institutional setups.
	<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>Carrying out masonry work related to drainage and sewerage systems</li> </ul>
	<b>Performance Criteria(PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance Criteria</b>
	<b>Masonry work</b>	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> <li>PC1. Understand the task</li> <li>PC2. determine work requirement and sequence of masonry work</li> <li>PC3. carry out ground levelling, surfacing and sloping related tasks prior to beginning work</li> <li>PC4. assemble material and tools as per the requirement</li> </ul>
	<b>Productivity &amp; Quality of output</b>	<ul style="list-style-type: none"> <li>PC5. Mix cement using hoes, cement-mixing equipment, and/or hand tools</li> <li>PC6. cut or break bricks and concrete using hammers, powered abrasive saws, paving breakers, drills, and/or hand tools</li> <li>PC7. lay bricks/mortar/concrete in manholes, water tanks, septic tanks and openings/cuts made in structure for installing plumbing systems</li> <li>PC8. perform proper finishing work</li> </ul>
	<b>Knowledge and Understanding (K)</b>	
	<b>A. Organizational Context</b>	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1. company's policies on: quality and delivery standards, safety and hazards, integrity, dress code, etc.</li> <li>KA2. importance of the individual's role in the work flow</li> <li>KA3. risk and impact of not following defined procedures/work instructions</li> <li>KA4. how to handover/ takeover of the equipment / work area as per the instructions</li> </ul>
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KB1. different types of materials (bricks, cements, mortar, concrete, etc.), and fixtures (basins, water and septic tanks, etc.)</li> <li>KB2. techniques related to laying of bricks, laying of bed concrete and encasing of pipes with concrete and gully traps, etc.</li> <li>KB3. direction of flow of water and waste water</li> <li>KB4. basic plumbing/masonry terminology</li> <li>KB5. relevant tools such as hoe, trowel, float, hammer, etc.</li> </ul>	



**PSC/N0104 Masonry work related to plumbing systems**

	<p>KB6. units of measurement</p> <p>KB7. material disposal procedure, importance of appropriate disposal of material</p>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Communication skills</b>
	The user/individual on the job needs to know and understand how to:
	SA1. communicate in Hindi / regional language
	<b>Measurement/positioning skills</b>
	SA2. perform simple mathematical calculations
	SA3. measure and mark positions and levels as per instructions
<b>B. Professional Skills</b>	<b>Teamwork</b>
	SA4. share work load as required
	SA5. accept and interpret instructions and requirements correctly
	SA6. co-ordinate with co-workers and sub-ordinates
	<b>Use of tools and machines</b>
	The user/individual on the job needs to know and understand how to:
SB1. identify tools, equipment and procedures required for masonry work in plumbing systems	
SB2. use following key tools and equipment for installing piping fixtures and fittings:	
<ul style="list-style-type: none"> <li>• Tape/ Laser measure</li> <li>• Trowel</li> <li>• Float</li> <li>• Water level</li> <li>• Plumb</li> </ul>	
<ul style="list-style-type: none"> <li>• Hammers</li> <li>• Hoe</li> <li>• Spirit level</li> <li>• Total level (Theodolite)</li> <li>• Right angle</li> </ul>	
SB3. operate, maintain and repair tools	
<b>Execution techniques</b>	
SB4. carry out preparatory activities as per requirement	
SB5. execute the masonry work as per requirement	
SB6. stack and store materials and equipment appropriately at the task site	
SB7. test the structure/system for water flow, sewage flow, traps, etc.	

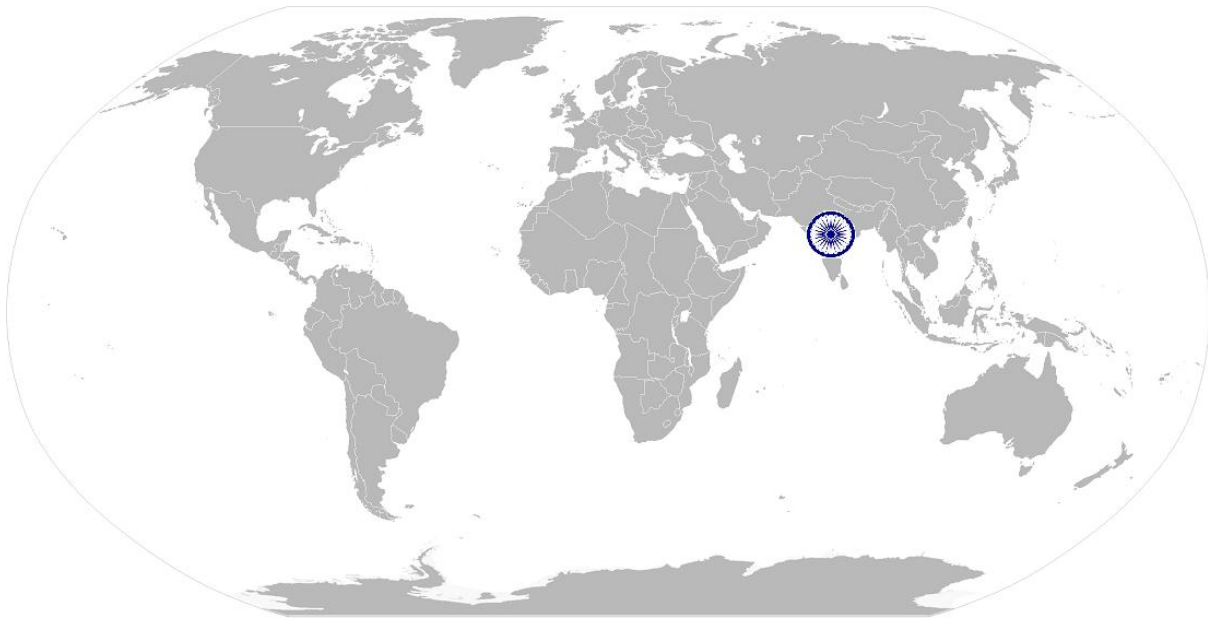




**PSC/N0104 Masonry work related to plumbing systems**

**NOS Version Control**

<b>NOS Code</b>	<b>PSC /N0104</b>		
<b>Credits(NVEQF/NVQF/NSQF) [OPTIONAL]</b>	<b>TBD</b>	<b>Version number</b>	<b>0.1</b>
<b>Industry</b>	<b>Plumbing</b>	<b>Drafted on</b>	<b>15/07/13</b>
<b>Industry Sub-sector</b>	<b>Contractors</b>	<b>Last reviewed on</b>	<b>30/07/13</b>
		<b>Next review date</b>	<b>31/01/14</b>



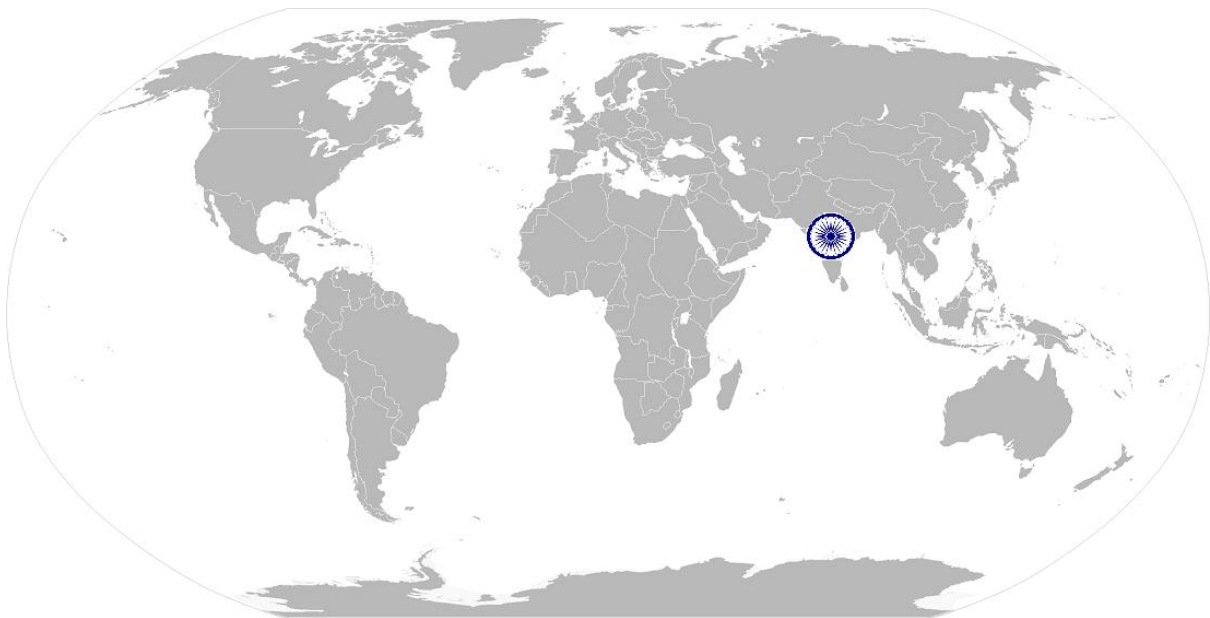




PSC/N0108 Coordinating with the senior and other working team

---

# National Occupational Standard



## Overview

This unit is about team work and level of communication with colleagues or clients. It determines the ability to work as a team member, share work and multi-task in order to achieve the deliverables on schedule.



**PSC/N0108 Coordinating with the senior and other working team**

National Occupational Standard	<b>Unit Code</b>	<b>PSC/N0108</b>
	<b>Unit Title (Task)</b>	<b>Coordinating with the senior and other working team</b>
	<b>Description</b>	This OS unit is about communicating with colleagues and seniors in order to achieve smooth and hazard free work flow
	<b>Scope</b>	<p>This unit/task covers the following:</p> <p>Interact with senior</p> <ul style="list-style-type: none"> <li>• receive work instructions, discuss task status and receive feedback</li> </ul> <p>Interact with colleagues within and outside the team</p> <ul style="list-style-type: none"> <li>• communicate and discuss work flow, problems faced, possible solutions and pass on the learning within and outside the team</li> </ul>
	<b>Performance Criteria(PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance Criteria</b>
	<b>Interaction with senior</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. receive work instructions and raw materials from reporting senior</p> <p>PC2. communicate to reporting senior about task status, repairs and maintenance of tools and equipment as required</p> <p>PC3. communicate any potential hazards and expected process disruptions</p> <p>PC4. handover completed task to reporting senior</p> <p>PC5. receive feedback from reporting senior</p> <p>PC6. report any anticipated reasons for delays</p>
	<b>Interact with colleagues within and outside the team</b>	<p>PC7. work as a team with colleagues and share work as per the work load and skills</p> <p>PC8. work with colleagues of other teams</p> <p>PC9. communicate and discuss work flow related difficulties in order to find solution with mutual agreement</p> <p>PC10. taking instructions from the reporting senior</p> <p>PC11. report problem/incident etc.</p> <p>PC12. put team over individual goals</p> <p>PC13. resolve conflicts</p>
	<b>Knowledge and Understanding (K)</b>	
	<b>A. Organizational Context</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. company's policies on: preferred language of communication, quality delivery standards and personnel management</p> <p>KA2. reporting structure</p>



### PSC/N0108 Coordinating with the senior and other working team

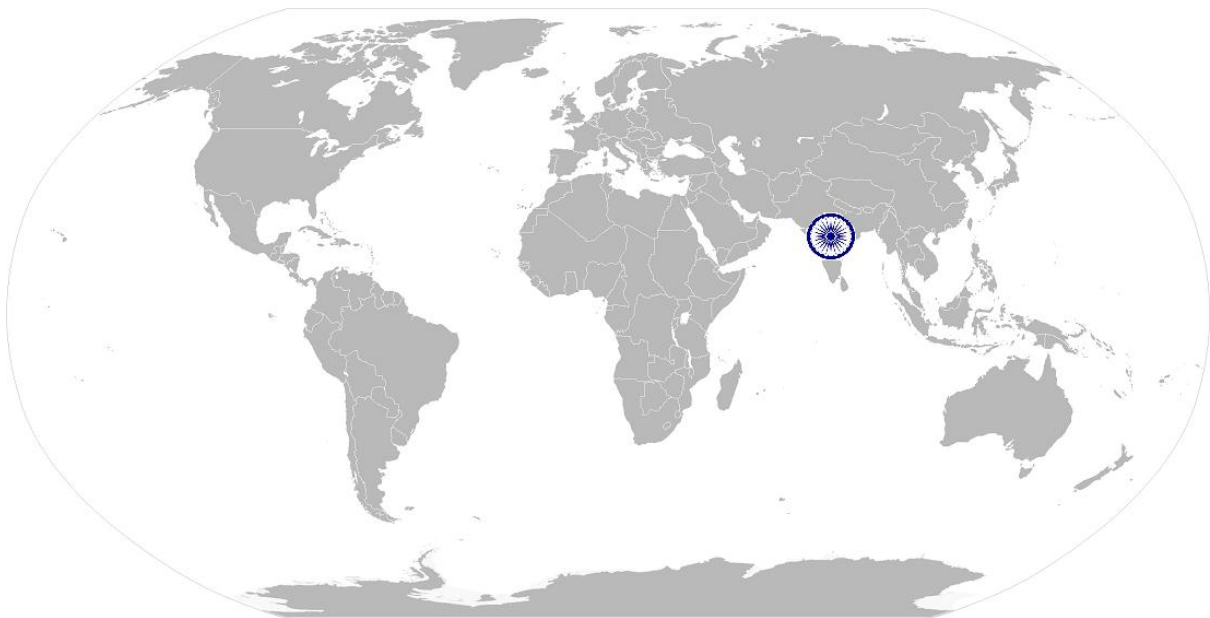
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: KB1. effective ways of communication KB2. building team co-ordination
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Communication skills</b>
	The user/individual on the job needs to know and understand how to: SA1. communicate in Hindi / regional language
	<b>Teamwork</b>
	SA2. share work load as required SA3. accept and interpret instructions and requirements correctly SA4. co-ordinate with co-workers and sub-ordinates
<b>B. Professional Skills</b>	<b>Decision making</b>
	The user/individual on the job needs to know and understand: SB1. how to spot and communicate potential areas of disruptions to work process and report the same SB2. when to report to senior and when to deal with a colleague individually, depending on the type of concern
	<b>Reflective thinking</b>
	SB3. improve work processes by interacting with others and adopting best practices



**PSC/N0108 Coordinating with the senior and other working team**

**NOS Version Control**

<b>NOS Code</b>	<b>PSC/N0108</b>		
<b>Credits(NVEQF/NVQF/NSQF) [OPTIONAL]</b>	<b>TBD</b>	<b>Version number</b>	<b>0.1</b>
<b>Industry</b>	<b>Plumbing</b>	<b>Drafted on</b>	<b>15/07/13</b>
<b>Industry Sub-sector</b>	<b>Contractors</b>	<b>Last reviewed on</b>	<b>30/07/13</b>
		<b>Next review date</b>	<b>31/01/14</b>

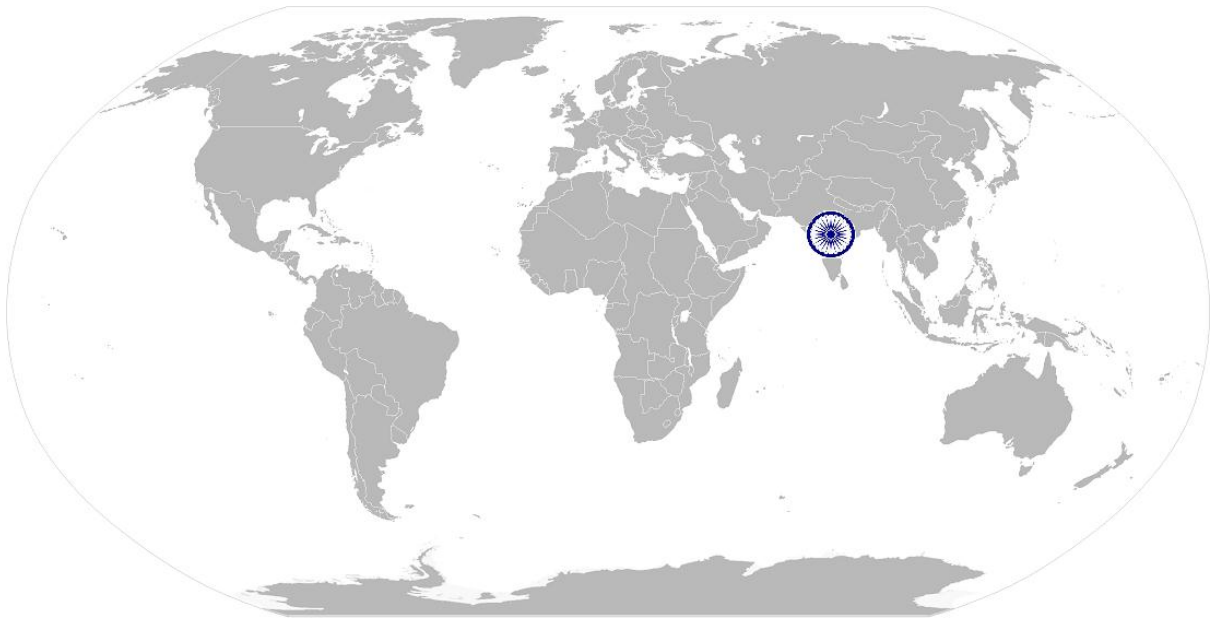




PSC/N0109 Maintain a healthy, safe and secure working environment

---

# National Occupational Standard



## Overview

This unit is about being aware of, communicating and taking steps towards minimizing potential hazards and dangers of accidents on the job and maintaining occupational health and safety.



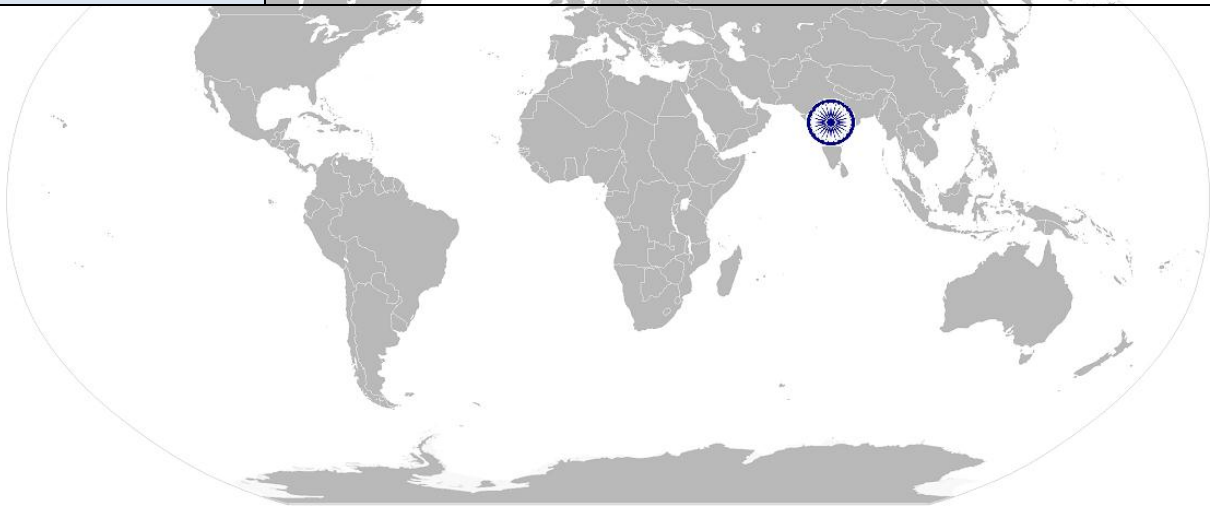
**PSC/N0109 Maintain a healthy, safe and secure working environment**

National Occupational Standard	<b>Unit Code</b>	<b>PSC/N0109</b>
	<b>Unit Title (Task)</b>	<b>Maintain a healthy, safe and secure working environment</b>
	<b>Description</b>	This OS unit is about monitoring your working environment and making sure it meets requirements for health and safety
	<b>Scope</b>	<p>This unit/task covers the following:</p> <p>Communicate to reporting senior about</p> <ul style="list-style-type: none"> <li>• process flow improvements that can reduce anticipated or repetitive hazards</li> <li>• mishandling of tools and equipment</li> <li>• electrical or any other problem at the construction site that could result in accident</li> </ul>
	<b>Performance Criteria(PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance Criteria</b>
	<b>Communicating potential accident points</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. to avoid accidents related to use of sharp tools and equipment</p> <p>PC2. attend and actively participate in the health and safety campaigns organized by the company or any other authority</p>
	<b>Using safety gear and following healthy practices</b>	<p>PC3. use or wear safety gear (helmet, gloves, goggles, safety shoes, ear plugs, etc.) as per the rules of the company</p> <p>PC4. attend fire drills or any other safety drills organized by the company or any other authority</p> <p>PC5. learn first-aid procedure</p> <p>PC6. use insect repellents and safe drinking water</p> <p>PC7. use site toilets and follow other hygienic practices</p> <p>PC8. understand the evacuation and emergency procedures</p>
	<b>Knowledge and Understanding (K)</b>	
	<b>A. Organizational Context</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. company's policy on: safety and hazards and personnel management</p> <p>KA2. reporting structure</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. how to use tools and equipment without suffering any physical harm</p> <p>KB2. first-aid procedure</p> <p>KB3. diseases caused due use of unsafe water, biting of insects and following unhygienic practices</p> <p>KB4. evacuation and emergency procedures</p>	



## PSC/N0109 Maintain a healthy, safe and secure working environment

Skills (S)	
<b>A. Core Skills/ Generic Skills</b>	<b>Communication skills</b>
	The user/individual on the job needs to know and understand how to: SA1. effectively communicate the danger
	<b>Organising skills</b>
	SA2. keep all the tools in an organised manner so as to avoid accidents SA3. keep the work environment safe and clean
<b>B. Professional Skills</b>	<b>Decision making</b>
	The user/individual on the job needs to know and understand how to: SB1. report potential sources of danger SB2. follow prescribed procedure in the event of an accident SB3. wear appropriate safety gear to avoid an accident
	<b>Reflective thinking</b>
	SB4. learn from past mistakes regarding use of hazardous tools and equipment



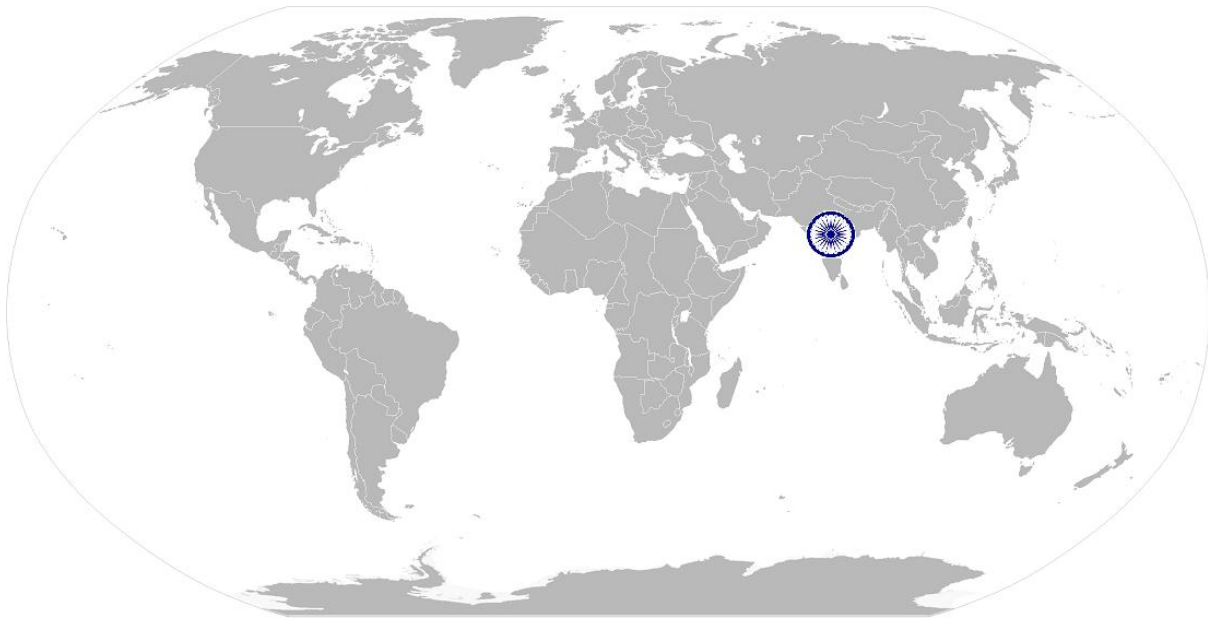




**PSC/N0109 Maintain a healthy, safe and secure working environment**

## NOS Version Control

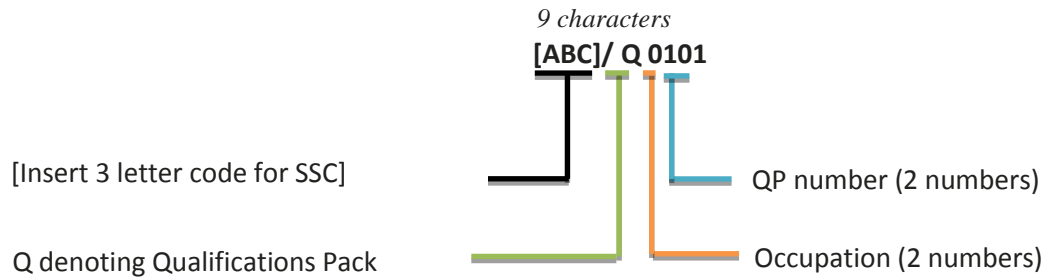
<b>NOS Code</b>	<b>PSC/N0109</b>		
<b>Credits(NVEQF/NVQF/NSQF) [OPTIONAL]</b>	<b>TBD</b>	<b>Version number</b>	<b>0.1</b>
<b>Industry</b>	<b>Plumbing</b>	<b>Drafted on</b>	<b>15/07/13</b>
<b>Industry Sub-sector</b>	<b>Contractors</b>	<b>Last reviewed on</b>	<b>30/07/13</b>
		<b>Next review date</b>	<b>31/01/14</b>



## Annexure

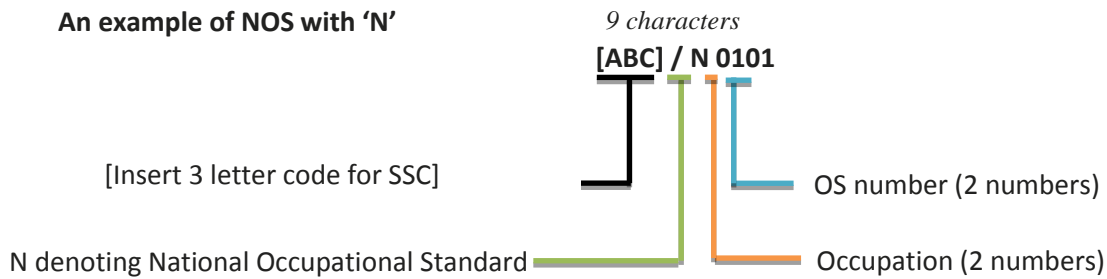
### Nomenclature for QP and NOS

#### Qualifications Pack



#### Occupational Standard

##### An example of NOS with 'N'



The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
<b>Contractors</b>	01-10
<b>Consultants</b>	11-20
<b>Manufacturers</b>	21-30

Sequence	Description	Example
<b>Three letters</b>	Industry name	PSC
<b>Slash</b>	/	/
<b>Next letter</b>	Whether <b>QP</b> or <b>NOS</b>	N
<b>Next two numbers</b>	Occupation code	01
<b>Next two numbers</b>	OS number	01