

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR PAINTS AND COATINGS INDUSTRY

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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

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Introduction

Qualifications Pack: General Industrial (Liquid) Painter

SECTOR: PAINTS AND COATINGS

SUB-SECTOR: APPLICATION

OCCUPATION: Industrial Paint Application

REFERENCE ID: PCS/Q5108

ALIGNED TO: NCO-2004/ NIL

The General Industrial (Liquid) Painter is responsible for painting metal sections, mainly, used for industrial purposes by using liquid paint.

Brief Job Description: The individual at work assesses the metal section, understands colour, chemistry and finish required by the customer, prepares part for liquid paint application and coats it using recommended tools and machines to achieve the desired finish as per company's standards or customer's requirements.

Personal Attributes: The job requires the individual to: undertake physical labour; work in a paint-redolent environment, have good eye-sight and no colour blindness and work in all types of weather conditions.



Job Details

Qualifications Pack Code	PCS/Q5108		
Job Role	General Industrial (Liquid) Painter		
Credits(NSQF)	TBD	Version number	1.0
Sector	Paints and Coatings	Drafted on	17/02/16
Sub-sector	Application	Last reviewed on	31/03/16
Occupation	Industrial Paint Application	Next review date	31/03/18
NSQC Clearance on	NA		

Job Role	General Industrial (Liquid) Painter
Role Description	Painting metal sections, mainly, used for industrial purposes by using liquid paint
NSQF level	4
Minimum Educational Qualifications	Preferably 5 th Standard
Maximum Educational Qualifications	12 th standard
Training (Suggested but not mandatory)	Not Applicable
Minimum Job Entry Age	18 years
Experience	Minimum 3 years as helper to Liquid Paint Applicator
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> PCS/N5105 Prepare for coating PCS/N5106 Pre-treat the section to be coated PCS/N5107 Apply top-coat and finish the surface PCS/N5108 Maintain jigs, tools and machines PCS/N9901 Coordinate with colleagues and/or customers PCS/N9902 Maintain standards of product/ service quality PCS/N9903 Maintain OH&S standards and follow environmental norms <p>Optional:</p> <ol style="list-style-type: none"> PCS/N9904 Maintain IPR of organisation and customers
Performance Criteria	As described in the relevant OS units

Qualifications Pack For General Industrial (Liquid) Painter

Definitions

Keywords /Terms	Description
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 NOS, these include communication related skills that are applicable to most job roles.
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 NOS.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
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.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Organisational Context	Organisational 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.
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 NOS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
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.
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.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.

Qualifications Pack For General Industrial (Liquid) Painter

Acronyms

Keywords /Terms	Description
NSQF	National Skills Qualifications Framework
QP	Qualification Pack
OS	Occupational Standards
OH&S	Occupational Health and Safety
PPE	Personal Protective Equipment
HR	Human Resources

National Occupational Standard



Overview

This unit is about studying the drawing and production plan, studying the coating required, verifying details with the customer and prepare jigging.

PCS/N5105

Prepare for coating

National Occupational Standard

Unit Code	PCS /N5105
Unit Title (Task)	Prepare for coating
Description	This OS unit is about studying the drawing and production plan, studying the coating required, verifying details with the customer and prepare jigging
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Study the drawing and production plan Study the coating required Verify details with the customer Prepare Jigging <p>Range statement: Pre-treatment bath, Jigs, paint booth, spray gun, brush, buffers and curing machine</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Studying the drawing and production plan	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. study the plan for powder coating</p> <p>PC2. study the assembly of the metal segment to be coated</p> <p>PC3. disassemble the segment if it has multiple pieces to be coated separately</p> <p>PC4. remove the pieces which are made up of rubber, plastic, etc.</p>
Studying the coating required	<p>To be competent, the user/ individual must be able to:</p> <p>PC5. understand the conditions where segment is to be used, hot, wet, friction</p> <p>PC6. study the metal and chemistry required, e.g., pure epoxy, epoxy polyester, pure polyester, polyurethane</p> <p>PC7. colour of paint and finish required</p>
Verifying details with the customer	<p>To be competent, the user/ individual must be able to:</p> <p>PC8. document the colour, finish and chemistry required, process description and time and effort estimated for the process</p> <p>PC9. meet the customer at appropriate time</p> <p>PC10. present the fact file document to the customer and seek approval</p> <p>PC11. make necessary changes after discussion and take approval to start the process</p>
Preparing the jigging	<p>To be competent, the user/ individual must be able to:</p> <p>PC12. select the size of jigs for hanging the segments to be prepared for coating</p> <p>PC13. hang segments on the jigs</p> <p>PC14. check the controls to see if jigs conveyor is in good working condition</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the	<p>The individual on the job needs to know and understand:</p> <p>KA1. company's policy and work instructions on quality standards</p> <p>KA2. company's personnel management and incentives rules</p>

PCS/N5105

Prepare for coating

company / organization and its processes)	KA3. importance of the individual's role in the workflow KA4. reporting structure KA5. occupational health and safety standards
B. Technical Knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. production plan and bill of materials</p> <p>KB2. properties of paint or powder, e.g., chemical resistance, mechanical strength, uv resistance, flexibility, hardness, drying time</p> <p>KB3. ingredients of paint or powder, e.g., binder, pigment, extender, additive</p> <p>KB4. disassembling and assembling of components</p> <p>KB5. paint chemistry, e.g., pure epoxy, epoxy polyester, pure polyester, polyurethane</p> <p>KB6. types of finish, e.g., gloss, semi-gloss, satin, matt, structure finish, sand finish, hammer finish, metallic, antique finish</p> <p>KB7. pretreatment process, e.g., degreasing, water rinsing, activation, phosphating or chromating, passivation, drying</p> <p>KB8. coating process, equipment, hopper, booth and electrostatic sprayer controls</p> <p>KB9. curing process, e.g., cycles, temperature controls, holding time, etc.</p> <p>KB10. quality checks to pass inline</p> <p>KB11. quality standards of customer or OEM</p> <p>KB12. documentation process</p> <p>KB13. various techniques for estimating customer service standards in the market and benchmarks</p> <p>KB14. significance of customer education</p> <p>KB15. pricing metrics</p> <p>KB16. jig preparation and checking</p>
Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. read company's work instructions and quality policy</p> <p>SA2. read instructions by powder/ paint manufacturers and special requirements</p> <p>SA3. read instructions on controls and machines</p> <p>SA4. read production plan</p>
	Writing Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. maintain records as per company's policy</p> <p>SA6. note down customer's requirements accurately</p> <p>SA7. prepare document on colour, finish and chemistry required, process description and time and effort estimated for the process</p> <p>SA8. write document on disassembling of component</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA9. listen to customers to capture their requirements</p>

PCS/N5105

Prepare for coating

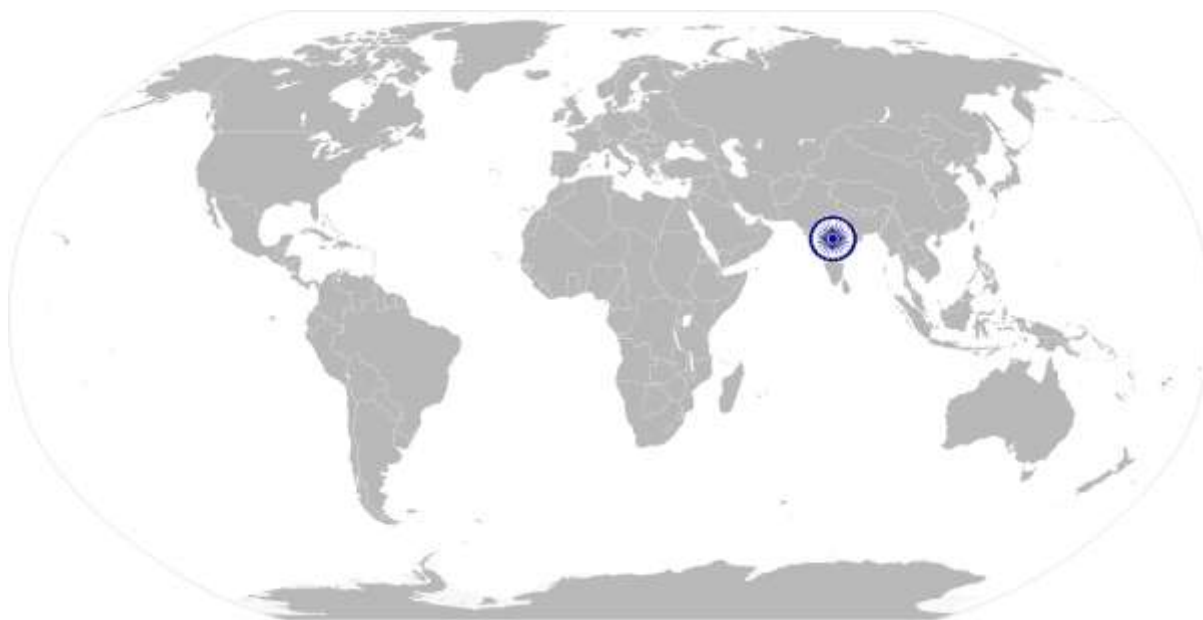
	SA10. answer the queries of customers in language they understand SA11. communicate with customers in pleasant, polite, calm and clear way SA12. educate customer on the process as per company's standards
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. select the right materials and tools for painting as per the chemistry, colour and finish required and company's standards SB2. provide a detailed schedule to customer as per company's standards
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB3. schedule the sequence of work process SB4. arrange for materials and equipment required to do the work SB5. interact with persons involved in the process as per company's standards
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB6. ensure the completion of work as per the schedule given to the customer at the start of the work
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB7. resolve work related problems such as related to materials shortage, helper support, change in customer expectation, either by communicating politely but effectively or by escalating to superior
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB8. assess time and effort required for powder coating SB9. make notes on disassembling which can be referenced during assembling the component
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB10. remove metal bearings as their lifetime will be shortened due to heating SB11. remove the pieces which are made up of rubber, plastic etc to prevent them melting during baking SB12. check proper working of controls and conveyor

PCS/N5105

Prepare for coating

NOS Version Control

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PCS/N5106 Pre-treat the section to be coated

National Occupational Standard



Overview

This unit is about cleaning the surface, loading prepared sections on conveyor and pre-treating for coating.

PCS/N5106

Pre-treat the section to be coated

National Occupational Standard

Unit Code	PCS /5106
Unit Title (Task)	Pre-treat the section to be coated
Description	This OS unit is about cleaning the surface, loading prepared sections for pre-treatment and pre-treatment for coating
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Clean the surface • Load sections on conveyor • Pre-treat for coating <p>Range statement: Pre-treatment bath, Jigs, paint booth, spray gun, brush, buffers and curing machine</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Cleaning the surface	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. use brush to remove dust from the corners</p> <p>PC2. fix the buffing pad</p> <p>PC3. pour the chemical for cleaning onto the buffing pad</p> <p>PC4. switch on the buffer</p> <p>PC5. clean the surface by moving buffer machine on the component surface in circular motion</p>
Loading sections on conveyor	<p>To be competent, the user/ individual must be able to:</p> <p>PC6. load the tanks with chemical and check the concentration of chemicals</p> <p>PC7. hang the components on jigs and move towards the pre-treatment tanks</p> <p>PC8. set the control of jigs, conveyor speed and temperature</p>
Pre-treating for powder coating	<p>To be competent, the user/ individual must be able to:</p> <p>PC9. dip component in alkaline/acid cleaners to degrease the section</p> <p>PC10. rinse the metal in water</p> <p>PC11. dip the component in activation solution to convert any chemical on the metal surface to fumes</p> <p>PC12. dip the component in phosphatising/ chromating solution to remove rust and formation of blue-grey layer to prevent the metal for corrosion or oxidation</p> <p>PC13. final chemical rinse as passivation treatment for further enhancing the anti-corrosion performance of the metal</p> <p>PC14. dry metal with hot air</p> <p>PC15. perform cloth test to check moisture</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company /	<p>The individual on the job needs to know and understand:</p> <p>KA1. company's policy and work instructions on quality standards</p> <p>KA2. company's personnel management and incentives</p> <p>KA3. importance of the individual's role in the workflow</p> <p>KA4. reporting structure</p>

PCS/N5106

Pre-treat the section to be coated

organization and its processes)	KA5. occupational health and safety standards
B. Technical Knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. production plan and bill of materials</p> <p>KB2. properties of paint or powder, e.g., chemical resistance, mechanical strength, uv resistance, flexibility, hardness, drying time</p> <p>KB3. ingredients of paint or powder, e.g., binder, pigment, extender, additive</p> <p>KB4. disassembling and assembling of components</p> <p>KB5. paint chemistry, e.g. pure epoxy, epoxy polyester, pure polyester, polyurethane</p> <p>KB6. types of finish, e.g., gloss, semi-gloss, satin, matt, structure finish, sand finish, hammer finish, metallic, antique finish</p> <p>KB7. pretreatment process, e.g., degreasing, water rinsing, activation, phosphating or chromating, passivation, drying</p> <p>KB8. coating process, equipment, hopper, booth and electrostatic sprayer controls</p> <p>KB9. curing process, e.g., cycles, temperature controls, holding time, etc.</p> <p>KB10. quality checks to pass inline</p> <p>KB11. quality standards of customer or OEM</p> <p>KB12. documentation process</p> <p>KB13. various techniques for estimating customer service standards in the market and benchmarks</p> <p>KB14. significance of customer education</p> <p>KB15. pricing metrics</p> <p>KB16. jig preparation and checking</p>
Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. read company's work instructions and quality policy</p> <p>SA2. read instructions by powder or paint manufacturers and special requirements</p> <p>SA3. read instructions on controls and machines</p> <p>SA4. read production plan</p>
	Writing Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. maintain records as per company's policy</p> <p>SA6. note down customer's requirements accurately</p> <p>SA7. prepare document on colour, finish and chemistry required, process description and time and effort estimated for the process</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. listen to customers to register their requirements</p> <p>SA9. answer the queries of customers in language they understand</p>

PCS/N5106

Pre-treat the section to be coated

	SA10. communicate with customers in pleasant, polite, calm and clear way SA11. educate customer on the process as per company's standards
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. schedule the sequence of work process SB2. arrange for materials and equipment required to do the work SB3. interact with persons involved in the process as per company's standards
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB4. arrange for paint, tools and other chemicals ready before use SB5. prioritize the work to complete as per agreed schedule SB6. work in coordination with co-workers to do the quality work in time SB7. check tanks are clean and chemical concentration in tanks is as per company standards before starting the pre-treatment process
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB8. ensure the completion of work as per the given schedule and quantity of materials provided to the customer at the start of the work
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB9. resolve work related problems such as related to materials shortage, helper support, change in customer expectation, either by communicating politely but effectively or by escalating to superior
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB10. select pre-treatment process depending on the metal and type of surface contaminant (e.g. oxidation, organic dirt or grease)
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB11. check proper working of controls and conveyor SB12. check earthing of jigs SB13. dry metal with hot air at temperature and for time as per company's standards

PCS/N5106

Pre-treat the section to be coated

NOS Version Control

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Occupation	Industrial Paint Application	Next review date	31/03/18





National Occupational Standard



Overview

This unit is about preparing paint colour, applying paint on the surface and finishing the surface.

PCS/N5107

Apply top-coat and finish the surface

National Occupational Standard

Unit Code	PCS/N5107
Unit Title (Task)	Apply top-coat and finish the surface
Description	This OS unit is about preparing paint colour, applying paint on the surface and finishing the surface
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Prepare paint colour • Apply paint on the surface • Finish the surface <p>Range statement: Pre-treatment bath, Jigs, paint booth, spray gun, brush, buffers and curing machine</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Prepare paint colour	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. check the paint colour as per the given mixing ratio</p> <p>PC2. prepare colour in mentioned ratio of pigment, thinner and hardener</p>
Apply paint on the surface	<p>To be competent, the user/ individual must be able to:</p> <p>PC3. clean the surface by buffing</p> <p>PC4. fill the paint in the fluid container</p> <p>PC5. adjust controls for pressure in fluid container and size of the fluid orifice</p> <p>PC6. spray paint on the work surface in the paint booth</p> <p>PC7. maintain given pressure by hand or preprogrammed support sprayer</p>
Finish the surface	<p>To be competent, the user/ individual must be able to:</p> <p>PC8. remove masking</p> <p>PC9. send for curing</p> <p>PC10. after curing, check surface for any grains, etc., formed on the surface after painting</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. company's policy and work instructions on quality standards</p> <p>KA2. company's personnel management and incentives</p> <p>KA3. importance of the individual's role in the workflow</p> <p>KA4. reporting structure</p> <p>KA5. occupational health and safety standards</p>

PCS/N5107

Apply top-coat and finish the surface

<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. mixing pigment, thinner and hardener in the ratio given to prepare a batch paint</p> <p>KB2. adjusting pressure on the fluid container and the size of the fluid orifice</p> <p>KB3. distance to be maintained while spraying</p> <p>KB4. number of coats to be applied</p> <p>KB5. use of air spray gun or electrostatic spray gun</p> <p>KB6. common causes of poor painting</p> <p>KB7. common symptoms of poor painting</p> <p>KB8. microns of thickness required</p> <p>KB9. production plan and bill of materials</p> <p>KB10. properties of paint or powder, e.g., chemical resistance, mechanical strength, uv resistance, flexibility, hardness, drying time</p> <p>KB11. ingredients of paint or powder, e.g., binder, pigment, extender, additive</p> <p>KB12. disassembling and assembling of components</p> <p>KB13. paint chemistry, e.g. pure epoxy, epoxy polyester, pure polyester, polyurethane</p> <p>KB14. types of finish, e.g., gloss, semi-gloss, satin, matt, structure finish, sand finish, hammer finish, metallic, antique finish</p> <p>KB15. pretreatment process, e.g., degreasing, water rinsing, activation, phosphating or chromating, passivation, drying</p> <p>KB16. coating process, equipment, hopper, booth and electrostatic sprayer controls</p> <p>KB17. curing process, e.g., cycles, temperature controls, holding time, etc.</p> <p>KB18. quality checks to pass inline</p> <p>KB19. quality standards of customer or OEM</p> <p>KB20. documentation process</p> <p>KB21. various techniques for estimating customer service standards in the market and benchmarks</p> <p>KB22. significance of customer education</p> <p>KB23. costing metrics and productivity</p> <p>KB24. jig preparation and checking</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Reading Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. to read company's work instructions and quality policy</p> <p>SA2. to read instructions displayed on the chemical containers</p> <p>SA3. to read the mixing ratio given for a particular colour</p> <p>Writing Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA4. to maintain records as per company's policy</p> <p>Oral Communication (Listening and Speaking skills)</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. to answer the queries of customers in language they understand</p>

PCS/N5107

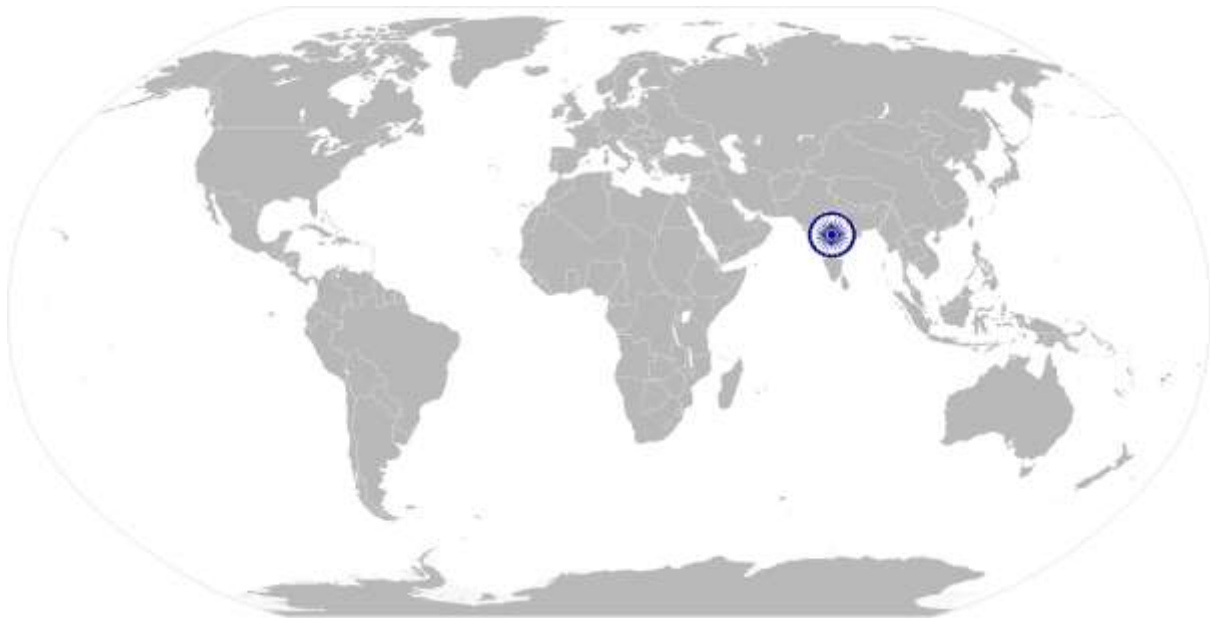
Apply top-coat and finish the surface

	SA2. communicate with customers in pleasant, polite, calm and clear way
B. Professional Skills	Decision Making
	The user/ individual on the job needs to know and understand how to: SB1. Matching the colour from the colour booklet similar to the undamaged motor body and adding colour in amount matching exactly the same
	Plan and Organize
	The user/ individual on the job needs to know and understand how to: SB2. to schedule the sequence of work process SB3. to arrange for materials and equipment required to do the work
	Customer Centricity
	The user/ individual on the job needs to know and understand how to: SB4. to ensure the completion of work as per the given schedule given to the customer at the start of the work
	Problem Solving
	The user/ individual on the job needs to know and understand how to: SB5. to rub till all grains are removed from the surface after painting SB6. to polish the surface with Buffers till required gloss is achieved SB7. to resolve any concerns related to work or customer's requirement by communicating politely and effectively or escalating the issue to designated superior
	Analytical Thinking
	The user/ individual on the job needs to know and understand how to: SB8. number of coats to be applied for required thickness SB9. mixing ratio given by the colour booklet and what subtraction and addition to be made to produce colour matching the motor body SB10. produce the right quantity of paint required for the job SB11. avoid paint wastage
	Critical Thinking
	The user/ individual on the job needs to know and understand how to: SB12. to hold the gun perpendicular to the work throughout the spray stroke SB13. to move the spray gun parallel to the work surface throughout the spray stroke SB14. move the spray gun at a speed which ensures full wet coat is applied on the surface SB15. to ensure full work surface area is covered

PCS/N5107 Apply top-coat and finish the surface

NOS Version Control

NOS Code	PCS/N5107		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	17/02/16
Industry Sub-sector	Application	Last reviewed on	31/03/16
Occupation	Industrial Paint Application	Next review date	31/03/18





National Occupational Standard



Overview

This unit is about maintaining pre-treatment bath, paint booth, tools and equipment.

PCS/N5108

Maintain jigs and parts

National Occupational Standard

Unit Code	PCS /N5108
Unit Title (Task)	Maintain jigs and parts
Description	This OS unit is about maintaining pre-treatment bath, paint booth, tools and equipment.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Maintain pre-treatment bath and paint booth • Maintain tools and equipment <p>Range statement: Pre-treatment bath, Jigs, paint booth, spray gun, brush, buffers and curing machine</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Maintaining pre-treatment bath and Paint booth	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. remove surface oils from tank using oil skimmers</p> <p>PC2. remove particles from the bottom of the tank using bag filtration</p> <p>PC3. remove emulsified and suspended oils using ultrafiltration or centrifugation</p> <p>PC4. remove deposits from paint booths</p>
Maintaining tools and equipment	<p>To be competent, the user/ individual must be able to:</p> <p>PC5. clean powder hoses</p> <p>PC6. remove deposits from powder guns</p> <p>PC7. clean jigs after the process is over</p> <p>PC8. clean the facility regularly</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The individual on the job needs to know and understand:</p> <p>KA1. company's policy and work instructions on quality standards</p> <p>KA2. company's personnel management and incentives rules</p> <p>KA3. importance of the individual's role in the workflow</p> <p>KA4. reporting structure</p> <p>KA5. occupational health and safety standards</p>
B. Technical Knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. powder coating plant design</p> <p>KB2. types of methods to clean tanks used for pre-treatment</p> <p>KB3. maintaining pre-treatment bath, paint booth, tools and equipments as per company's standards</p> <p>KB4. properties of paint or powder, e.g., chemical resistance, mechanical strength, uv resistance, flexibility, hardness, drying time</p> <p>KB5. ingredients of paint or powder, e.g., binder, pigment, extender, additive</p> <p>KB6. disassembling and assembling of components</p> <p>KB7. pretreatment process, e.g., degreasing, water rinsing, activation, phosphating</p>

PCS/N5108

Maintain jigs and parts

	<p>or chromating, passivation, drying</p> <p>KB8. coating process, equipment, hopper, booth and electrostatic sprayer controls</p> <p>KB9. charging of powder gun</p> <p>KB10. curing process, e.g., cycles, temperature controls, holding time, etc.</p> <p>KB11. quality checks to pass inline</p> <p>KB12. quality standards of customer or OEM</p> <p>KB13. jig preparation and checking</p>
Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. read company's work instructions and quality policy</p> <p>SA2. read instructions by powder/ paint manufacturers and special requirements</p> <p>SA3. read instructions on controls and machines</p> <p>SA4. read production plan</p>
	Writing Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. maintain records as per company's policy</p> <p>SA6. updating maintenance record</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA7. communicate with colleagues in pleasant, polite, calm and clear way</p>
B. Professional Skills	Decision Making
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. select the right tools and methods for cleaning</p> <p>SB2. provide a detailed maintenance record</p>
	Plan and Organize
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. schedule the sequence of work process</p> <p>SB4. arrange for materials and equipment required to do the work</p> <p>SB5. interact with persons involved in the process as per company's standards</p>
	Customer Centricity
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB6. ensure the completion of work as per the schedule given to the customer at the start of the work</p>
	Problem Solving
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB7. resolve work related problems such as related to materials shortage, helper</p>

PCS/N5108

Maintain jigs and parts

	support, change in customer expectation, either by communicating politely but effectively or by escalating to superior
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB8. assess time and effort required for cleaning
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB9. clean and maintain tools, equipments, pre-treatment bath and paint booth as per company's standards



PCS/N5108

Maintain jigs and parts

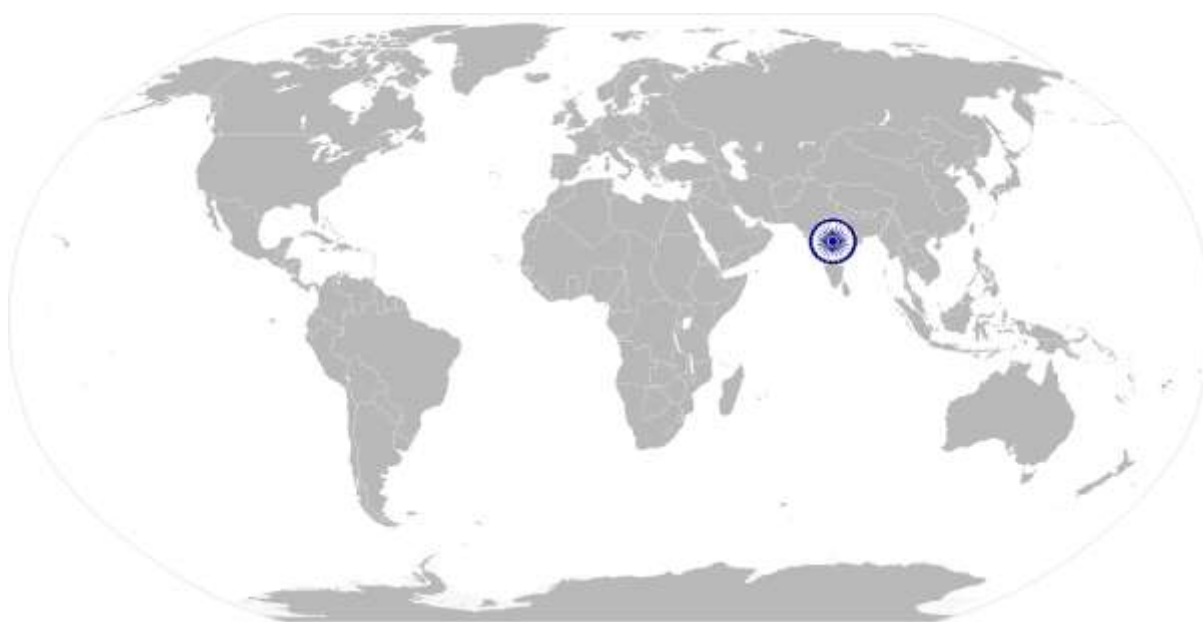
NOS Version Control

NOS Code	PCS/N5108		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	17/02/16
Industry Sub-sector	Application	Last reviewed on	31/03/16
Occupation	Industrial Paint Application	Next review date	31/03/18





National Occupational Standard



Overview

This unit is about communicating effectively with superiors, colleagues and/or customers to achieve a smooth workflow.

PCS/N9901

Coordinate with colleagues and/or customers

National Occupational Standard

Unit Code	PCS/N9901
Unit Title (Task)	Coordinate with colleagues and/or customers
Description	This OS unit is about communicating effectively with superiors, colleagues and customer to achieve a smooth workflow
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Interact with superior • Communicate with colleagues • Communicate effectively with customers, if required
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Interacting with superior	<p>To be competent, the user/ individual must be able to:</p> <p>PC11. receive job order and instructions from reporting superior</p> <p>PC12. understand the work output requirements, targets, performance indicators and incentives</p> <p>PC13. deliver quality work on time and report any anticipated reasons for delays</p> <p>PC14. escalate unresolved problems or complaints to the relevant senior</p> <p>PC15. communicate maintenance and repair schedule proactively to the superior</p> <p>PC16. receive feedback on work standards</p> <p>PC17. document the completed work schedule and handover to the superior</p>
Communicating with colleagues	<p>To be competent, the user/ individual must be able to:</p> <p>PC18. exhibit trust, support and respect to all the colleagues in the workplace</p> <p>PC19. aim to achieve smooth workflow</p> <p>PC20. help and assist colleagues with information and knowledge</p> <p>PC21. seek assistance from the colleagues when required</p> <p>PC22. identify the potential and existing conflicts with the colleagues and resolve</p> <p>PC23. pass on essential information to other colleagues on timely basis</p> <p>PC24. maintain the etiquette, use polite language, demonstrate responsible and disciplined behaviors to the colleagues</p> <p>PC25. interact with colleagues from different functions clearly and effectively on all aspects to carry out the work among the team and understand the nature of their work</p> <p>PC26. put team over individual goals and multi task or share work where necessary supporting the colleagues</p> <p>PC27. highlight any errors of colleagues, help to rectify and ensure quality output</p> <p>PC28. work with cooperation, coordination, communication and collaboration, with shared goals and supporting each others performance</p>
Communicating effectively with customers, if required	<p>To be competent, the user/ individual must be able to:</p> <p>PC29. ask more questions to the customers and identify their needs</p> <p>PC30. possess strong knowledge on the product, services and market</p> <p>PC31. brief the customers clearly on potential costs and hazards</p> <p>PC32. communicate with the customers in a polite, professional and friendly manner</p> <p>PC33. build effective but impersonal relationship with the customers</p>

PCS/N9901

Coordinate with colleagues and/or customers

	<p>PC34. ensure the appropriate language and tone are used with customers</p> <p>PC35. listen actively and have a two way communication</p> <p>PC36. be sensitive to the gender, cultural and social differences such as modes of greeting, formality, etc.</p> <p>PC37. understand the customer expectations correctly and provide the appropriate products and services</p> <p>PC38. understand the customer dissatisfaction and address or escalate their complaints effectively</p> <p>PC39. maintain a positive, sensible and cooperative manner all time</p> <p>PC40. ensure to maintain a proper body language, dress code, gestures and etiquettes towards the customers</p> <p>PC41. avoid interrupting the customers while they talk</p> <p>PC42. ensure to avoid negative questions and statements to the customers</p> <p>PC43. inform the customers on any issues or problems before hand and also on the developments involving them</p> <p>PC44. ensure to respond back to the customer immediately for their voice messages, e-mails, apps, etc.</p> <p>PC45. develop good rapport with the customers and promote other products and services</p> <p>PC46. seek feedback from the customers on their understanding to what was discussed</p> <p>PC47. explain the terms and conditions clearly</p>
Knowledge and Understanding (K)	
<p>B. Organizational</p> <p>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. company's policies on personnel management, effective team work at workplace</p> <p>KA2. company's HR policies</p> <p>KA3. company's reporting structure</p> <p>KA4. company's documentation policy</p> <p>KA5. company's customer profile</p> <p>KA6. occupational health and safety standards</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA7. methods for effective communication with various categories of people and the different departments in the organization</p> <p>KA8. significance of team coordination and productivity targets of the organisation</p> <p>KA9. how to record the job activity as required on various types of documents?</p> <p>KA10. how to use computer or smartphone to communicate effectively and productively?</p> <p>KA11. significance of helping colleagues with specific issues and problems</p> <p>KA12. importance of meeting quality and time standards as a team</p> <p>KA13. how to practice effective listening and talking</p> <p>KA14. effective use of voice tone and pitch for communication</p>

PCS/N9901

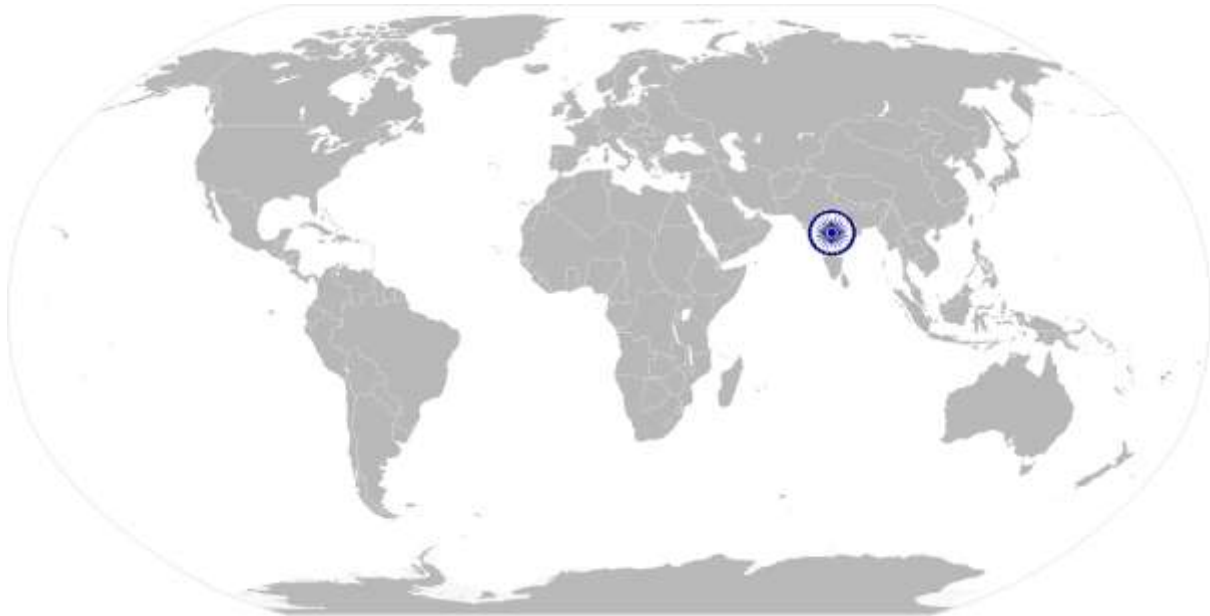
Coordinate with colleagues and/or customers

	<p>KA15. how to demonstrate ethics and convey discipline to the customers?</p> <p>KA16. how to build effective working relationship with mutual trust and respect within the team</p> <p>KA17. importance of dealing with grievances effectively and in time</p>
Skills (S)	
C. Core Skills/ Generic Skills	Reading Skills
	The user/ individual on the job needs to know and understand how to:
	SA1. read job sheets, company policy documents and information displayed at the workplace
	SA2. read notes/comments from the supervisor
	Writing Skills
	The user/ individual on the job needs to know and understand how to:
D. Professional Skills	SA3. fill up documentation pertaining to job requirement
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to:
	SA4. interact with team members to work efficiently
	SA5. communicate effectively with superior to achieve smooth workflow
	SA6. communicate effectively with the customers to build a good rapport with them
	SA7. use language that the customer or colleague understands
	SA8. use the communications systems of the company, e.g., telephone, fax, public announcement systems
	SA9. E-mail and use Internet for communicating
	SA10. use of audio-visual aids to communicate complex issues
	Decision Making
	The user/ individual on the job needs to know and understand how to:
	SB1. spot and communicate potential areas of disruptions to work process and report the same
	SB2. report to supervisor and deal with a colleague individually, depending on the type of concern
	Plan and Organize
	The user/ individual on the job needs to know and understand how to:
	SB3. plan communication strategy in order to avoid conflicts and work disruption
	Customer Centricity
	The user/ individual on the job needs to know and understand how to:
	SB4. practice patient listening, careful talking and paraphrasing in order to avoid misunderstanding
	Problem Solving
	The user/ individual on the job needs to know and understand how to:
	SB5. coordinate with different departments and multi-task as necessary

PCS/N9901

Coordinate with colleagues and/or customers

	SB6. contribute to quality of team work and achieve smooth workflow
	SB7. share work load as required
	SB8. delegate work in consultation with superior or as necessary instead of allowing work to pile up
	Analytical Thinking
	The user/ individual on the job needs to know and understand how to:
	SB9. resolve recurring inter-personal conflicts by clear and two-way dialogue
	Critical Thinking
	The user/ individual on the job needs to know and understand how to:
	SB10. improve work processes by interacting with others and adopting best practices



PCS/N9901

Coordinate with colleagues and/or customers

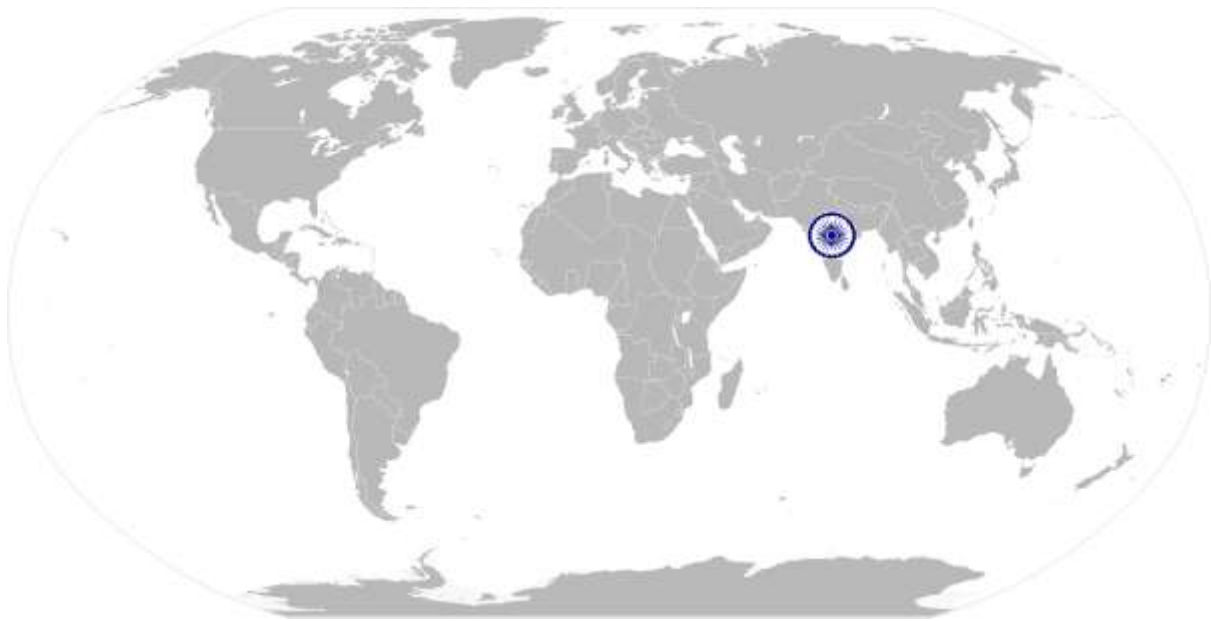
NOS Version Control

NOS Code	PCS/N9901		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	17/02/16
Industry Sub-sector	Manufacturing and Application	Last reviewed on	31/03/16
Occupation	Industrial Paint Application	Next review date	31/03/18





National Occupational Standard



Overview

This unit is about understanding accepted levels of standards of product quality or customer service and executing the designated work in a manner that results in 100% satisfaction.

PCS/N9902

Maintain standards of product/ service quality

National Occupational Standard

Unit Code	PCS/N9902
Unit Title (Task)	Maintain standards of product/ service quality
Description	This OS unit is about understanding accepted levels of standards of product quality or customer service and executing the designated work in a manner that results in 100% satisfaction.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Engage with superior or customers to understand their product/service quality requirements Achieve 100% satisfaction for given quality Work to fulfil end-customers's expectations
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Engaging with superior or customers to understand product/ service quality requirements	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. keep in mind the profiles of expected customers</p> <p>PC2. understand the target customers and their product/ service quality requirements as defined by the company</p> <p>PC3. receive superior's/ customer feedback from regularly</p> <p>PC4. aim to build a good connect with the customers through quality product/ service</p> <p>PC5. keep tab on frequent discussions with regular customers on general likes and dislikes in the market, latest trends, customer expectations, etc.</p> <p>PC6. receive updates on regular feedbacks from the clients on current service, complaints, and improvements to be made, etc.</p> <p>PC7. if necessary, compulsively seek customer rating of product/ service in order to help develop a set of regularly improved procedures</p> <p>PC8. demonstrate quality orientation at all level</p> <p>PC9. aim to gain their long lasting loyalty through satisfaction</p>
Achieving 100% customer satisfaction for given quality	<p>To be competent, the user/ individual must be able to:</p> <p>PC10. ensure 100% customer satisfaction via product/ service quality</p> <p>PC11. treat the customers fairly and with due respect</p> <p>PC12. focus on executing company's marketing strategies and product development needs</p> <p>PC13. focus on enhancing brand value of company by maintaining or enhancing quality standards</p>
Fulfilling customer requirement	<p>To be competent, the user/ individual must be able to:</p> <p>PC14. ensure that customer expectations are met</p> <p>PC15. learn to read customers' needs and wants</p> <p>PC16. willingly accept and implement new and innovative products and services that help improve customer satisfaction</p> <p>PC17. communicate feedback of customer to senior, especially, the negative feedback</p> <p>PC18. maintain close contact with the customers and focus groups</p>

PCS/N9902

Maintain standards of product/ service quality

	<p>PC19. offer promotions to improve product satisfaction level to the customers periodically</p> <p>PC20. weigh the cost of fulfilling unscheduled customer requests, consult with senior and advise the customer on alternatives</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. company's quality standards policy</p> <p>KA2. company's HR policies</p> <p>KA3. company's reporting structure</p> <p>KA4. company's documentation policy for quality compliance</p> <p>KA5. company's end-customer profile</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA6. significance of maintaining or enhancing company's quality standards</p> <p>KA7. significance of treating the customers with respect and professional way</p> <p>KA8. different types of parameters tested for quality</p> <p>KA9. test pass/ fail criteria and acceptable tolerance levels</p> <p>KA10. equipment used for quality tests</p> <p>KA11. importance of gaining customer loyalty</p> <p>KA12. methods of engaging with the customers effectively and professionally, for customer facing activities</p> <p>KA13. ways to improve company's customer satisfaction rating</p> <p>KA14. prevailing market standards of customer satisfaction</p> <p>KA15. standard operating procedure (SOP)</p> <p>KA16. the variety of common and unscheduled requests to expect in customer facing activities</p> <p>KA17. significance of being transparent and courteous under all circumstances involving customer interaction without losing composure</p>
Skills (S)	
<p>A. Core Skills/ Generic Skills</p>	<p>Reading Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. read job sheets, company policy documents and information displayed at the workplace about quality standards</p> <p>SA2. read notes/comments from the supervisor</p> <p>Writing Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA3. fill up documentation pertaining to one's role in customer satisfaction</p> <p>Oral Communication (Listening and Speaking skills)</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. interact with team members to achieve quality standards</p>

PCS/N9902

Maintain standards of product/ service quality

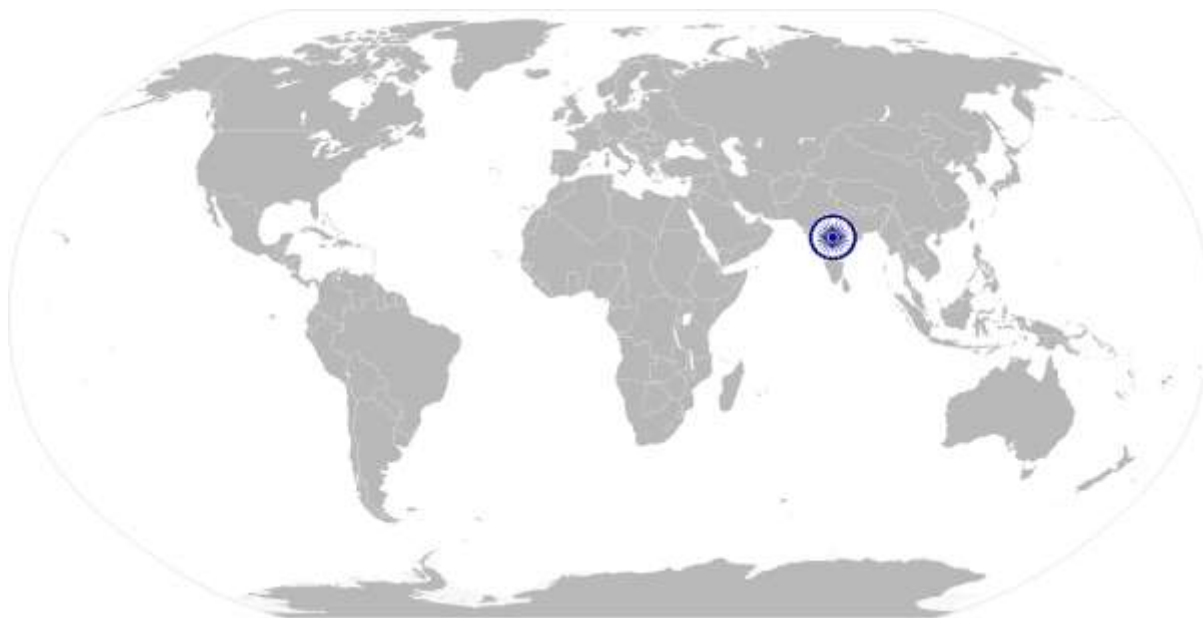
	<p>SA2. communicate effectively with customers in field jobs</p> <p>SA3. engage with customer to understand their expectations in field jobs</p> <p>SA4. company standards and effectiveness improvements pattern</p> <p>SA5. resolve customer's concerns satisfactorily within timeframe stipulated by the company or as agreed with customer or colleague</p> <p>SA6. use Internet for updating on current quality related practices</p> <p>SA7. use of audio-visual aids to communicate recurring quality concerns</p>
B. Professional Skills	<p>Decision Making</p> <p>The user/ individual on the job needs to know and understand:</p> <p>SB1. how to spot and when to report potential areas of recurring quality concerns</p> <p>SB2. how to address the complaints and handle the dissatisfied the customers</p> <p>Plan and Organize</p> <p>The user/ individual on the job needs to know and understand:</p> <p>SB3. how to plan workflow to achieve/ deliver 100% quality in the given time and with given equipment</p> <p>Customer Centricity</p> <p>The user/ individual on the job needs to know and understand:</p> <p>SB4. how to earn full customer loyalty</p> <p>Problem Solving</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB5. coordinate with different departments in order to service the customer better</p> <p>SB6. contribute to quality of team work and achieve smooth workflow</p> <p>SB7. share work load as required</p> <p>Analytical Thinking</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB8. communicate new product quality standards to different stakeholders in the market and train colleagues for quality, if required</p> <p>Critical Thinking</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB9. improve work processes by interacting with customers and adopting best practices</p> <p>SB10. resolve recurring inter-personal or system related conflicts with colleagues that hinder customer service</p> <p>SB11. act upon constructively on any problems as pointed by customers</p> <p>SB12. handle personality clashes effectively</p>

PCS/N9902

Maintain standards of product/ service quality

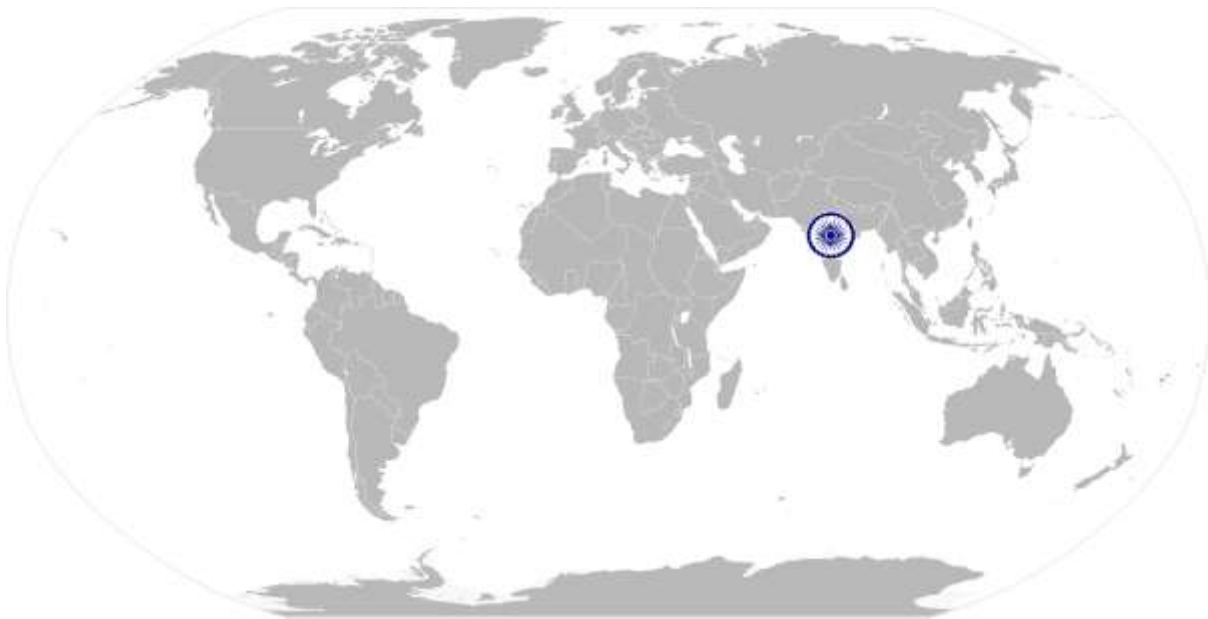
NOS Version Control

NOS Code	PCS/N9902		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	17/02/16
Industry Sub-sector	Manufacturing and Application	Last reviewed on	31/03/16
Occupation	Industrial Paint Application	Next review date	31/03/18





National Occupational Standard



Overview

This unit is about following workplace safety standards to have a hazard-free environment and avoid downtime because of disruption from personal injuries and hazardous system failures.

PCS/N9903 Maintain OH&S standards and follow environmental norms

National Occupational Standard

Unit Code	PCS/N9903
Unit Title (Task)	Maintain OH&S standards and follow environmental norms
Description	This OS unit is about complying with workplace health, hygiene, safety and environmental standards to have a hazard-free environment and avoid downtime. It is also about following government laid norms for waste treatment and disposal
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Take precautionary measures to avoid work hazards and environmental damage • Follow standard health, safety and environmental policies and procedures • Use safety tools and/ or personal protective equipment • Achieve health, safety and environmental standards
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Taking precautionary measures to avoid health, safety and environmental hazards	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. assess the various health, safety and environmental hazards in the work areas</p> <p>PC2. take necessary steps to eliminate or minimize the hazards</p> <p>PC3. analyze the causes of accidents at the workplace</p> <p>PC4. suggest measures to prevent such accidents from taking place</p> <p>PC5. take preventive measures to avoid risk of burns and other injury due to contact with hot surfaces, gas, fire, hot fluids/ liquids, etc.</p> <p>PC6. suggest methods to improve the existing safety procedures at the workplace</p> <p>PC7. dispose waste in the designated areas safely as per company's policies and rules</p> <p>PC8. maintain appropriate ventilation in the rooms while there is more exposure to paint vapours</p> <p>PC9. avoid dumping unused cans to safeguard the environment</p>
Following standard health, safety and environmental policies and procedure	<p>To be competent, the user/individual must be able to:</p> <p>PC10. be aware of the locations of fire extinguishers, emergency exits, etc.</p> <p>PC11. practice correct emergency procedures</p> <p>PC12. check and review the storage areas frequently</p> <p>PC13. stack items in an organized way and use safe lifting techniques to reduce risk of injuries from handling procedures at the storage areas</p> <p>PC14. ensure to be safe while handling materials, tools, acids, chemicals, equipment, etc.</p> <p>PC15. store the chemicals and acids in a well-ventilated and locked areas with warning signs displayed</p> <p>PC16. ensure safe techniques while moving furniture and fixtures</p> <p>PC17. ensure to reduce risk of injury from use of electrical tools</p> <p>PC18. read the manufacturer's manual carefully before use of any equipment</p> <p>PC19. unplug the electrical equipment before performing maintenance</p> <p>PC20. keep the floors free from oil, water and grease to avoid slippery surface</p> <p>PC21. use rubber mats in the places where floors are constantly wet</p> <p>PC22. ensure safety from injuries of cuts to loss of fingers, while handling sharp</p>

PCS/N9903 Maintain OH&S standards and follow environmental norms

	<p>hazardous tools and equipment</p> <p>PC23. use flat surfaces, secure holding and protective wear while using such sharp tools</p> <p>PC24. use health, safety and environmental protection practices for storing, cleaning, and maintaining tools, equipment, and supplies</p> <p>PC25. practice ergonomic lifting, bending, or moving equipment and supplies</p> <p>PC26. identify the requirement for maintaining environmental norms</p> <p>PC27. comply with the environmental safety norms while on work to prevent accidents and health hazards</p> <p>PC28. follow company policies and rules regarding use of hazardous materials to avoid health, safety and environmental impacts caused by them</p>
Using safety tools or Personal Protective Equipment	<p>To be competent, the user/individual must be able to:</p> <p>PC29. ensure the employees have access to first aid kit when needed</p> <p>PC30. ensure all equipment and tools are stored and maintained properly and safe to use</p> <p>PC31. ensure to use personal protective equipment and safety gear such as gloves, mask, headwear, footwear, glasses, goggles, etc. for specific tasks and work conditions where required</p> <p>PC32. ensure to display safety signs at places where necessary for people to be cautious</p> <p>PC33. ensure electrical precautions such as insulated clothing, adequate equipment insulation, dry work area, switch off the power supply when not required, etc.</p> <p>PC34. ensure availability of general health and safety equipment such as fire extinguishers, first aid equipment, safety equipment, clothing, safety installations such as fire exits, exhaust fans, etc.</p>
Achieving health, safety and environmental standards	<p>To be competent, the user/individual must be able to:</p> <p>PC35. document all the first aid treatments, inspections, etc., conducted to keep track of the safety measures undertaken</p> <p>PC36. document all the environmental hazards caused and the measures undertaken to comply with the established safety procedures of the workplace</p> <p>PC37. report to the supervisor on any problems and hazards identified and any breach of environmental procedures.</p> <p>PC38. ensure zero accident at workplace</p> <p>PC39. adhere to safety standards and ensure no material damage</p> <p>PC40. take necessary action and correct any environmental hazards caused</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The individual on the job needs to know and understand:</p> <p>KA1. company's policies on health, safety and environmental procedures at the workplace</p> <p>KA2. company's reporting structure</p> <p>KA3. company's documentation policy</p> <p>KA4. occupational health, safety and environmental standards.</p>

PCS/N9903 Maintain OH&S standards and follow environmental norms

B. Technical Knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. the purpose and usage of protective gears such as gloves , protective goggles, masks, etc. while working</p> <p>KB2. use of first aid at workplace</p> <p>KB3. significance of accidental risks to the worker and productivity loss</p> <p>KB4. reporting procedure or heirarchy for signs of damage and potential hazards</p> <p>KB5. methods to minimize accidental risks</p> <p>KB6. safe handling of chemicals, acids, etc. for cleaning</p> <p>KB7. material handling procedure</p> <p>KB8. standard operating procedure for safety drills and equipment maintenance</p> <p>KB9. precautionary activities to be followed for work place safety</p> <p>KB10. operation of tools and electrical equipment</p> <p>KB11. emergency procedures to be followed in case of an mishap such as fire, accidents, etc.</p> <p>KB12. government and company's environmental norms</p> <p>KB13. solid, liquid and gaseous waste disposal, treatment norms and equipment</p> <p>KB14. necessary action to be taken for the hazards identified</p> <p>KB15. methods to minimize environmental hazards</p> <p>KB16. precautionary activities to be followed to minimize environmental impacts</p>
Skills (S)	
A. Core Skills/ Generic Skills	<p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. read and interpret the relevant organisation policies, procedures and diagrams that identify health, safety and safe environmental practices.</p> <p>SA2. read job sheets, company policy documents and information displayed at the workplace for health, safety and environment.</p> <p>SA3. read notes/comments from the supervisor</p> <p>Writing Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. fill up documentation related to health, safety and environmental standards, if required</p> <p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. verbally report health, safety and environmental hazards and poor organisation practice.</p> <p>SA6. communicate to the supervisor about the work health, safety and environmental issues</p> <p>SA7. receive instructions from supervisor on minimizing the risks</p> <p>SA8. communicate with co-workers about the precautions to be taken for hazards free work</p>

PCS/N9903 Maintain OH&S standards and follow environmental norms

B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to:
	SB1. take preventive measures for the identified hazards
	SB2. select appropriate hand tools and personal protection equipment
	SB3. identify first aid needs in case of an injury
	Plan and Organize
	The user/individual on the job needs to know and understand how to:
	SB4. incorporate elements of health, safety and environment in daily work practices
	Customer Centricity
	The user/ individual on the job needs to know and understand how to:
	SB5. ensure targeted product/ service delivery by practicing stipulated standards of occupational health safety and environmental measures
	Problem Solving
	The user/individual on the job needs to know and understand how to:
	SB6. take care of personal and equipment protection
	SB7. identify the hazards and suggest possible solutions
	Analytical Thinking
	The user/individual on the job needs to know and understand how to:
	SB8. use safety equipment such as fire extinguisher during fire accidents
	SB9. store chemicals and tools in a safe way
	SB10. use tools and equipment without causing any injury to fellow workers
	SB11. analyse the seriousness of the hazards
	Critical Thinking
	The user/individual on the job needs to know and understand how to:
	SB12. evolve smooth workflow by avoiding hazards at workplace
	SB13. evaluate and apply the possible solutions for the hazards, as necessary

PCS/N9903 Maintain OH&S standards and follow environmental norms

NOS Version Control

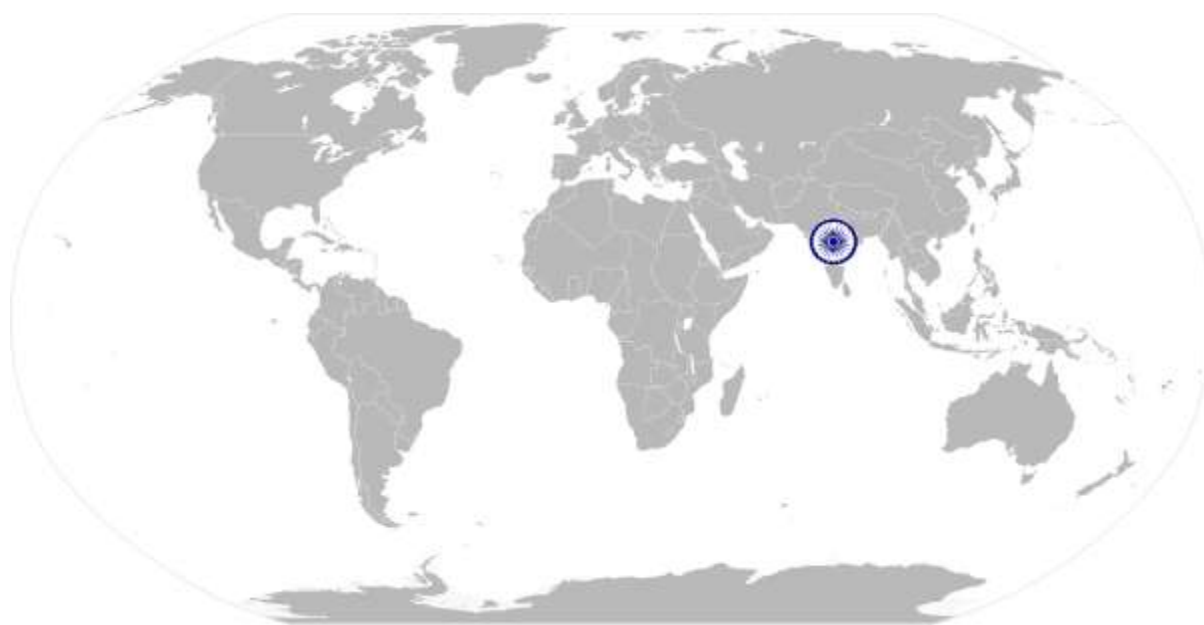
NOS Code	PCS/N9903		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	17/02/16
Industry Sub-sector	Manufacturing & Application	Last reviewed on	31/03/16
Occupation	Production	Next review date	31/03/18



PCS/N9904

Maintain IPR of organisation and customer

National Occupational Standard



Overview

This unit is about securing intellectual property rights (IPR) of the employee's organisation and respecting customer's copyright.

PCS/N9904

Maintain IPR of organisation and customer

Unit Code	PCS/N9904
Unit Title (Task)	Maintain IPR of organisation and customer
Description	This OS unit is about securing intellectual property rights of the company and respecting customer's copyright
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Secure company's IPR Respect customers copyright
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Securing company's IPR	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. prevent leak of new plans and designs to competitors by reporting on time</p> <p>PC2. be aware of any of company's product or design patents</p> <p>PC3. report IPR violations observed in the market, to supervisor or company head</p>
Respecting customer's copyright	<p>To be competent, the user/ individual must be able to:</p> <p>PC4. read copyright clause of the material published on the internet and any other printed material</p> <p>PC5. protect infringement upon customer's business or design plans</p> <p>PC6. consult supervisor or senior management when in doubt about using information available from customer</p> <p>PC7. report any infringement observed by anyone in the company</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. company's policies on intellectual property rights and infringement reporting policy</p> <p>KA2. company's HR policies</p> <p>KA3. company's reporting structure</p> <p>KA4. company's documentation policy</p> <p>KA5. company's customer profile</p> <p>KA6. occupational health and safety standards</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. patents and IPR laws</p> <p>KB2. how IPR protection is important for competitiveness of a company</p> <p>KB3. significance of damages resulting from IPR infringement</p> <p>KB4. industrial and political espionages</p>

PCS/N9904

Maintain IPR of organisation and customer

Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	The user/ individual on the job needs to know and understand: SA1. read job sheets, company policy documents and information displayed at the workplace on IPR SA2. read notes/comments from the supervisor
	Writing Skills
	The user/ individual on the job needs to know and understand: SA3. fill up documentation pertaining to one's role in protecting IPR infringement
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA4. interact with team members to work efficiently SA5. communicate effectively with the customers about IPR protection and building trust
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. identify IPR related issues
	Plan and Organize
	SB2. The user/individual on the job needs to know and understand how to: prevent information leaks SB3. Avoid being caught up in copyright issues
	Customer Centricity
	SB4. The user/individual on the job needs to know and understand how to: inform superior about any copyright infringement
	Problem Solving
	NA
	Analytical Thinking
	The user/ individual on the job needs to know and understand: SB5. basics of what constitutes IPR violations under WTO agreement SB6. penalties to company or individual on evidence of IPR violations SB7. likely effect of IPR violation on customer
	Critical Thinking
	The user/ individual on the job needs to know and understand how to: SB8. improve work IPR related safety and adopting best practices SB9. resolve conflicts related to IPR by reporting in time

PCS/N9904

Maintain IPR of organisation and customer

NOS Version Control

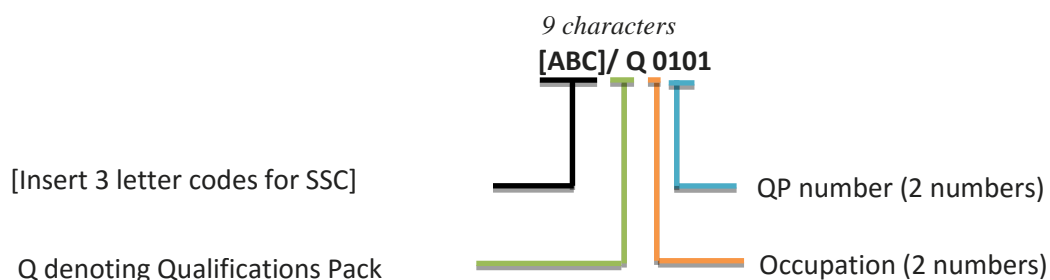
NOS Code	PCS/N9904		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	17/02/16
Industry Sub-sector	Manufacturing and Application	Last reviewed on	31/03/16
Occupation	Industrial Paint Application	Next review date	31/03/18



Annexure

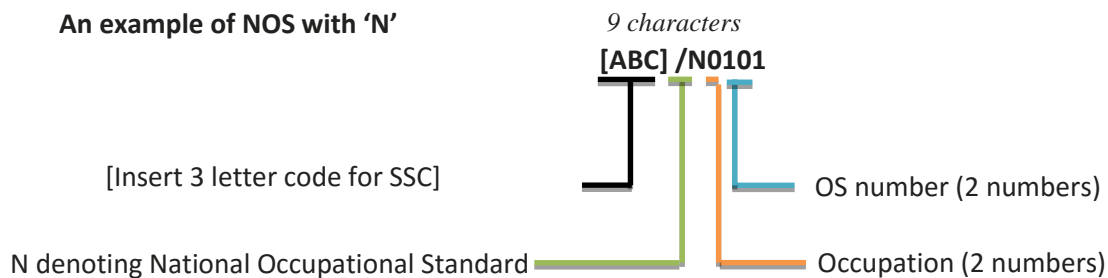
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



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

Sub-sector	Range of Occupation numbers
Manufacturing	01 - 49
Application	50 - 59
Unused	60 - 97
Generic occupation	98 - 99

Sequence	Description	Example
Three letters	Industry name	PCS
Slash	/	/
Next letter	Whether QP or NOS	Q / N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

ASSESSMENT CRITERIA

Job Role : General Industrial (Liquid) Painter

Qualification Pack : PCS/Q5108

Sector Skill Council : Paints and Coatings

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 theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack , every trainee should score a minimum of 60% in every NOS
6. 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.

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
PCS/N5105 Prepare for coating	PC1. study the plan for powder coating	50	3.5	1	2.5
	PC2. study the assembly of the metal segment to be coated		3.5	1	2.5
	PC3. disassemble the segment if it has multiple pieces to be coated seperately		3.5	1	2.5
	PC4. remove the pieces which are made up of rubber, plastic, etc.		3.5	1	2.5
	PC5. understand the conditions where segment is to be used, hot, wet, friction		3.5	1	2.5
	PC6. study the metal and chemistry required, e.g., pure epoxy, epoxy polyester, pure polyester, polyurethane		3.5	1	2.5
	PC7. colour of paint and finish required		3.5	1	2.5
	PC8. document the colour, finish and chemistry required, process description and time and effort estimated for the process		3.5	1	2.5
	PC9. meet the customer at appropriate time		3.5	1	2.5
	PC10. present the fact file document to the customer and seek approval		3.5	1	2.5
	PC11. make necessary changes after discussion and take approval to start the process		4	1.5	2.5
	PC12. select the size of jigs for hanging the segments to be prepared for coating		4	1.5	2.5
	PC13. hang segments on the jigs		3.5	1	2.5
	PC14. check the controls to see if jigs conveyour is in good working condition		3.5	1	2.5

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
	POINTS		50	15	35
	TOTAL POINTS			50	

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
PCS/N5106 Pre treat the section to be coated	PC1. use brush to remove dust from the corners	50	3	1	2
	PC2. fix the buffing pad		3	1	2
	PC3. pour the chemical for cleaning onto the buffing pad		3	1	2
	PC4. switch on the buffer		3	1	2
	PC5. clean the surface by moving buffer machine on the component surface in circular motion		3	1	2
	PC6. load the tanks with chemical and check the concentration of chemicals		3	1	2
	PC7. hang the components on jigs and move towards the pre-treatment tanks		3	1	2
	PC8. set the control of jigs, conveyor speed and temperature		4	1.5	2.5
	PC9. dip component in alkaline/acid cleaners to degrease the section		4	1.5	2.5
	PC10. rinse the metal in water		4	1.5	2.5
	PC11. dip the component in activation solution to convert any chemical on the metal surface to fumes		4	1.5	2.5
	PC12. dip the component in phosphatising/ chromating solution to remove rust and formation of blue-grey layer to prevent the metal for corrosion or oxidation		4	1.5	2.5
	PC13. final chemical rinse as passivation treatment for further enhancing the anti-corrosion performance of the metal		3	1	2
	PC14. dry metal with hot air		3	1	2
	PC15. perform cloth test to check moisture		3	1	2
	POINTS		50	17.5	32.5
	TOTAL POINTS			50	

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
PCS/N5107 Apply top coat and finish the surface	PC1. check the paint colour as per the given mixing ratio	50	5	2	3
	PC2. prepare colour in mentioned ratio of pigment, thinner and hardener		5	2	3
	PC3. clean the surface by buffing		5	2	3



	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
	PC4. fill the paint in the fluid container		5	2	3
	PC5. adjust controls for pressure in fluid container and size of the fluid orifice		5	2	3
	PC6. spray paint on the work surface in the paint booth		5	2	3
	PC7. maintain given pressure by hand or preprogrammed support sprayer		5	2	3
	PC8. remove masking		5	2	3
	PC9. send for curing		5	2	3
	PC10. after curing, check surface for any grains, etc., formed on the surface after painting		5	2	3
	POINTS		50	20	30
	TOTAL POINTS			50	

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
PCS/N5108 Maintain jigs and parts	PC1. remove surface oils from tank using oil skimmers	50	6	2	4
	PC2. remove particles from the bottom of the tank using bag filtration		7	3	4
	PC3. remove emulsified and suspended oils using ultrafiltration or centrifugation		6	2	4
	PC4. remove deposits from paint booths		7	3	4
	PC5. clean powder hoses		6	2	4
	PC6. remove deposits from powder guns		6	2	4
	PC7. clean jigs after the process is over		6	2	4
	PC8. clean the facility regularly		6	2	4
	POINTS		50	18	32
	TOTAL POINTS			50	

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
PCS/N9901 Coordinate with colleagues and/or customers	PC1. receive job order and instructions from reporting superior	50	0.5	0.0	0.5
	PC2. understand the work output requirements, targets, performance indicators and incentives		2.0	0.5	1.5
	PC3. deliver quality work on time and report any anticipated reasons for delays		2.0	0.5	1.5
	PC4. escalate unresolved problems or complaints to the relevant senior		2.0	0.5	1.5
	PC5. communicate maintenance and repair schedule proactively to the superior		2.0	0.5	1.5



	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
	PC6. receive feedback on work standards		1.0	0.0	1.0
	PC7. document the completed work schedule and handover to the superior		2.0	0.5	1.5
	PC8. exhibit trust, support and respect to all the colleagues in the workplace		1.0	0.25	0.75
	PC9. aim to achieve smooth workflow		2.0	0.5	1.5
	PC10. help and assist colleagues with information and knowledge		1.0	0.0	1.0
	PC11. seek assistance from the colleagues when required		1.0	0.25	0.75
	PC12. identify the potential and existing conflicts with the colleagues and resolve		1.0	0.25	0.75
	PC13. pass on essential information to other colleagues on timely basis		1.0	0.0	1.0
	PC14. maintain the etiquette, use polite language, demonstrate responsible and disciplined behaviours to the colleagues		2.0	0.5	1.5
	PC15. interact with colleagues from different functions clearly and effectively on all aspects to carry out the work among the team and understand the nature of their work		1.0	0.25	0.75
	PC16. put team over individual goals and multi task or share work where necessary supporting the colleagues		2.0	0.0	2.0
	PC17. highlight any errors of colleagues, help to rectify and ensure quality output		1.0	0.25	0.75
	PC18. work with cooperation, coordination, communication and collaboration, with shared goals and supporting each other's performance		1.0	0.0	1.0
	PC19. ask more questions to the customers and identify their needs		1.0	0.25	0.75
	PC20. possess strong knowledge on the product, services and market		2.0	0.5	1.5
	PC21. brief the customers clearly on potential costs and hazards		1.0	0.25	0.75
	PC22. communicate with the customers in a polite, professional and friendly manner		1.0	0.25	0.75
	PC23. build effective but impersonal relationship with the customers		0.5	0.25	0.25
	PC24. ensure the appropriate language and tone are used with customers		1.0	0.25	0.75
	PC25. listen actively and have a two way communication		1.0	0.25	0.75
	PC26. be sensitive to the gender, cultural and social differences such as modes of greeting, formality, etc.		1.0	0.25	0.75
	PC27. understand the customer expectations correctly and provide the appropriate products and services		2.0	0.5	1.5



	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
	PC28. understand the customer dissatisfaction and address or escalate their complaints effectively		2.0	0.5	1.5
	PC29. maintain a positive, sensible and cooperative manner all time		1.0	0.25	0.75
	PC30. ensure to maintain a proper body language, dress code, gestures and etiquettes towards the customers		1.0	0.25	0.75
	PC31. avoid interrupting the customers while they talk		1.0	0.0	1.0
	PC32. ensure to avoid negative questions and statements to the customers		1.0	0.0	1.0
	PC33. inform the customers on any issues or problems before hand and also on the developments involving them		2.0	0.5	1.5
	PC34. ensure to respond back to the customer immediately for their voice messages, e-mails, apps, etc.		1.0	0.0	1.0
	PC35. develop good rapport with the customers and promote other products and services		2.0	0.5	1.5
	PC36. seek feedback from the customers on their understanding to what was discussed		1.0	0.0	1.0
	PC37. explain the terms and conditions clearly		2.0	0.5	1.5
	POINTS		50	10	40
	TOTAL POINTS				50

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
PCC/N9902 Maintain standards of product/ service quality	PC1. keep in mind the profiles of expected customers	50	2.0	0.5	1.5
	PC2. understand the target customers and their product/ service quality requirements as defined by the company		3.0	0.5	2.5
	PC3. receive superior's/ customer feedback regularly		2.0	0.0	2.0
	PC4. aim to build a good connect with the customers through quality product/ service		2.0	0.5	1.5
	PC5. keep tab on frequent discussions with regular customers on general likes and dislikes in the market, latest trends, customer expectations, etc.		2.0	0.5	1.5
	PC6. receive updates on regular feedbacks from the clients on current service, complaints, and improvements to be made, etc.		2.0	0.5	1.5
	PC7. if necessary, compulsively seek customer rating of product/ service in order to help develop a set of regularly improved		2.0	0.5	1.5

Qualifications Pack For General Industrial (Liquid) Painter

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
	procedures				
	PC8. demonstrate quality orientation at all level		4.0	1.5	2.5
	PC9. aim to gain their long lasting loyalty through satisfaction		3.0	1.0	2.0
	PC10. ensure 100% customer satisfaction via product/ service quality		3.0	0.5	2.5
	PC11. treat the customers fairly and with due respect		3.0	0.5	2.5
	PC12. focus on executing company's marketing strategies and product development needs		3.0	1.0	2.0
	PC13. focus on enhancing brand value of company by maintaining or enhancing quality standards		3.0	1.0	2.0
	PC14. ensure that customer expectations are met		2.0	0.5	1.5
	PC15. learn to read customers' needs and wants		2.0	0.5	1.5
	PC16. willingly accept and implement new and innovative products and services that help improve customer satisfaction		3.0	1.0	2.0
	PC17. communicate feedback of customer to senior, especially, the negative feedback		2.0	0.5	1.5
	PC18. maintain close contact with the customers and focus groups		2.0	0.5	1.5
	PC19. offer promotions to improve product satisfaction level to the customers periodically		3.0	1.0	2.0
	PC20. weigh the cost of fulfilling unscheduled customer requests, consult with senior and advise the customer on alternatives		2.0	0.5	1.5
	POINTS		50	13	37
	TOTAL POINTS			50	

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
PCS/N9903 Maintain O&HS standards and follow environmental norms	PC1. assess the various health, safety and environmental hazards in the work areas	50	1.5	0.4	1.1
	PC2. take necessary steps to eliminate or minimize the hazards		1.0	0.4	0.6
	PC3. analyze the causes of accidents at the workplace		1.5	0.4	1.1
	PC4. suggest measures to prevent such accidents from taking place		1.5	0.4	1.1



	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
	PC5. take preventive measures to avoid risk of burns and other injury due to contact with hot surfaces, gas, fire, hot fluids/ liquids, etc.		1.5	0.4	1.1
	PC6. suggest methods to improve the existing safety procedures at the workplace		1.5	0.4	1.1
	PC7. dispose waste in the designated areas safely as per company's policies and rules		1.5	0.4	1.1
	PC8. maintain appropriate ventilation in the rooms while there is more exposure to paint vapours		1.0	0.4	0.6
	PC9. avoid dumping unused cans to safeguard the environment		1.0	0.0	1.0
	PC10. be aware of the locations of fire extinguishers, emergency exits, etc.		1.0	0.4	0.6
	PC11. practice correct emergency procedures		1.5	0.4	1.1
	PC12. check and review the storage areas frequently		1.5	0.4	1.1
	PC13. stack items in an organized way and use safe lifting techniques to reduce risk of injuries from handling procedures at the storage areas		1.5	0.4	1.1
	PC14. ensure to be safe while handling materials, tools, acids, chemicals, equipment, etc.		1.0	0.4	0.6
	PC15. store the chemicals and acids in a well-ventilated and locked areas with warning signs displayed		1.5	0.4	1.1
	PC16. ensure safe techniques while moving furniture and fixtures		1.5	0.4	1.1
	PC17. ensure to reduce risk of injury from use of electrical tools		1.5	0.4	1.1
	PC18. read the manufacturer's manual carefully before use of any equipment		1.0	0.0	1.0
	PC19. unplug the electrical equipment before performing maintenance		1.0	0.4	0.6
	PC20. keep the floors free from oil, water and grease to avoid slippery surface		1.0	0.4	0.6
	PC21. use rubber mats in the places where floors are constantly wet		1.0	0.0	1.0
	PC22. ensure safety from injuries of cuts to loss of fingers, while handling sharp hazardous tools and equipment		1.5	0.4	1.1
	PC23. use flat surfaces, secure holding and protective wear while using such sharp tools		1.5	0.4	1.1
	PC24. use health, safety and environmental protection practices for		1.5	0.4	1.1



	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
	storing, cleaning, and maintaining tools, equipment, and supplies				
	PC25. practice ergonomic lifting, bending, or moving equipment and supplies		1.5	0.4	1.1
	PC26. identify the requirement for maintaining environmental norms		1.0	0.4	0.6
	PC27. comply with the environmental safety norms while on work to prevent accidents and health hazards		1.0	0.4	0.6
	PC28. follow company policies and rules regarding use of hazardous materials to avoid health, safety and environmental impacts caused by them		1.0	0.4	0.6
	PC29. ensure the employees have access to first aid kit when needed		1.0	0.0	1.0
	PC30. ensure all equipment and tools are stored and maintained properly and safe to use		1.0	0.4	0.6
	PC31. ensure to use personal protective equipment and safety gear such as gloves, mask, headwear, footwear, glasses, goggles, etc. for specific tasks and work conditions where required		1.5	0.4	1.1
	PC32. ensure to display safety signs at places where necessary for people to be cautious		1.5	0.4	1.1
	PC33. ensure electrical precautions such as insulated clothing, adequate equipment insulation, dry work area, switch off the power supply when not required, etc.		1.5	0.4	1.1
	PC34. ensure availability of general health and safety equipment such as fire extinguishers, first aid equipment, safety equipment, clothing, safety installations such as fire exits, exhaust fans, etc.		1.5	0.4	1.1
	PC35. document all the first aid treatments, inspections, etc., conducted to keep track of the safety measures undertaken		1.0	0.4	0.6
	PC36. document all the environmental hazards caused and the measures undertaken to comply with the established safety procedures of the workplace		1.0	0.0	1.0
	PC37. report to the supervisor on any problems and hazards identified and any breach of environmental procedures.		1.0	0.4	0.6
	PC38. ensure zero accident at workplace		1.0	0.4	0.6
	PC39. adhere to safety standards and ensure no material damage		1.0	0.4	0.6
	PC40. take necessary action and correct any environmental hazards caused		1.0	0.4	0.6



	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
	POINTS		50	14	36
	TOTAL POINTS			50	

	Performance Criteria	Total Marks (400)	Out of	Theory	Skills Practical
PCS/N9904 Maintain IPR of organisation and customer	PC1. prevent leak of new plans and designs to competitors by reporting on time	50	7.0	0.0	7.0
	PC2. be aware of any of company's product or design patents		8.0	1.0	7.0
	PC3. report IPR violations observed in the market, to supervisor or company head		8.0	2.0	6.0
	PC4. read copyright clause of the material published on the internet and any other printed material		8.0	0.5	7.5
	PC5. protect infringement upon customer's business or design plans		8.0	2.0	6.0
	PC6. consult supervisor or senior management when in doubt about using information available from customer		6.0	0.0	6.0
	PC7. report any infringement observed by anyone in the company		5.0	0.0	5.0
	POINTS		50	5.5	44.5
	TOTAL POINTS			50	
	GRAND TOTAL	400			