



Model Curriculum

QP Name: Protective and Marine Painter

(Electives: Paint the substrate/ Perform Floor Coating/ Perform Road Marking)

QP Code: PCS/Q5109

QP Version: 2.0

NSQF Level: 4

Model Curriculum Version: 1.0

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Training Parameters

Sector	PAINTS AND COATINGS
Sub-Sector	Application
Occupation	Industrial Paint Application
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO 2015- 7131.0200; 7131.0300
Minimum Educational Qualification and Experience	<p>12th grade pass Or 11th grade pass with 1 year relevant experience Or Completed 2nd year of 3 year diploma (after 10th) and pursuing regular diploma Or 10th grade pass plus 2 year NTC (after 10th) Or 10th grade pass with 1 year NTC/ NAC and 1 year experience Or 8th grade pass plus 2 year NTC plus 1 year NAC Or 8th grade pass with 1 year NTC plus 1 year NAC plus CITS Or Certified for Assistant Decorative Painter (NSQF level 3) and 2 years' experience</p>
Prerequisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	31/03/2022
Next Review Date	31/03/2025
NSQC Approval Date	31/03/2022
Version	2.0
Model Curriculum Creation Date	31/03/2022
Model Curriculum Valid Up to Date	31/03/2025
Model Curriculum Version	1.0
Minimum Duration of the Course	480 Hours, 0 Minutes
Maximum Duration of the Course	720 Hours, 0 Minutes

Program Overview

This section summarises the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills

- Explain the nature of work across the paints and coatings industry, the various subsectors, and their evolution.
- Identify the role and responsibility of a Protective and Marine Painter.
- Identify the substrates and it's process of preparation using different materials and tools for protective and marine painting.
- Perform the activity of protective and marine painting, floor coating and road marking.
- Dispose off waste material safely, as per organizational SOP.
- Implement quality control activities.
- Record and document all problems arising during quality analysis.
- Discuss how to comply with current health, safety and environmental policies and procedures.
- Discuss a plan of learning and development activities to address learning needs with appropriate people.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
PCS/N5110 – Prepare to Paint the Substrate NOS Version No. 2.0 NSQF Level 4	94:00	86:00	30:00	00:00	210:00
Module 1 - Introduction to the sector and the job role of Protective and Marine Painter	04:00	00:00	00:00	00:00	04:00
Module 2 - Analyse and inspect the surface before and after preparation	45:00	45:00	10:00	00:00	100:00
Module 3 - Prepare the surface for painting	45:00	41:00	20:00	00:00	106:00
PCS/N9901 – Co-ordinate with Colleagues and Customers NOS Version No. 2.0 NSQF Level 4	10:00	20:00	00:00	00:00	30:00
Module 4 - Coordinate with supervisors, colleagues, and customers	10:00	20:00	00:00	00:00	30:00



PCS/N9902 – Maintain Standards of Product/ Service Quality NOS Version No. 2.0 NSQF Level 4	10:00	20:00	00:00	00:00	30:00
Module 5 - Achieve customer satisfaction for given quality	10:00	20:00	00:00	00:00	30:00
PCS/N9903 – Maintain OH&S Standards and Follow Environmental Norms NOS Version No. 2.0 NSQF Level 4	10:00	20:00	00:00	00:00	30:00
Module 6 - Achieve health, safety, and environmental standards	10:00	20:00	00:00	00:00	30:00
DGT/VSQ/N0102 – Employability Skills (60 hours) NOS Version No. 1 NSQF Level 4	24:00	36:00	00:00	00:00	60:00
Module 7 – Introduction to Employability Skills	00:50	01:00	00:00	00:00	01:50
Module 8 – Constitutional Values – Citizenship	00:50	01:00	00:00	00:00	01:50
Module 9 – Becoming a Professional in the 21st century	01:00	01:50	00:00	00:00	02:50
Module 10 – Basic English Skills	04:00	06:00	00:00	00:00	10:00
Module 11 – Career Development and Goal Setting	01:00	01:00	00:00	00:00	02:00
Module 12 – Communication Skills	02:00	03:00	00:00	00:00	05:00
Module 13 – Diversity and Inclusion	01:00	01:50	00:00	00:00	02:50
Module 14 – Financial and Legal Literacy	02:00	03:00	00:00	00:00	05:00
Module 15 – Essential Digital Skills	04:00	06:00	00:00	00:00	10:00
Module 16 – Entrepreneurship	03:00	04:00	00:00	00:00	07:00
Module 17 – Customer Service	02:00	03:00	00:00	00:00	05:00
Module 18 – Getting ready for apprenticeship and jobs	03:00	05:00	00:00	00:00	08:00
Total Duration	148:00	182:00	30:00	00:00	360:00



Elective Modules

The table lists the modules and their duration corresponding to the Elective NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
PCS/N5111 – Paint the Substrate NOS Version No. 2.0 NSQF Level 4	30:00	60:00	30:00	00:00	120:00
Module 19 - Paint the substrate and inspect the painted substrate	30:00	60:00	30:00	00:00	120:00
PCS/N5112 – Perform Floor Coating NOS Version No. 1.0 NSQF Level 4	30:00	60:00	30:00	00:00	120:00
Module 20 - Apply floor coating	30:00	60:00	30:00	00:00	120:00
PCS/N5113 – Perform Road Marking NOS Version No. 1.0 NSQF Level 4	30:00	60:00	30:00	00:00	120:00
Module 21 - Apply Road Marking Paint	30:00	60:00	30:00	00:00	120:00
Total Duration	90:00	180:00	90:00	00:00	360:00

Module Details

Module 1: Introduction to the Sector and the Job Role of Protective and Marine Painter *Bridge Module*

Terminal Outcomes:

- Overview of the Paints and Coatings sector in India.
- Identify the role and responsibilities of a Protective and Marine Painter

Duration: 04:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the role and the importance of the paints and coatings industry in India. • List the various sub-sectors and occupations in the paints and coatings sector. • Discuss the product range supplied by the major paint companies in India. • Discuss the current and future trends in the paints and coatings sector. • Discuss the features including advantages of various protective and marine paints • Describe the skills and competencies required for a Protective and Marine Painter. • Define the role and the career progression chart of a Protective and Marine Painter. 	
Classroom Aids:	
Laptop, whiteboard, marker, projector	

Module 2: Analyse and Inspect the Substrate before and after preparation

Mapped to NOS PCS/N5110 v2.0

Terminal Outcomes:

- Explain the steps involved in analysing the substrate to be prepared for painting
- Explain how to inspect the substrate for visual defects and imperfections

Duration: 45:00	Duration: 45:00 + Mandatory OJT : 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the steps for performing pre- inspection of surface. • List the materials to be masked before preparation and painting. • List the various imperfections that need to be treated in a surface before painting. • Discuss the surface profile specification. • Explain the effects of water ingress, moisture condensation, and unfavourable strength (adhesivestrength and compressive strength) of thesurface. • Discuss the company’s policies, reporting structure, work instructions, and occupational health and safety standards. • Explain how to identify a green tag scaffolding. • List the steps for safe use of a scaffolding. 	<ul style="list-style-type: none"> • Measure the ambient relative humidity using Hygrometer and dew point measuring device. • Measure the substrate and ambient temperature using a thermometer • Demonstrate the process to check whether the scaffolding is safe for use. • Identify the various imperfections that need to be treated in a given surface before painting. • Employ the process to check the adhesion of previously applied coating onto the surface, the pull-off adhesion strength and compressive strength of the floor. • Demonstrate the process to check the moisture content of the surface using a moisture meter or a 1.2 m x 1.2 m plastic sheet. • Create a checklist to ensure that all imperfections have been treated • Demonstrate the use of a profile-o- meter to check the surface profile • Perform inspection of the surface after preparation
Classroom Aids:	
Laptop, whiteboard, marker, projector, tools for learning activities – Intranet, Email, IMs, learning management system (for example, Moodle, Blackboard, etc.) to enable blended learning	
Tools, Equipment and Other Requirements	
Profile-o-meter, scaffolding, masking sheet and tape, spatula, trowel, dew point measuring device, hygrometer, thermometer, plastic sheets and adhesive tapes, personal protective equipment like protective gloves, insulated clothing, safety mask, hard helmet, safety shoes, safety goggles, etc.	

Module 3: Prepare the Surface for Painting

Mapped to NOS PCS/N5110 v2.0

Terminal Outcomes:

- Demonstrate how to prepare the surface/substrate post analysis and inspection.

Duration: 45:00	Duration: 41:00 + <i>Mandatory OJT</i> : 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain all the surface preparation steps for methods like washing, grinding, scarifying, vacuum blast cleaning, acid etching, etc. and compare their effectiveness. • Explain the different profile grades of cleaning like SA1.0, SA2.0, SA2.5, SA3.0. • Explain the steps of sealing and patching surface cracks, crevices and joints and their benefits. • Discuss how to identify the substrate and choose appropriate preparation and cleaning method. • Discuss the common causes of poor surface preparation 	<ul style="list-style-type: none"> • Demonstrate the process of masking the materials in the surroundings that do not require painting. • Prepare the sample surface with the use of wire brush, chipping tool, power tool, hydro or abrasive blast machines. • Seal the given cracks, crevices and joint on the floor. • Patch the given cracks and repair of large cracks, holes, and joints on the masonry surface and metal surface. • Demonstrate the scarifying method to remove deep-seated oil contamination from the previously coated floors • Show the process of removing previously applied coating mechanically. • Demonstrate the surface cleaning process using chemicals. • Perform coving of the given area.
Classroom Aids:	
Laptop, whiteboard, marker, projector, tools for learning activities – Intranet, Email, IMs, learning management system (for example, Moodle, Blackboard, etc.) to enable blended learning	
Tools, Equipment and Other Requirements	
Masking tapes and plastic sheets, wire brush, chipping tool, power tool, hydro or abrasive blast machines, chemical pretreatment process set up, sealants and adhesive tapes, spatula, trowel, rollers, coving material, personal protective equipment like protective gloves, insulated clothing, safety mask, hard helmet, safety shoes, safety goggles, etc.	

Module 4: Coordinate with Supervisors, Colleagues, and Customers

Mapped to NOS PCS/N9901 v2.0

Terminal Outcomes:

- Demonstrate effective communication with supervisors, colleagues and customers.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the importance of effective communication and interpersonal skills. • Identify the common causes of interpersonal conflicts and ways to manage them effectively. • Explain the importance of Standard Operating Procedure (SOP) of the company with respect to quality, privacy, confidentiality and security. • Explain the need for implementing guidelines and practices pertaining to gender sensitivity at the workplace. • Explain different gender concepts such as gender roles, gender as a social construct, gender power relations etc. • Discuss the provisions of Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013. • Identify the need for implementing guidelines and practices pertaining to sensitivity towards Persons with Disabilities (PwD). • Explain the schemes available for PwD. • Explain the ways to help persons with disability overcome challenges. 	<ul style="list-style-type: none"> • Demonstrate, via role play, effective working with colleagues and customers. • Demonstrate active listening skills in a role play. • Create sample reports as per standard templates • Draw a table to list the dos and don'ts of customer service • Demonstrate use of appropriate behaviour and language that is respectful of disability and gender.
Classroom Aids:	
Laptop, whiteboard, marker, projector, tools for learning activities – Intranet, Email, IMs, learning management system (for example, Moodle, Blackboard, etc.) to enable blended learning	
Tools, Equipment and Other Requirements	
Cases for study and analysis, sample job order, sample SOP comprising work output requirements, quality standards, delivery schedule, targets, performance indicators and incentive policies	

Module 5: Achieve Customer Satisfaction for Given Quality

Mapped to NOS PCS/N9902 v2.0

Terminal Outcomes:

- Apply practices for customer satisfaction
- Demonstrate escalation of customer complaints and grievances to higher authorities, if required

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the steps involved in capturing customer expectations. • Explain the process for collecting customer feedback. • Discuss standard practices in customer orientation and quality adherence. • Discuss the importance of meeting quality standards and timelines in a team. 	<ul style="list-style-type: none"> • Demonstrate understanding of customer expectations using role play. • Demonstrate collection of customer feedback using verbal and non-verbal communication. • Create a sample complaint register to record customer complaints. • Create a sample work flow to report customer issues/complaints to the concerned authorities and supervisors. • Demonstrate steps of escalating negative feedback to the supervisor or concerned authorities. • Perform lab tests to ensure quality adherence of the products. • Prepare a sample product quality test report.
Classroom Aids:	
Laptop, whiteboard, marker, projector, tools for learning activities – Intranet, Email, IMs, learning management system (for example, Moodle, Blackboard, etc.) to enable blended learning	
Tools, Equipment and Other Requirements	
Cases for study and analysis, sample SOP comprising customer handling policies, sample SOP comprising organisational policies related to inclusive practices, sample quality policy documents, samples of good and bad quality products	

Module 6: Achieve Health, Safety, and Environmental Standards

Mapped to NOS PCS/N9903 v2.0

Terminal Outcomes:

- Apply health and safety practices at the workplace
- Explain the pandemic precautions and guidelines

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the composition of a basic first aid kit. • List the daily safety instructions and other safety procedures for work. • Explain the types of fire and the correct extinguishers to be used. • Identify eco-friendly products, tools and equipment. • Explain the importance and methods for efficient use of materials, water and energy. • Discuss the methods of waste segregation and disposal. • Explain the safety procedures for handling and use of hazardous materials, tools and equipment. • Explain the importance of following COVID-19/ pandemic safety guidelines • Discuss the components and use of a MSDS (Material Safety Data Sheet) • List the personal protective equipment required for protective and marine painting. • Explain the steps to be followed for prevention of workplace accident. 	<ul style="list-style-type: none"> • Demonstrate, in a mock situation, the procedure to administer first aid. • Demonstrate fire-fighting techniques and evacuation process. • Demonstrate, in a role play, steps for eliminating or minimising health, safety and environmental hazards in the work areas. • Demonstrate ways of optimising the usage of resources (water, electricity, fuel, etc.). • Segregate waste into different categories (recyclable, non-recyclable, hazardous, etc.) • Demonstrate disposal of hazardous materials and waste as per local environmental norms/ company's policies. • Create a sample record all incidents/ accidents and first aid treatments. • Demonstrate the process of lifting and storing items to reduce the risk of injuries. • Demonstrate the measures to prevent the spread of the pandemic.
Classroom Aids:	
Laptop, whiteboard, marker, projector, tools for learning activities – Intranet, Email, IMs, learning management system (for example, Moodle, Blackboard, etc.) to enable blended learning	
Tools, Equipment and Other Requirements	
A sample health and safety policy document, material safety data sheets (MSDS), personal protective equipment like protective gloves, insulated clothing, safety mask, hard helmet, safety shoes, safety goggles, etc., instruction manual for safe handling and routine cleaning of tools, machines, and equipment, samples of various categories of waste, colour-coded bins and containers, various symbols representing hazardous waste, containers for disposing of chemical waste, wastewater treatment/recycling unit, COVID-19 safety manual, hazard reporting form, accident reporting form, first-aid kit, emergency broadcast system and mock emergency signage in the appropriate areas of the training institute, cases for study and analysis	

Module 7: Introduction to Employability Skills

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 00:50	Duration: 01:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Discuss the Employability Skills required for jobs in various industries List different learning and employability related GOI and private portals and their usage 	

Module 8: Constitutional Values - Citizenship

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 00:50	Duration: 01:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen Show how to practice different environmentally sustainable practices. 	

Module 9: Becoming a Professional in the 21st Century

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 01:00	Duration: 01:50
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Discuss importance of relevant 21st century skills. Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life. Describe the benefits of continuous learning 	

Module 10: Basic English Skills

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 04:00	Duration: 06:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone. Read and interpret text written in basic English. Write a short note/paragraph / letter/e -mail using basic English. 	

Module 11: Career Development & Goal Setting

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 01:00	Duration: 01:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Create a career development plan with well-defined short- and long-term goals 	

Module 12: Communication Skills

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 02:00	Duration: 03:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette. 	
<ul style="list-style-type: none"> Explain the importance of active listening for effective communication 	
<ul style="list-style-type: none"> Discuss the significance of working collaboratively with others in a team 	

Module 13: Diversity and Inclusion

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 01:00	Duration: 01:50
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD 	
<ul style="list-style-type: none"> Discuss the significance of escalating sexual harassment issues as per POSH act. 	

Module 14: Financial and Legal Literacy

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 02:00	Duration: 03:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Outline the importance of selecting the right financial institution, product, and service 	
<ul style="list-style-type: none"> Demonstrate how to carry out offline and online financial transactions, safely and securely 	
<ul style="list-style-type: none"> List the common components of salary and compute income, expenditure, taxes, investments etc. 	
<ul style="list-style-type: none"> Discuss the legal rights, laws and aids 	

Module 15: Essential Digital Skills

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 04:00	Duration: 06:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Describe the role of digital technology in today's life 	
<ul style="list-style-type: none"> Demonstrate how to operate digital devices and use the associated applications and features, safely and securely 	
<ul style="list-style-type: none"> Discuss the significance of displaying responsible online behaviour while browsing, using various social media platforms, e-mails, etc., safely and securely 	
<ul style="list-style-type: none"> Create sample word documents, excel sheets and presentations using basic features 	
<ul style="list-style-type: none"> utilize virtual collaboration tools to work effectively 	

Module 16: Entrepreneurship

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 03:00	Duration: 04:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Explain the types of entrepreneurship and enterprises 	
<ul style="list-style-type: none"> Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan 	
<ul style="list-style-type: none"> Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement 	
<ul style="list-style-type: none"> Create a sample business plan, for the selected business opportunityDescribe the role of digital technology in today's life 	

Module 17: Customer Service

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 02:00	Duration: 03:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Describe the significance of analyzing different types and needs of customers 	
<ul style="list-style-type: none"> Explain the significance of identifying customer needs and responding to them in a professional manner. 	
<ul style="list-style-type: none"> Discuss the significance of maintaining hygiene and dressing appropriately 	

Module 18: Getting ready for Apprenticeship and jobs

Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 03:00	Duration: 05:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Create a professional Curriculum Vitae (CV) 	
<ul style="list-style-type: none"> • Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively 	
<ul style="list-style-type: none"> • Discuss the significance of maintaining hygiene and confidence during an interview 	
<ul style="list-style-type: none"> • Perform a mock interview 	
<ul style="list-style-type: none"> • List the steps for searching and registering for apprenticeship opportunities 	

Module 19: Paint and Inspect the Painted Substrate

Mapped to NOS PCS/N5111 v2.0

Terminal Outcomes:

- Demonstrate how to paint the substrate as per standard procedure and inspect the painted substrate.

Duration: 30:00	Duration: 60:00 + Mandatory OJT : 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the importance of mixing the components of the paint, as recommended. • List the parts of a spray gun and the common spray application parameters. • Explain the concept of pot life. • Discuss the co-relation between wet film thickness and dry film thickness. • Explain the concept of curing the paint film. • Discuss the common tests conducted to check the quality of the paint. • List the common application defects. 	<ul style="list-style-type: none"> • Demonstrate the mixing of a 2K paint, as per the recommended mixing ratio, to prepare for application. • Demonstrate in the lab, the process for checking the working of the painting machine and spray gun. • Demonstrate the application process using a brush, roller and a spray gun. • Demonstrate the curing of the paint film by air dry and force dry. • Demonstrate the tests to check the paint quality. • Identify the paint film defects in the sample and carry out the corrective and preventive measures.
Classroom Aids:	
Laptop, whiteboard, marker, projector, tools for learning activities – Intranet, Email, IMs, learning management system (for example, Moodle, Blackboard, etc.) to enable blended learning	
Tools, Equipment and Other Requirements	
2K paints, epoxy-based paint, solvent-less and colourless epoxy primers and topcoat paint, dry natural sand, epoxy-based coving compound, epoxy and polyurethane base coat, additives like hardener, thinner, anti-fouling agent, pigment paste and tools like agitator, pneumatic stirrers, plastic sheets, masking tapes, and adhesive tapes, wire brush, chipping hand tool and power tool, hydro blaster, abrasive blaster, application tool like brush, roller, air-assisted spray, airless spray gun, lambskin short pile roller/squeezer, steel trowel with notches, spike roller with a long handle, slow-speed stirrer with mixing paddle attachment, personal protective equipment like protective gloves, insulated clothing, safety mask, hard helmet, safety shoes, safety goggles, etc., instruction manual for safe handling and routine cleaning of tools, machines, and equipment, samples of finished surfaces, samples of paint film defects.	

Module 20: Apply Floor Coating

Mapped to NOS PCS/N5112 v1.0

Terminal Outcomes:

- Demonstrate application of a coating to the floor.

Duration: 30:00	Duration: 60:00 + Mandatory OJT : 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the significance of the environmental conditions for the floor coating. • Describe the different stages of floor coating. • List the common defects that occur during the application of a floor coating and the corrective and preventive measures. 	<ul style="list-style-type: none"> • Demonstrate the process to check the environmental and floor condition before preparation and coating. • Demonstrate the preparation and coating of the floor, on a sample area. • Demonstrate the correction of defects observed in the sample coated floor.
Classroom Aids:	
Laptop, whiteboard, marker, projector, tools for learning activities – Intranet, Email, IMs, learning management system (for example, Moodle, Blackboard, etc.) to enable blended learning	
Tools, Equipment and Other Requirements	
2K paints, epoxy-based paint, solvent-less and colourless epoxy primers and topcoat paint, dry natural sand, epoxy-based coving compound, epoxy and polyurethane base coat, additives like hardener, thinner, pigment paste and tools like agitator, pneumatic stirrers, plastic sheets, masking tapes, and adhesive tapes, wire brush, chipping hand tool and power tool, hydro blaster, abrasive blaster, application tools like brush, roller, lambskin short pile roller/squeezer, steel trowel with notches, spike roller with a long handle, slow-speed stirrer with mixing paddle attachment, personal protective equipment like protective gloves, insulated clothing, safety mask, hard helmet, safety shoes, gumboots, safety goggles, etc., instruction manual for safe handling and routine cleaning of tools, machines, and equipment, samples of finished surfaces	

Module 21: Apply Road Marking Paint

Mapped to NOS PCS/N5113 v1.0

Terminal Outcomes:

- Demonstrate application of road marking paint.

Duration: 30:00	Duration: 60:00 + Mandatory OJT : 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the surface preparation steps for application of road marking paint. • Discuss the importance of mixing glass beads, small aggregates, and additives to improve visibility and reflective properties of the road marking paint. • List down the different application methods of road marking paint. 	<ul style="list-style-type: none"> • Prepare the sample surface for road marking. • Mix glass beads, small aggregates, additives in the road marking paint to improve visibility and reflective property. • Demonstrate application of road marking paint using different tools and equipment.
Classroom Aids:	
Laptop, whiteboard, marker, projector, tools for learning activities – Intranet, Email, IMs, learning management system (for example, Moodle, Blackboard, etc.) to enable blended learning	
Tools, Equipment and Other Requirements	
Raw materials like thermoplastic and thermosetting acrylic based road marking primers and paints, tools and equipment like agitator, pneumatic stirrers, hot melt and cold coating application equipment, plastic sheets, masking tapes, and adhesive tapes, wire brush, chipping tool, hydro blaster, abrasive blaster, sanding machine, application tools like brush, roller, hot melt and cold coating machines, personal protective equipment like protective gloves, insulated clothing, safety mask, helmet, safety shoes, safety goggles, etc., instruction manual for safe handling and routine cleaning of tools, machines, and equipment, samples of finished roads, cordoning tapes, glass beads, screed mix.	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate or CITS Trainer	Paint technology	2	Paint manufacturing and/ or application CITS Trainer for Paint Technology	1 (preferable but not mandatory)	Paint manufacturing and/ or application CITS Trainer for Paint Technology	Training experience preferable but not mandatory

Trainer Certification	
Domain Certification	Platform Certification
Certified for the job role "Protective and Marine Painter", mapped to the Qualification Pack "PCS/Q5109, V 2.0", issued by Paints and Coatings Skill Council and DGT/VSQ/N0102 (ES 60 hours). Minimum accepted score in SSC Assessment is 80%.	Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack: "MEP/Q2601, v3". Minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialisation	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialisation	Years	Specialisation	
Graduate or CITS Trainer	Paint Technology	2	Paint manufacturing and/ or application CITS Trainer for Paint technology	1 (preferable but not mandatory)	Paint manufacturing and/ or application CITS Trainer for Paint technology	Training experience preferable but not mandatory

Assessor Certification	
Domain Certification	Platform Certification
Certified for the job role "Protective and Marine Painter", mapped to the Qualification Pack "PCS/Q5109, V 2.0", issued by Paints and Coatings Skill Council and DGT/VSQ/N0102 (ES 60 hours). Minimum accepted score in SSC Assessment is 80%.	Recommended that the assessor is certified for the job role "Assessor" mapped to the Qualification Pack "MEP/Q2701,v3". Minimum accepted score is 80%.

Assessment Strategy

1. Assessment System Overview:

- Batches are assigned to the assessment agencies for conducting the assessment on SIP or email.
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC.
- Assessment agency deploys the ToA certified Assessor for conducting the assessment.
- SSC monitors the assessment process via video conferencing/ surprise visits and records.

2. Testing Environment:

- Confirm that the centre is available at the same address as mentioned on SIP or email.
- Check the duration of the training.
- Check the Assessment Start and End time to be as 9 A.M. and 6 P.M.
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory and Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/ Computer/ Smart Phone or Blended or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels/Framework:

- Question papers created by the Subject Matter Experts (SME).
- Question papers created by the SME verified by the other subject Matter Experts.
- Questions are mapped with NOS and PC.
- Question papers are prepared considering that level 1 to 3 are for the unskilled and semi-skilled individuals, and level 4 and above are for the skilled, supervisor and higher management.
- Assessor must be ToA certified and trainer must be ToT Certified.
- Assessment agency must follow the assessment guidelines to conduct the assessment.

4. Types of evidence or evidence-gathering protocol:

- Time-stamped and geotagged reporting of the assessor from assessment location.
- Centre photographs with signboards and scheme specific branding.
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period.
- Time-stamped and geotagged assessment (Theory + Viva + Practical) photographs and videos.

5. Method of verification or validation:

- Surprise visit to the assessment location.
- Random audit of the batch.
- Random audit of any candidate.

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents and photographs of the assessment are uploaded/accessed from Cloud Storage
- Soft copies of the documents and photographs of the assessment are stored in the Hard Drives

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective, or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
SOP	Standard Operating Procedure
AQL	Acceptable Quality Level
ITI	Industrial Training Institute
OJT	On the Job Training
PPE	Personal Protective Equipment