

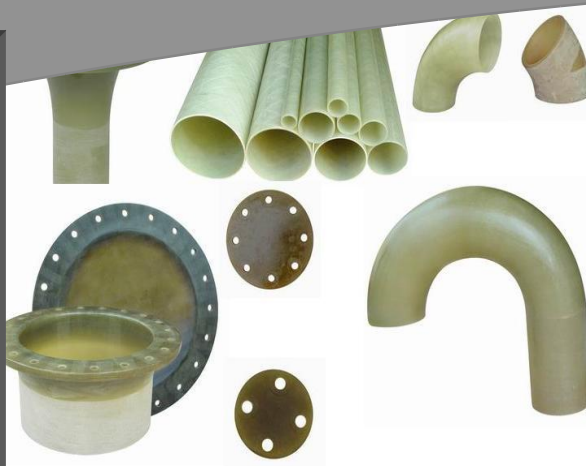
## QUALIFICATIONS PACK- OCCUPATIONAL STANDARDS FOR PLASTICS INDUSTRY

### What are Occupational Standards (OS)?

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

#### Contact Us:

PHD House (4th Floor),  
Opp. Asian Games  
Village,  
Siri Fort Institutional  
Area, New Delhi -  
110016  
E-mail:  
info@rsdcindia.in



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### Introduction

## Qualifications Pack- Plastic FRP - Operator

**SECTOR:** RUBBER

**SUB SECTOR:** PLASTICS PROCESSING

**OCCUPATION:** FIBRE REINFORCED PLASTICS

**REFERENCE ID:** RSC/Q4806 (CPC/Q1004)

**ALIGNED TO:**

#### Brief Job Description:

The individual at work place is responsible for smooth and efficient operation of the machines required for manufacturing the FRP products. He is also responsible for proper selection of materials and process to manufacture the product. He supervises the other team members to complete the assigned work qualitatively and maintain time schedule.

#### Personal Attributes:

This job requires the individual to concentrate on the job at hand and complete it efficiently and effectively without any accidents so diligence and hardworking are desired attributes for individuals in this role. He must also demonstrate strong work ethics, courteously with co-workers, and must be good with following instructions of the supervisor. He should be physically fit, and willing to work in factory environment.

### Qualifications Pack for Plastic FRP - Operator

#### Job Details

<b>Qualifications Pack Code</b>	<b>RSC/Q4806 (CPC/Q 1004)</b>		
<b>Job Role</b>	<b>PLASTIC FRP - Operator</b>		
<b>Credits (NSQF)</b>	<b>48</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Rubber</b>	<b>Drafted on</b>	<b>18/05/2016</b>
<b>Sub Sector</b>	<b>Manufacturing / Plastics Processing</b>	<b>Last reviewed on</b>	<b>26/12/2016</b>
<b>Occupation</b>	<b>Fibre Reinforced Plastics</b>	<b>Next review date</b>	<b>31/12/2021</b>
<b>NSQC Clearance on</b>	<b>21/07/2016</b>		

<b>Job Role</b>	<b>Plastic FRP - Operator</b>
<b>Role Description</b>	The role holder works as an operator, for performing the job safely, smoothly on the machine and within given time frame. The job is all about selecting the suitable materials, process, preparation of moulds and then mouldings from the moulds. Maintaining desired quality and completing the work within given timeline. He is also responsible for maintaining necessary documentation, production data and other details.
<b>NSQF level</b>	4
<b>Minimum Educational Qualifications*</b>	VIII Standard
<b>Maximum Educational Qualifications*</b>	
<b>Training</b> (Suggested but not mandatory)	No previous training required
<b>Minimum Job Entry Age</b>	18
<b>Experience</b>	No previous experience required
<b>Applicable National Occupational Standards (NOS)</b>	<ol style="list-style-type: none"> <li>1. <a href="#">RSC/N4817 (CPC/N1019): Use and applications of FRP products. Merits and Demerits.</a></li> <li>2. <a href="#">RSC/N4818 (CPC/N1020) Basics of thermoplastics and thermoset materials. Introduction to Resins/fibres used for FRP Molding.</a></li> <li>3. <a href="#">RSC/4819 (CPC/N1021) Selection of suitable process for FRP products manufacturing and Mould development</a></li> <li>4. <a href="#">RSC/N4820 (CPC/N1022) Efficient operation of the machinery.</a></li> <li>5. <a href="#">RSC/N4821 (CPC/N1023): Finishing/Decoration operations for FRP products.</a></li> <li>6. <a href="#">RSC/N4822 (CPC/N1024) Understand and apply the quality control techniques for defect free manufacturing</a></li> <li>7. <a href="#">RSC/N4101 (CPC/N0411) Maintain basic health and safety practices at the Workplace, 5S.</a></li> </ol>

*Qualifications Pack for Plastic FRP - Operator*

	<p>8. <a href="#">RSC/N4823 (CPC/N1026): Develop and maintain suitable housekeeping practices in the shop floor.</a></p> <p>9. <a href="#">RSC/N4203 (CPC/N7014) Effective working with others.</a></p> <p>10. <a href="#">RSC/N4824 (CPC/N1028) Perform the reporting and documentation work required in the shop floor.</a></p>
<b>Performance Criteria</b>	As described in the relevant OS units

## Qualifications Pack for Plastic FRP - Operator

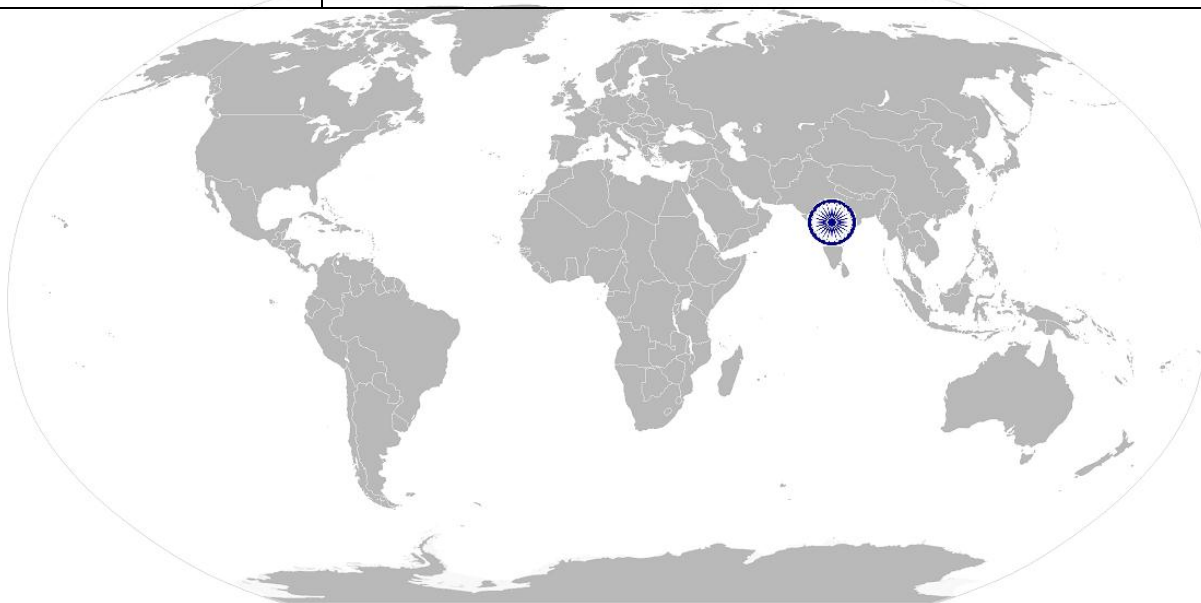
### Definitions

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 OS, these include communication related skills that are applicable to most job roles.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
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.
Occupational Standards (OS)	OS 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.
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
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 Plastic FRP - Operator

## Acronyms

Unit Code	Unit Code is a unique identifier for a OS unit, which can be denoted with an 'N'
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
<b>Keywords /Terms</b>	<b>Description</b>
OS	Occupational Standard(s)
NVEQF	National Vocational Education Qualifications Framework
NVQF	National Vocational Qualifications Framework
NSQF	National Skills Qualifications Framework
OEM	Original Equipment Manufacturer
OS	Occupational Standard(s)
QP	Qualifications Pack



*RSC/N4817 (CPC/N1019) Use and applications of FRP products. Merits and Demerits*

# National Occupational Standards



## Overview

This unit is about use and application of FRP products their merits and demerits design and development of new FRP products.

*RSC/N4817 (CPC/N1019) Use and applications of FRP products. Merits and Demerits*

National Occupational Standards	<b>Unit Code</b>	<b>RSC/N4817 (CPC/N1019)</b>
	<b>Unit Title (Task)</b>	<b>Use and applications of FRP products. Merits and Demerits.</b>
	<b>Description</b>	This OS unit describe about use and application of FRP products in different fields like furniture, Automobiles, Container , Panels etc.
	<b>Scope</b>	This unit/ task covers the following: <ul style="list-style-type: none"> <li>• Application in FRP Products in different fields.</li> <li>• Merits and demerits of FRP products over conventional material.</li> <li>• Selection of various type of Materials, machinery and mould used in manufacturing FRP products.</li> <li>• Size &amp; shape limitations in FRP products designing.</li> </ul>
	<b>Performance criteria (PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance criteria</b>
	<b>Use and applications of FRP products. Merits and Demerits.</b>	The individual on the job should be able to: <ul style="list-style-type: none"> <li>PC1. Identify the need of material and mould for required product.</li> <li>PC2. Find the merits and demerits of FRP products.</li> <li>PC3. Select the type of material, machinery, Mould and process for manufacturing the product.</li> <li>PC4. Ensure the designing criteria for the FRP products.</li> </ul>
<b>Knowledge and Understanding (K)</b>		
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)		The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1. Types of FRP products their uses and applications.</li> <li>KA2. Different types processes used in the industry.</li> <li>KA3: Different types of products manufactured by the company</li> <li>KA4. Company's reporting structure</li> </ul>



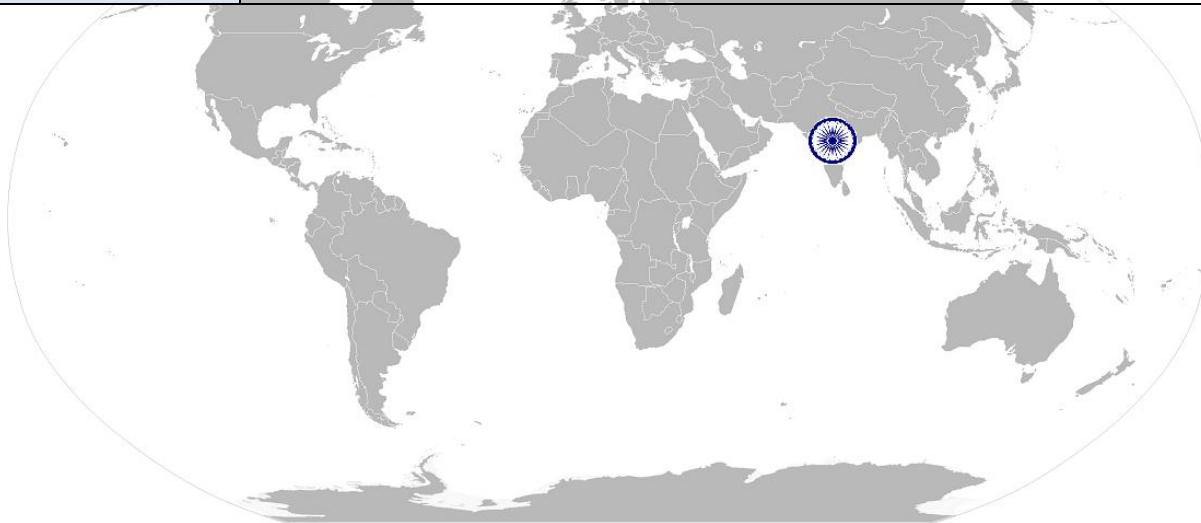
*RSC/N4817 (CPC/N1019) Use and applications of FRP products. Merits and Demerits*

<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Different types of FRP products, design criteria and material and machine selection.</p> <p>KB2. Specific lay out of various work place in the industry.</p> <p>KB3. Sequence of various assembling/dismantling of equipment's at work place</p> <p>KB4. The identification of damage, defects .cracks or leaks beforehand.</p> <p>KB5. Measuring instruments like vernier callipers, micrometres, Thickness Gauge.</p> <p>KB6. Hazards and safety aspects involved in FRP production and usage of relevant Personal Protective Equipment's (PPEs)</p> <p>KB7. Operation of various manufacturing machines for FRP industry.</p>
<b>Skills (S) [Optional]</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Reading and Writing Skills</b>
	<p>The individual on the job needs to know and understand:</p> <p>SA1. How to read warnings, instructions and other text material on product labels, components etc.</p> <p>SA2.The work instructions and standard operation procedures (SOP).</p> <p>SA3. The Creation of small notes/ work documents for supervisor related to operation.</p> <p>SA4. Equipment manuals and process documents given by the equipment supplier to under</p> <p>SA5. Instructions especially safety instructions especially symbols while using the equipment in the plant area</p>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. Understand effectively about operational requirements.</p> <p>SA7. Answer the Queries raised by the operating team as well as others.</p> <p>SA8. Communicate with the supervisor related to the work expectation, timeliness and schedule for completion of the assigned job effectively.</p> <p>SA9. Attentively, listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker.</p>



*RSC/N4817 (CPC/N1019) Use and applications of FRP products. Merits and Demerits*

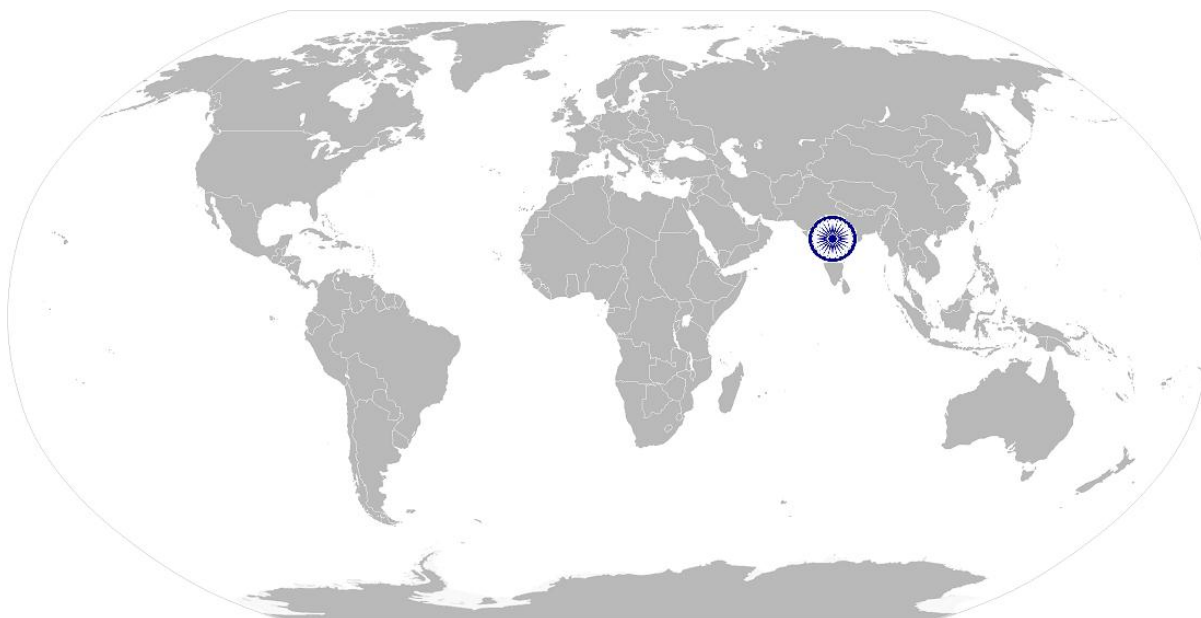
	<p>SA 10. Avoid using jargon, slang or acronyms when communicating with a supervisor /fellow subordinates etc. unless it is required</p> <p>SA11. Maintain Integrity with respect to company property and time.</p> <p>SA12. Communicate with people in a polite manner using respectful language.</p> <p>SA13. Resolve difficulties in relationship with colleagues amicably.</p> <p>SA14. Avoid absenteeism and maintain quality of work.</p> <p>SA15. Work in a disciplined environment and adhere to working norms of the organization.</p> <p>SA16. Be punctual and adhere to timeliness.</p>
<b>B. Professional Skills</b>	<b>Team Work</b>
	<p>The user/individual on the job needs to know &amp; understand how to:</p> <p>SB1. Prioritize &amp; execute task within the scheduled time limit.</p>



*RSC/N4817 (CPC/N1019) Use and applications of FRP products. Merits and Demerits*

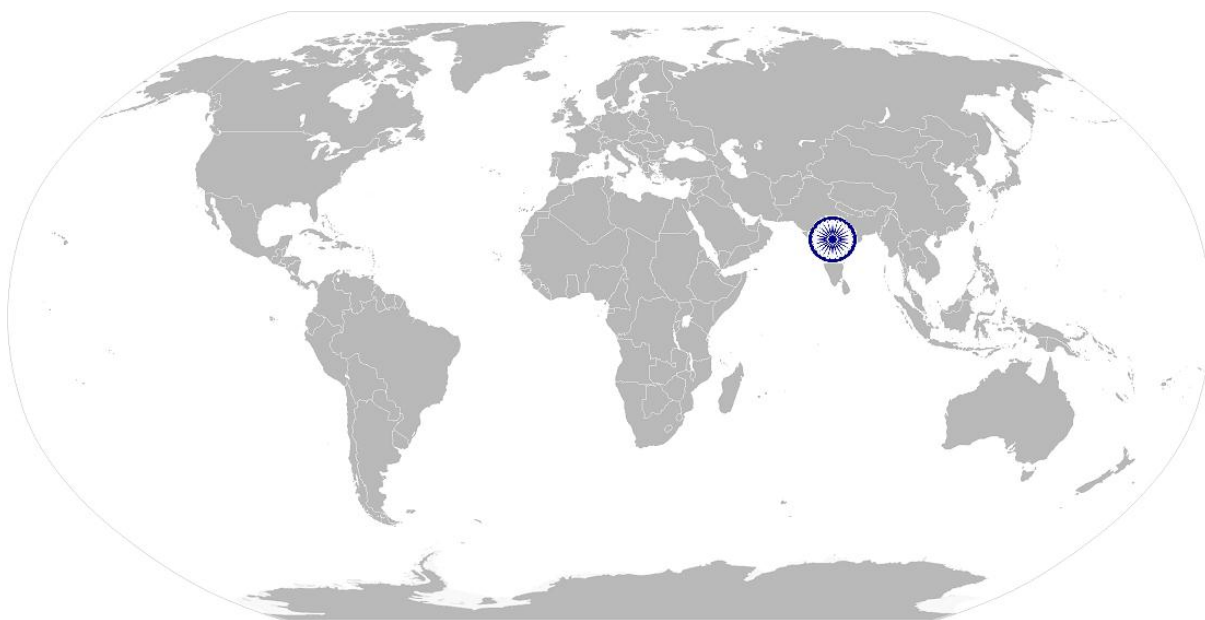
## NOS Version Control

NOS Code	RSC/N4817 (CPC/N1019)		
Credits(NSQF)	3.5	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Plastics Processing	Last reviewed on	26/12/2016
Occupation	Fibre Reinforced Plastics	Next review date	31/12/2021



*RSC/N4818 (CPC/N1020) Basics of thermoplastics and thermoset materials. Introduction to Resins/fibres used for FRP Molding.*

# National Occupational Standards



## Overview

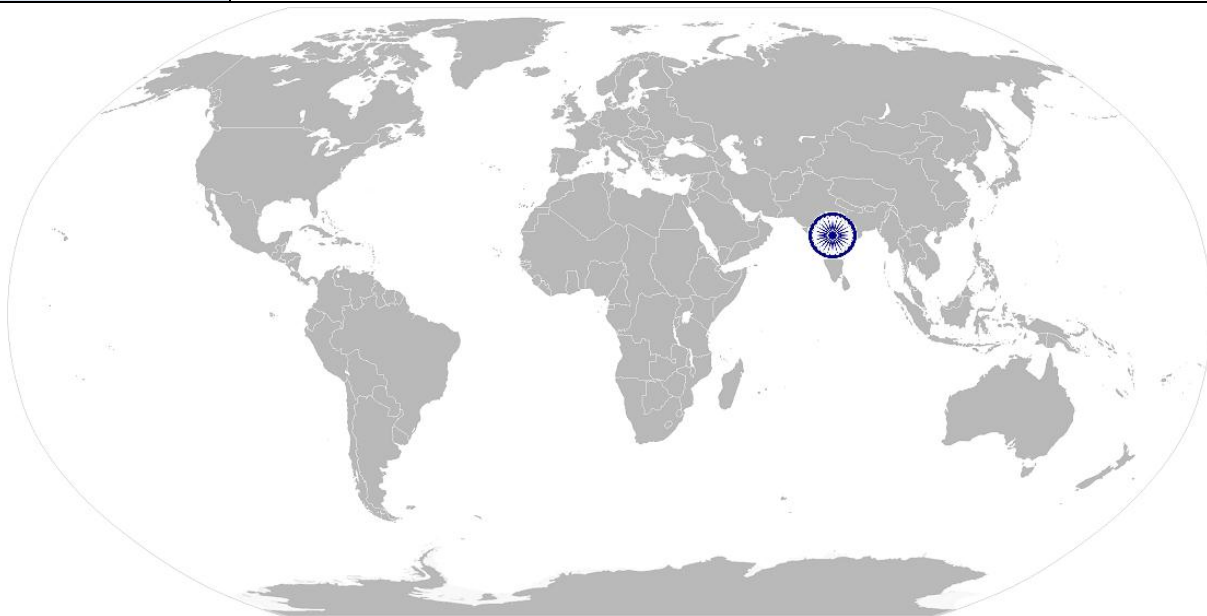
This unit is about understanding different types of raw materials, resins, fibers, used in the FRP manufacturing industry.

*RSC/N4818 (CPC/N1020) Basics of thermoplastics and thermoset materials. Introduction to Resins/fibres used for FRP Molding.*

<b>Unit Code</b>	<b>RSC/N4818 (CPC/N1020)</b>
<b>Unit Title (Task)</b>	<b>Basics of thermoplastics and thermoset materials. Introduction to Resins/fibres used for FRP Molding.</b>
<b>Description</b>	This unit is about understanding types of materials and fibers, their characteristics and applications.
<b>Scope</b>	The OS unit/task covers the following <ul style="list-style-type: none"> <li>Understand different types of raw materials like's thermoplastics and thermoset resins.</li> <li>Understand different types of fibers and their application</li> <li>Understanding the use and application of various additives.</li> <li>Preparation of resin and fiber.</li> <li>Storage and handling resin and fiber.</li> </ul>
<b>Performance criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance criteria</b>
Basics of thermoplastics and thermoset materials. Introduction to Resins/fibres used for FRP Molding.	The individual on the job should be able to: <ul style="list-style-type: none"> <li>PC1. Ensure that the use and application of various additives like catalyst, accelerators, hardeners, colorants, etc.</li> <li>PC2. Learn the use and application of various resins and fibers.</li> <li>PC3. Prepare the fibres for laying. Percentage loading of fibres.</li> <li>PC4. Learn the properties of thermo plastics and thermoset material and their behavior.</li> </ul>
<b>Element</b>	<b>Knowledge &amp; understanding</b>
<b>A. Organizational Context</b>	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1: Safety policy of the organization.</li> <li>KA2: Material cost and loss to the company by materials mishandling.</li> <li>KA3: Chemical storage shelf life of different types of material.</li> <li>KA4: Requirement of Environmental conditions for safe storage.</li> </ul>
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KB1. Material requirement for specific product.</li> <li>KB2. Process knowledge.</li> <li>KB3. Weight and dimension of products manufactured by the industry.</li> </ul>
<b>Skills (S) [Optional]</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing &amp; Reading Skills</b>
	The user/ individual on the job needs to know and understand how to: <ul style="list-style-type: none"> <li>SA1. Read the material requisition slip and collect proper grade of material.</li> <li>SA2. Write log book in terms of Production quantity.</li> <li>SA3. Write material received and used details on daily basis.</li> <li>SA6. Read the safety instructions as mentioned in the raw material packets / containers.</li> </ul>

*RSC/N4818 (CPC/N1020) Basics of thermoplastics and thermoset materials. Introduction to Resins/fibres used for FRP Molding.*

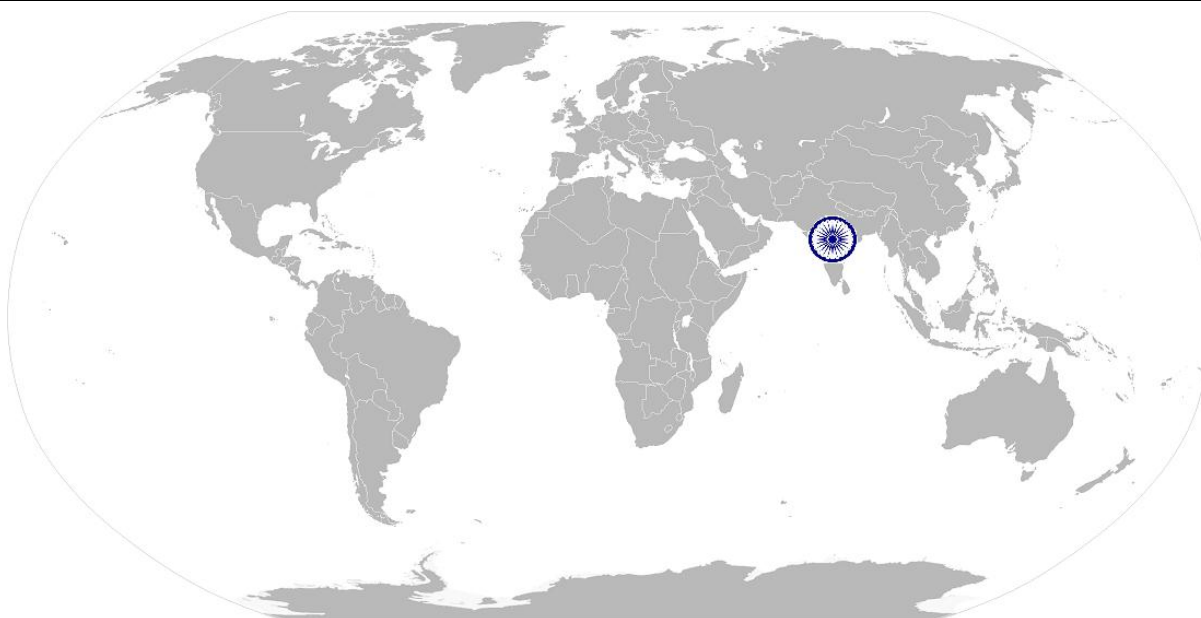
PROFESSIONAL SKILL	SA8. Read instructions especially safety instructions especially symbols while using the materials.
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to: SA9. Listen carefully the instruction given by the operators/supervisor.
	<b>Safety in Material Handling</b>
	The user/individual on the job needs to know and understand how to: SA10. Safely handle all types of resins/fibres and chemicals as specified in operating procedures/ packing details. SA11. Ensure precaution measures to avoid pilferage, spilling and theft or misuse of materials in any form



*RSC/N4818 (CPC/N1020) Basics of thermoplastics and thermoset materials. Introduction to Resins/fibres used for FRP Molding.*

## NOS Version Control

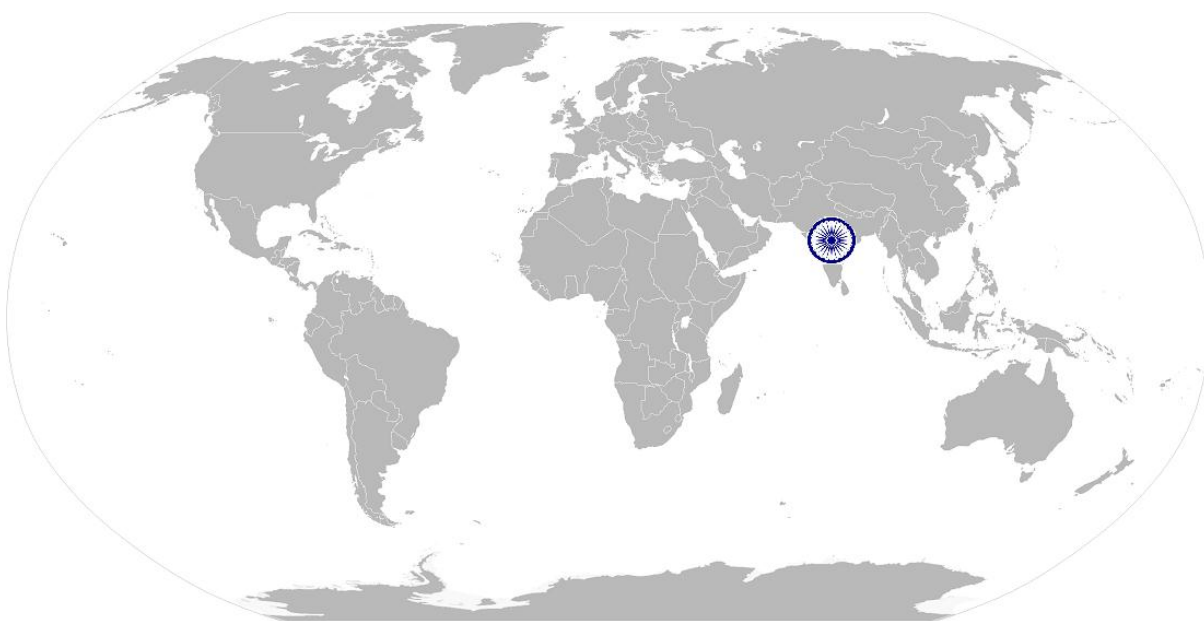
NOS Code	RSC/N4818 (CPC/N1020)		
Credits(NSQF)	5.0	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Plastics Processing	Last reviewed on	26/12/2016
Occupation	Fibre Reinforced Plastics	Next review date	31/12/2021





*RSC/4819 (CPC/N1021) Selection of suitable process for FRP products manufacturing  
and Mould development*

# National Occupational Standards



## Overview

This unit is about understanding various manufacturing process for FRP products manufacturing mould development and selection of suitable process for the product in hand.

*RSC/4819 (CPC/N1021) Selection of suitable process for FRP products manufacturing and Mould development*

National Occupational Standards	<b>Unit Code</b>	<b>RSC/4819 (CPC/N1021)</b>
	<b>Unit Title (Task)</b>	<b>Selection of suitable process for FRP products manufacturing and Mould development.</b>
	<b>Description</b>	This unit is about understanding selection of suitable process for FRP product manufacturing and mould development.
	<b>Scope</b>	The role holder will be responsible for <ul style="list-style-type: none"> <li>Operating all type of manufacturing machines and equipment's.</li> <li>Development of the mould with suitable material.</li> <li>Maintain product size and shape and other quality parameters</li> <li>Proper storage of material, mould and finished goods.</li> </ul>
	<b>Performance criteria (PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance criteria</b>
	Selection of suitable process for FRP products manufacturing and Mould development.	The individual on the job should be able to: PC1. Follow the requirements of the product like aesthetic, size & shape, use condition, performance parameters. Finishing after molding, assembly and disassembly requirements. PC2. Learn Hand layup process & Spray layup process PC3. Operate the Injection molding of thermosets. PC4. Operate the Pultrusion, centrifugal casting Filament winding. PC5. Operate Resin transfer molding, reinforced reaction injection molding. Compression molding. PC6. Study the Pattern making with ply wood, plaster of paris, etc. Mould development with various materials like aluminium, steel, FRP composite, etc.
	<b>Knowledge and Understanding (K)</b>	
	<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. Relevant standards, manuals related to the types products manufactured by the industry. KA2. Cost of various types of manufacturing machinery. KA3. Layout of different plant and machinery in the shopfloor.
	<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: KB1. To operate the machine efficiently. KB2. Safety required in every process. KB3. Basic knowledge of Safety procedures (firefighting, first aid etc.) within the organization. KB4. Different types of moulds, including various components of moulds and their function KB5. Possible causes of common moulding problems & their remedies KB6. Different types of press (hydraulic, sideplate, C –Frame etc.) including various components press and their function.

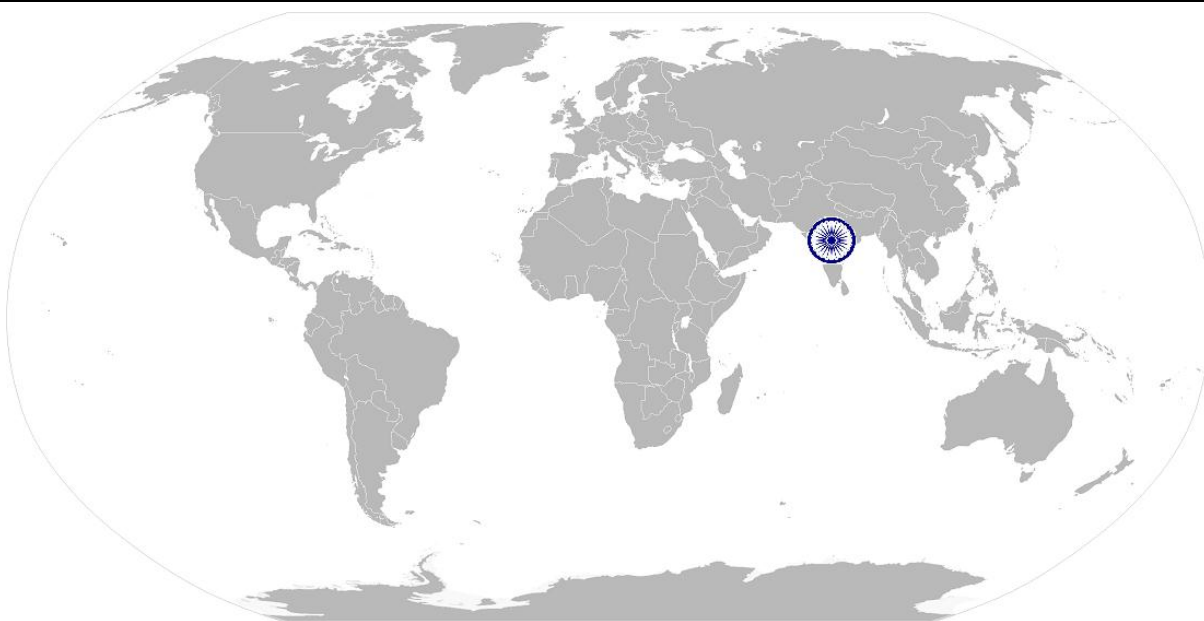
*RSC/4819 (CPC/N1021) Selection of suitable process for FRP products manufacturing and Mould development*

	KB7. Cleanliness and safety requirements for operating a moulding machine KB8. Influence of various dimension (size, shape and complexity) of perform/blank on cost and product quality. KB9. Influence of process parameters (e.g. time, temperature, pressure) on moulding operation/product performance.
<b>Skills (S) [Optional]</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Reading Skills &amp; Writing Skills</b>
	The user/ individual on the job needs to know and understand how to:
	SA1. write basic level notes and observations SA2. Read & comprehend basic English to read manuals of operation. SA3. Read and write an accident/incident report in local language or English.
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to:
	SA4. Effectively communicate information to team members inform employees in the plant and concerned functions about 5S.
<b>B. Professional Skills</b>	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB1. Diagnose common problems in the machine based on visual inspection, sound, temperature etc. SB2. Suggest improvements(if any) in process based on experience

*RSC/4819 (CPC/N1021) Selection of suitable process for FRP products manufacturing and Mould development*

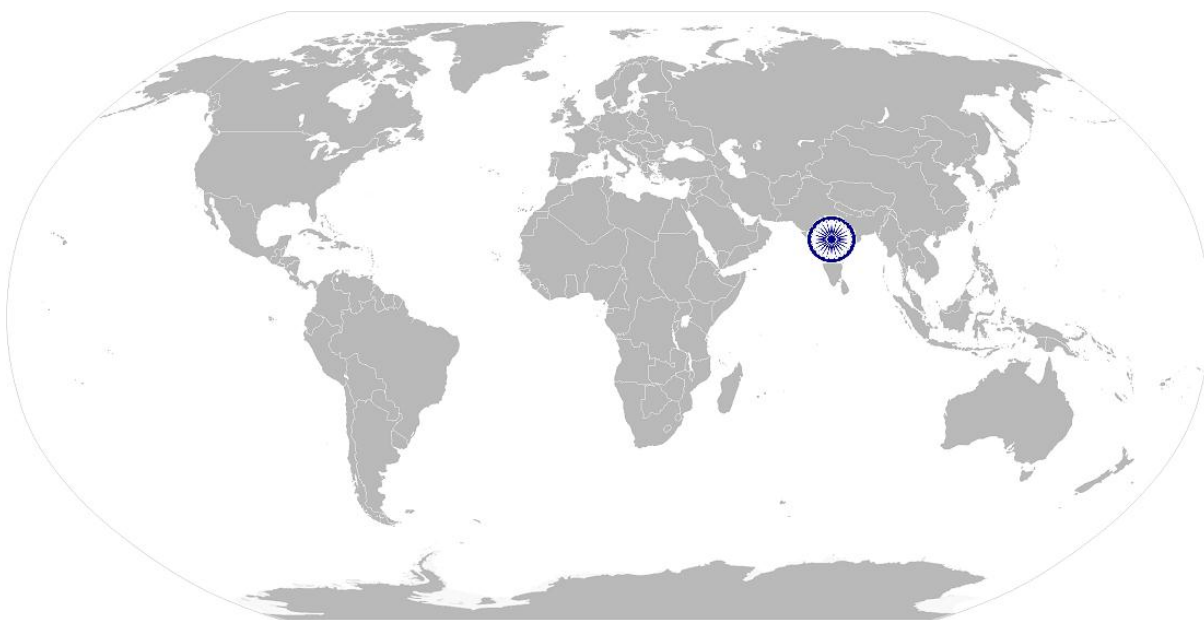
## NOS Version Control

NOS Code	RSC/4819 (CPC/N1021)		
Credits(NSQF)	7.0	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Plastics Processing	Last reviewed on	26/12/2016
Occupation	Fibre Reinforced Plastics	Next review date	31/12/2021



*RSC/N4820 (CPC/N1022) Efficient Operation of the Machinery*

# National Occupational Standards



## Overview

This unit is about efficiently operating the manufacturing equipment's available in the FRP industry.

*RSC/N4820 (CPC/N1022) Efficient Operation of the Machinery*

Unit Code	RSC/N4820 (CPC/N1022)
Unit Title (Task)	Efficient operation of the machinery.
Description	This OS is about efficiently operating the manufacturing equipment’s available in the FRP industry.
Scope	<p>This OS unit / task covers the following:</p> <ul style="list-style-type: none"><li>• Understanding the capacity and range of operation of the machine. Process capability.</li><li>• Start up and shut down procedures.</li><li>• Process/parameters optimization for quality product manufacturing.</li><li>• Trouble shooting of defects in manufacturing with regard to mould, material, moulding parameter and machine operation.</li><li>• Preventive and Break down Maintenance</li></ul>
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Efficient operation of the machinery.	<p>The individual on the job should be able to:</p> <p>PC1. Learn the capacity and range of operation of the machine. Process capability.</p> <p>PC2. Operate and skill about various parts and their functions of the machine.</p> <p>PC3. Selection the suitable process parameters for the material and product.</p> <p>PC4. Learn the Start up and shut down procedures</p> <p>PC5. Take a Trial production with new materials and molds</p>
Productivity enhancement by effective operation	<p>To be competent, the user/individual on the job must be able to :</p> <p>PC6. Set the Process/parameters optimization for quality product manufacturing.</p> <p>PC7. Handle the Safely loading and unloading of moulds</p> <p>PC8. Perform Products ejection and handling.</p> <p>PC9. Maintain Preventive and Break down Maintenance</p> <p>PC10. Learn the Electrical and hydraulic circuits and their operation.</p> <p>PC11. Handle the Trouble shooting of defects in manufacturing with regard to mould, material, moulding parameter and machine operation.</p>
Knowledge and Understanding (K) w.r.t. the scope	
Element	Knowledge and Understanding

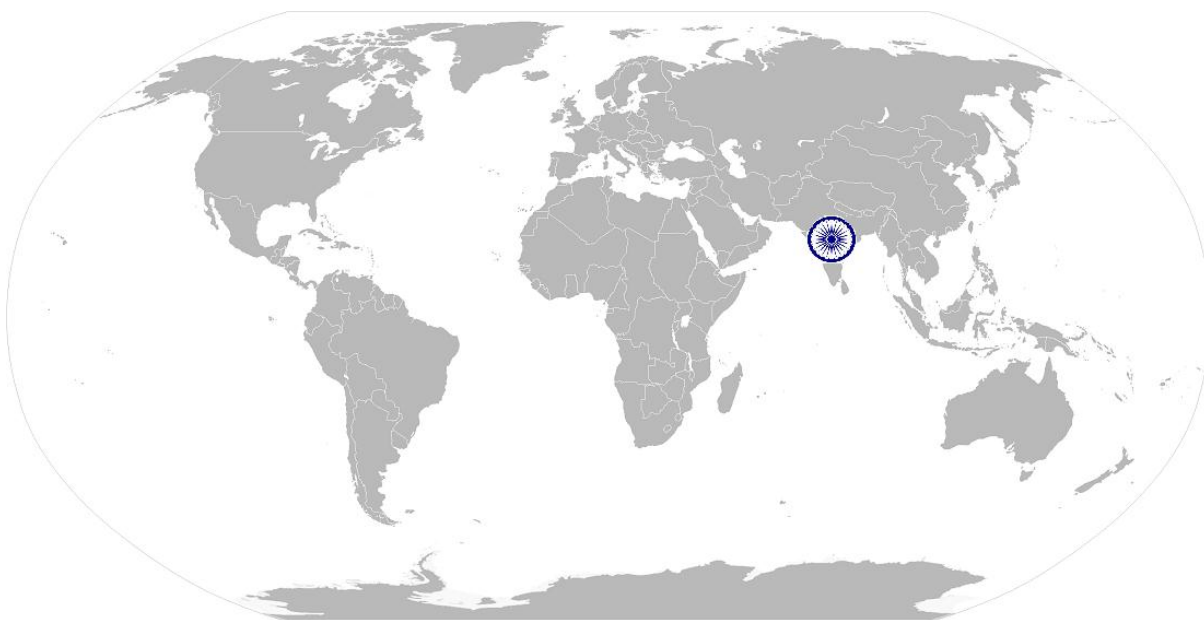


*RSC/N4820 (CPC/N1022) Efficient Operation of the Machinery*

<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. Safety policy of the company. KA2. Emergency organization of the specific work site. KA3. Risk and impact of not following defined procedures/work instructions.
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: KB1. Different type's tools, tackles, equipment's and hardware required for carrying out jobs for manufacturing of different products. KB2. Specific layout of various work places. KB3. Sequence of various dismantling / assembling of equipment at job site. KB4. Visual checks to identify damage, defects, cracks of leaks beforehand.
<b>Skills (S)w.r.t. the scope</b>	
<b>Element</b>	<b>Skills</b>
<b>A. Core Skills/ Generic Skills</b>	<b>Reading and Writing Skills</b>
	The user/ individual on the job needs to know and understand how to: SA1. Read work instructions and standard operation procedures (SOP) SA2. Create small notes/work documents for supervisor related to operation. SA3. Read business correspondence e.g. internal memos, circular etc. SA4. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and working processes.
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to: SA5. Understand about operational requirements effectively. SA6. Answer the queries raised by the operative team as well as other. SA7. Effectively communicate with the supervisor related to work expectations, timelines and schedule for completion of the assigned job. SA8. Attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker.
<b>B. Professional Skills</b>	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB1. Maintain integrity with respect to company property and time. SB2. Communicate with people in a polite manner using respectful language. SB3. Resolve difficulties in relationships with colleagues amicably.
	<b>Critical Thinking</b>

*RSC/N4820 (CPC/N1022) Efficient Operation of the Machinery*

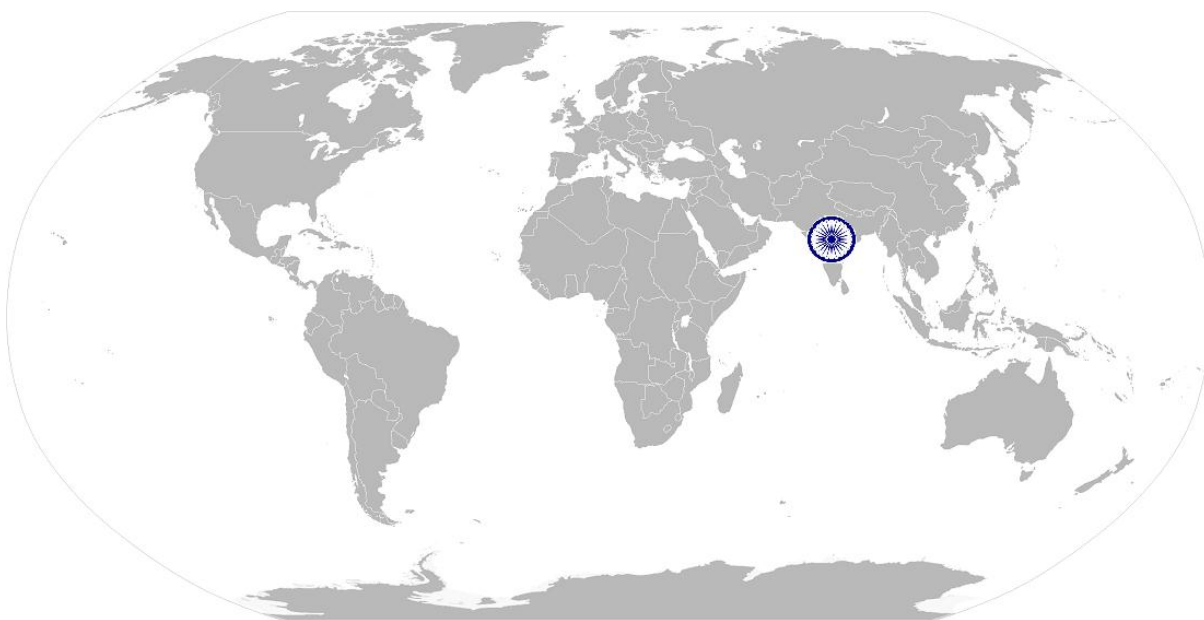
	The user/ individual on the jobs needs to know and understand how to: SB4. Avoid absenteeism and maintain quality of work. SB5. Work in a disciplined environment and adhere to working norms of the organization. SB6. Be punctual and adhere to timelines.
	<b>Team Work</b>
	The user/individual on the job needs to know and understand how to : SB1. Prioritize and execute tasks within the scheduled time limits.



**NOS Version Control**

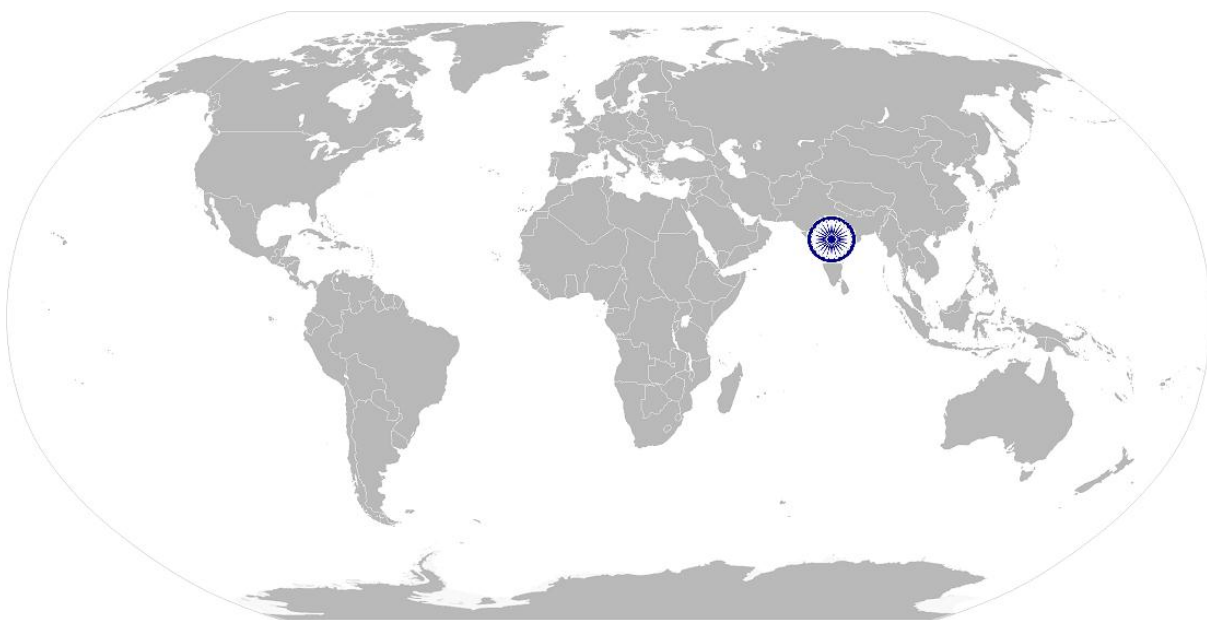
*RSC/N4820 (CPC/N1022) Efficient Operation of the Machinery*

NOS Code	RSC/N4820 (CPC/N1022)		
Credits(NSQF)	7.0	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Plastics Processing	Last reviewed on	26/12/2016
Occupation	Fibre Reinforced Plastics	Next review date	31/12/2021



*RSC/N4821 (CPC/N1023) Finishing/Decoration operations for FRP products.*

# National Occupational Standards



## Overview

This unit about understands the various finishing, decoration, fabrication required during post moulding operation in FRP products.

RSC/N4821 (CPC/N1023) Finishing/Decoration operations for FRP products.

<b>Unit Code</b>	<b>RSC/N4821 (CPC/N1023)</b>
<b>Unit Title (Task)</b>	<b>Finishing/Decoration operations for FRP products.</b>
<b>Description</b>	This unit is about understanding the various finishing, decoration, fabrication required during post moulding operation in FRP products
<b>Scope</b>	<p>The role holder will be responsible for</p> <ul style="list-style-type: none"> <li>Deciding the post moulding operations required for the finished product.</li> <li>Performing post moulding operation like painting, printing, Polishing and decoration of the product.</li> <li>Cleaning, washing, removing the releasing agents from the laminated sheets.</li> <li>Assembly and disassembly and improving the aesthetic looks.</li> </ul>
<b>Performance criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance criteria</b>
Finishing/Decoration operations for FRP products.	<p>The individual on the job should be able to:</p> <p>PC1. Do the Trimming and cutting operations on FRP open molded products.</p> <p>PC2. Ensure the cleaning, washing and removal of release agents from molded products.</p> <p>PC3. Follow the Post molding operations like joining, drilling, painting and printing on molded products.</p> <p>PC4. Check the Finishing operations aimed at improving aesthetic looks.</p> <p>PC5. Perform Assembly and disassembly of components for building the final product.</p>
<b>Knowledge and Understanding (K)w.r.t. the scope</b>	
<b>Element</b>	<b>Knowledge and Understanding</b>
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Customer requirements for the product</p> <p>KA2. Quality parameter to satisfy the customer requirements.</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Various types of printing and painting on FRP Products.</p> <p>KB2. Polishing, Buffing and grinding operations on FRP Products.</p> <p>KB3. Joining, Fabrication and assembly and disassembly of FRP products.</p>

*RSC/N4821 (CPC/N1023) Finishing/Decoration operations for FRP products.*

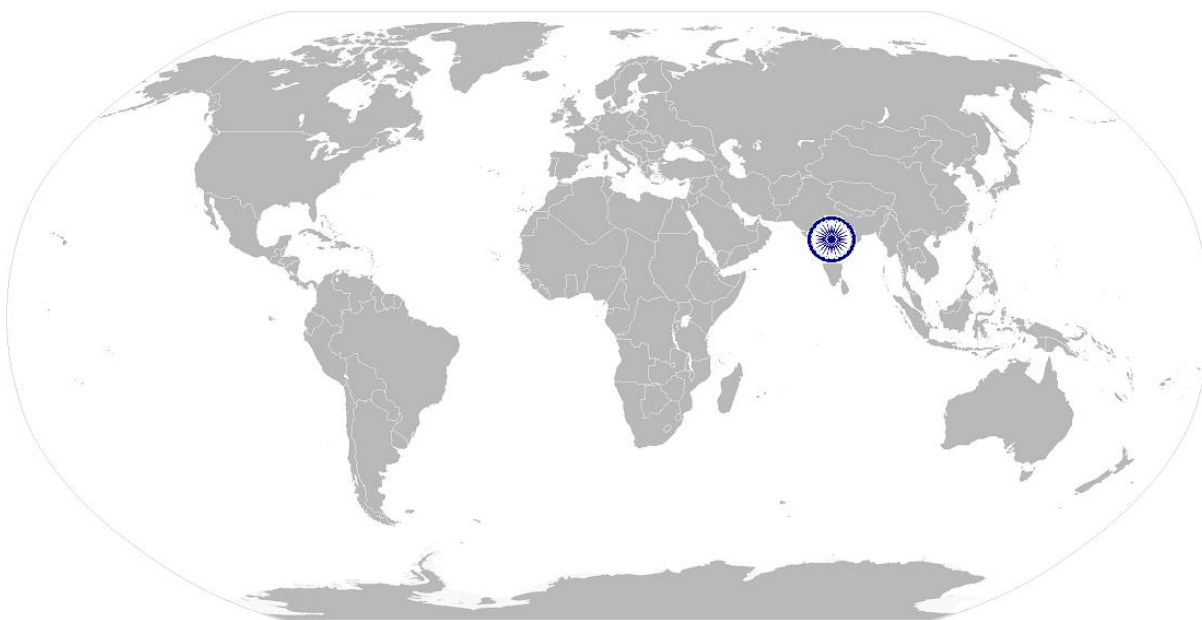
Skills (S)w.r.t. the scope	
Element	Skills
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The user/ individual on the job needs to know and understand how to: SA1. Write basic level notes and observations
	<b>Reading Skills</b>
	The user/individual on the job needs to know and understand how to: SA2. Read safety instructions put up across the plant premises SA3. Read safety precautions mentioned in equipment manuals and panels to understand the potential risks associated
	<b>Oral Communication (Listening and Speaking skills)</b>
<b>B. Professional Skills</b>	The user/individual on the job needs to know and understand how to: SA4. Effectively communicate information to team members SA5. Inform employees in the plant and concerned functions about events, incidents & potential risks observed related to Safety,
	<b>Plan and Organize</b>
	The user/individual on the job needs to know and understand how to: SB1. Plan & Organize his own work schedule and skills of reading and writing.



*RSC/N4821 (CPC/N1023) Finishing/Decoration operations for FRP products.*

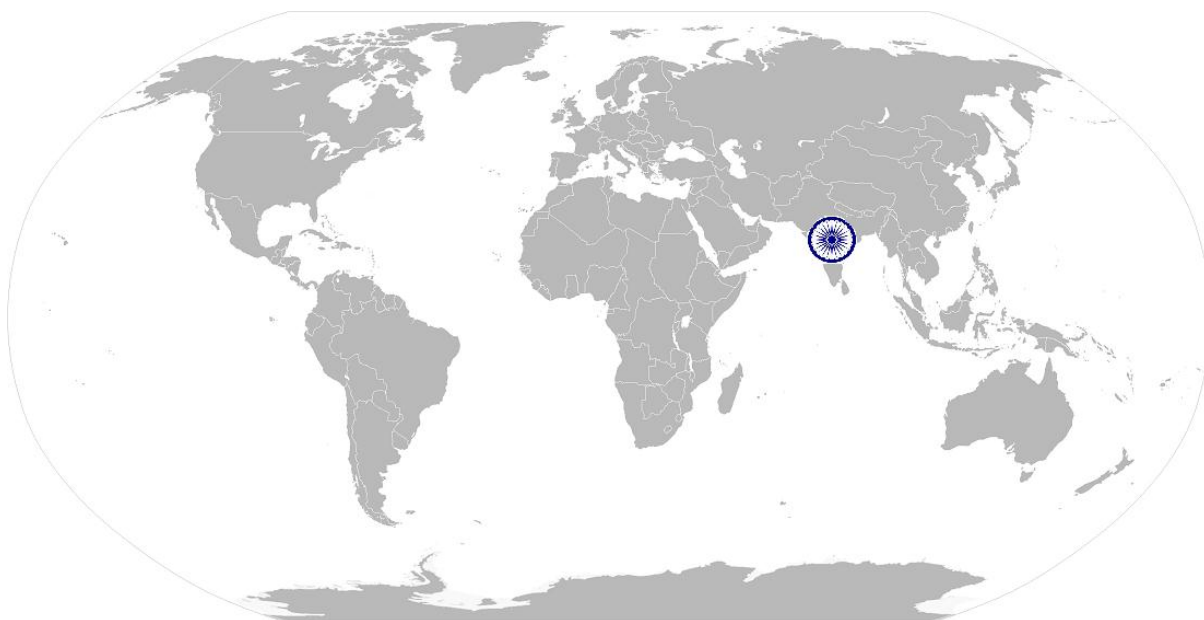
## NOS Version Control

NOS Code	RSC/N4821 (CPC/N1023)		
Credits(NSQF)	3.5	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Plastics Processing	Last reviewed on	26/12/2016
Occupation	Fibre Reinforced Plastics	Next review date	31/12/2021



*RSC/N4822 (CPC/N1024) Understand and apply the quality control techniques  
for defect free manufacturing*

# National Occupational Standards



## Overview

This unit is about the need of quality control and performing required activities to maintain the quality of the product.

*RSC/N4822 (CPC/N1024) Understand and apply the quality control techniques for defect free manufacturing*

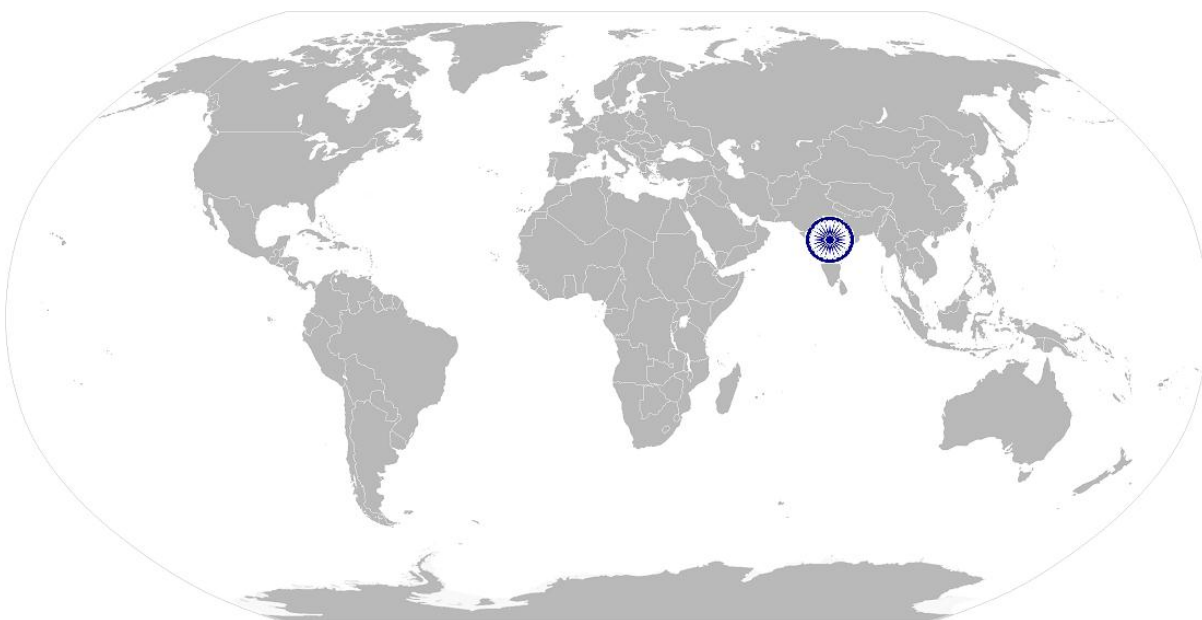
National Occupational Standards	<b>Unit Code</b>	<b>RSC/N4822 (CPC/N1024)</b>
	<b>Unit Title (Task)</b>	<b>Understand and apply the quality control techniques for defect free manufacturing</b>
	<b>Description</b>	This unit is about the need of quality control and performing required activities to maintain the quality of the product.
	<b>Scope</b>	<p>This OS unit / task covers the following:</p> <ul style="list-style-type: none"> <li>• Ensure that total range of checks as per the prescribed national and International standards on regular intervals throughout the shifts.</li> <li>• Use appropriate measuring instruments, equipment, tools, accessories etc, as prescribed / required.</li> <li>• Interpret the results of the quality check correctly.</li> <li>• Identify impact on final product due to non-conformance to prescribed Standards.</li> </ul>
	<b>Performance criteria (PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance criteria</b>
	Understand and apply the quality control techniques for defect free manufacturing	<p>The individual on the job must be able to:</p> <p>PC1. Determine Mechanical properties &amp; Thermal properties tests.</p> <p>PC2. Determine Physical &amp; chemical properties</p> <p>PC3. Determine Electrical, Fire &amp; smoke properties</p> <p>PC4. Review effectiveness of corrective action.</p> <p>PC5. Interpret the results of the quality check correctly.</p> <p>PC6. Take up results of the findings with QC in charge/appropriate authority.</p> <p>PC7. Identify non-conformities to quality assurance standards.</p> <p>PC8. Identify potential causes of non-conformities to quality assurance standards.</p> <p>PC9. Identify impact on final product due to non-conformance to prescribed Standards.</p> <p>PC10. Evaluating the need for action to ensure that problems do not reoccur.</p> <p>PC11. Suggest corrective action to address problem.</p>
	<b>Knowledge and Understanding (K) w.r.t. the scope</b>	
	<b>Element</b>	<b>Knowledge and Understanding</b>
	<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Quality objectives and policy of the company.</p> <p>KA2. National and international quality requirements.</p> <p>KA3. Competitors Quality parameters.</p>

*RSC/N4822 (CPC/N1024) Understand and apply the quality control techniques  
for defect free manufacturing*

<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Various types of test equipment's and measuring tools,</p> <p>KB2. National and International standard.</p> <p>KB3. Statistical quality control techniques.</p> <p>KB4. Nondestructive testing techniques.</p>
<b>Skills (S)w.r.t. the scope</b>	
<b>Element</b>	<b>Skills</b>
<b>A. Core Skills/ Generic Skills</b>	<b>Reading and Writing Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Read work instructions and standard operation procedures (SOP)</p> <p>SA2. Create small notes/work documents for supervisor related to operation.</p> <p>SA3. Read business correspondence e.g. internal memos, circular etc.</p> <p>SA4. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and working processes.</p> <p>SA5. Interpret results of the test with quality.</p>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Understand about operational requirements effectively.</p> <p>SA6. Answer the queries raised by the operative team as well as other.</p> <p>SA7. Communicate with the supervisor related to work expectations, timelines and schedule for completion of the assigned job effectively.</p> <p>SA8. Attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker.</p>
<b>B. Professional Skills</b>	<b>Critical Thinking</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Maintain integrity with respect to company property and time.</p> <p>SB2. Communicate with people in a polite manner using respectful language.</p> <p>SB3. Resolve difficulties in relationships with colleagues amicably.</p>
	<b>Analytical Thinking</b>
	<p>The user/ individual on the jobs needs to know and understand how to:</p> <p>SB4. Avoid absenteeism and maintain quality of work.</p> <p>SB5. Work in a disciplined environment and adhere to working norms of the organization.</p> <p>SB6. Be punctual and adhere to timelines.</p>

*RSC/N4822 (CPC/N1024) Understand and apply the quality control techniques for defect free manufacturing*

	Team Work
	The user/individual on the job needs to know and understand how to :  SB1. Execute Prioritize tasks within the scheduled time limits.



*RSC/N4822 (CPC/N1024) Understand and apply the quality control techniques for defect free manufacturing*

## NOS Version Control

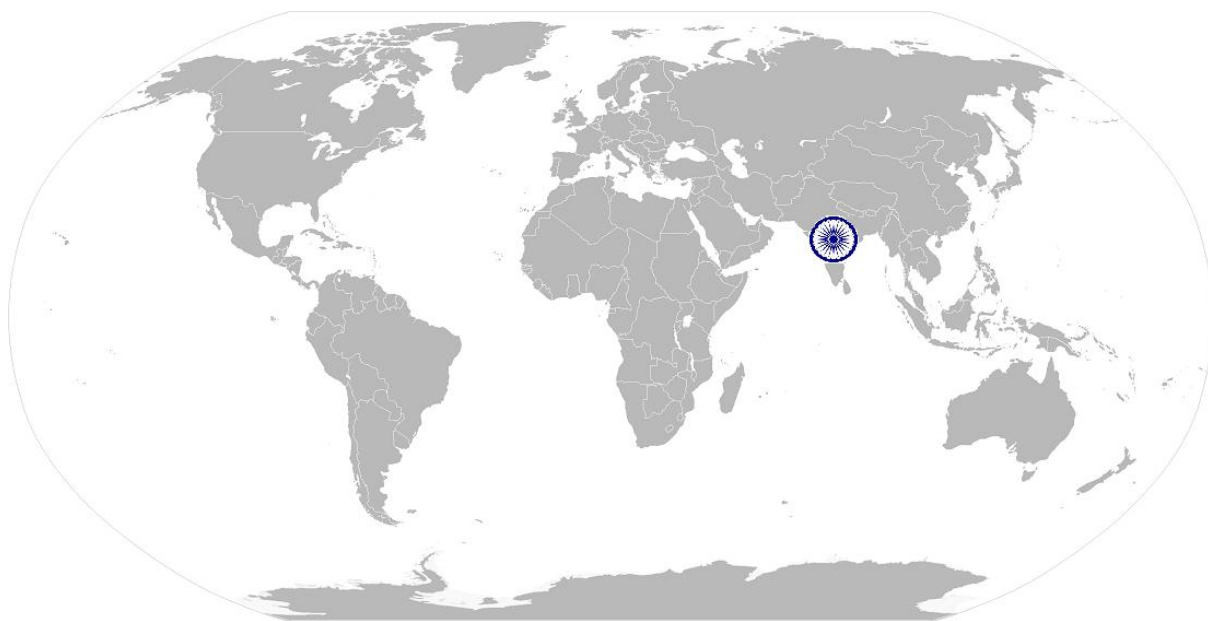
NOS Code	RSC/N4822 (CPC/N1024)		
Credits(NSQF)	5.0	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Plastics Processing	Last reviewed on	26/12/2016
Occupation	Fibre Reinforced Plastics	Next review date	31/12/2021





*RSC/N4101 (CPC/N0411) Maintain basic health and safety practices at the workplace, 5S.*

# National Occupational Standards



## Overview

*This unit is about understanding health, safety and environment measures in the work place.*

*RSC/N4101 (CPC/N0411) Maintain basic health and safety practices at the workplace, 5S.*

National Occupational Standards	<b>Unit Code</b>	<b>RSC/N4101 (CPC/N0411)</b>
	<b>Unit Title (Task)</b>	<b>Maintain basic health and safety practices at the workplace, 5S</b>
	<b>Description</b>	<p>This OS unit is about knowledge and practices relating to health, safety and security that candidates need to use in the workplace. It covers responsibilities towards self, others, assets and the environment.</p> <p>It includes understanding of risks &amp; hazards in the workplace, along with common techniques to minimize risk, deal with accidents, emergencies etc. It covers knowledge of fire safety, common first aid applications and safe practice.</p> <p>This OS is about ensuring all 5S activities both at the shop floor and the office area to facilitate increase in work productivity.</p>
	<b>Scope</b>	<p>The role holder will be responsible for</p> <ul style="list-style-type: none"> <li>• Health and safety procedure.</li> <li>• Fire safety procedure.</li> <li>• Emergencies, rescue and first aid procedures.</li> <li>• Ensure sorting, stream lining, storage and documentation, cleaning, standardization and sustenance across the plant premises of the organization.</li> </ul>
	<b>Performance Criteria (PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance Criteria</b>
	<b>Health and safety</b>	<p>The individual on the job should be able to:</p> <p>PC1. Wear protective clothing/equipment for specific tasks and work conditions</p> <p>PC2. Carry out safe working practices while dealing with hazards to ensure the safety of Self and others.</p> <p>PC3. Keep good housekeeping practices at all times</p>
	<b>Fire safety</b>	<p>The individual on the job should be able to:</p> <p>PC4. Use the various appropriate fire extinguishers on different types of fires correctly</p> <p>PC5. Demonstrate rescue techniques applied during fire hazard, demonstrate good housekeeping in order to prevent fire hazards, demonstrate the correct use of a fire extinguisher.</p>
	<b>Emergencies, rescue and first aid procedures.</b>	<p>PC6. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise, and Identify areas in the plant which are potentially hazardous / unhygienic in nature. Conduct regular checks with support of the maintenance team on machine health to identify potential hazards due to wear and tear of machine.</p> <p>PC7. Inform the concerned authorities on the potential risks identified in the processes, workplace area/ layout, materials used etc, Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations.</p>

RSC/N4101 (CPC/N0411) Maintain basic health and safety practices at the workplace, 5S.

	PC8. Create awareness amongst others by sharing information on the identified risks.
<b>Ensure sorting, stream lining, storage and documentation, cleaning, standardization and sustenance across the plant premises of the organization.</b>	<p>PC9. Follow the sorting process and check that the tools, fixtures &amp; jigs that are lying on workstations are the ones in use and un- necessary items are not cluttering the workbenches or work surfaces.</p> <p>PC10. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions</p> <p>PC11. Follow the technique of waste disposal and waste storage in the proper bins as per SOP</p> <p>PC12. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places</p> <p>PC13. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions</p> <p>PC14. Ensure that areas of material storage are not overflowing</p> <p>PC15. Ensure properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required</p> <p>PC16. Return of extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area</p> <p>PC17. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards</p> <p>PC18. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists</p> <p>PC19. Ensure to check the items in the respective areas have been identified as broken or damaged</p> <p>PC20. Follow the given instructions and check for labelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.</p> <p>PC21. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. The relevant standards, procedures and policies related to Health, Safety and Environment followed in the company</p> <p>KA2. The emergency handling procedures &amp; hierarchy for escalation</p>

*RSC/N4101 (CPC/N0411) Maintain basic health and safety practices at the workplace, 5S.*

<b>B. Technical Knowledge</b>	<p><b>The user/individual on the job needs to know and understand:</b></p> <p>KB1. The basic knowledge of Safety procedures (fire fighting, first aid) within the organization</p> <p>KB2. The basic knowledge of various types of PPEs and their usage</p> <p>KB3. The basic knowledge of risks/hazards associated with each occupation in the organization</p> <p>KB4. The knowledge of personal hygiene and how an individual contribute towards creating a highly safe and clean working environment the individual on the job needs to know and understand.</p> <p>KB5. The meaning of “hazards” and “risks”</p> <p>KB6. The health and safety hazards commonly present in the work environment and related precautions</p> <p>KB7. The possible causes of risk, hazard or accident in the workplace and why risk and/or accidents are possible</p> <p>KB8. The Possible causes of risk and accident (due to oil leakage)</p> <p>KB9. Methods of accident prevention</p> <p>KB9. Safe working practices when working with tools and machines</p> <p>KB10. Safe working practices while working at various hazardous sites</p> <p>KB11. The general health and safety equipment in the workplace</p> <p>KB12. Various dangers associated with the use of electrical equipment</p> <p>KB13. Preventative and remedial actions to be taken in the case of exposure to toxic materials</p> <p>KB14. The Importance of using protective clothing/equipment while working</p> <p>KB15. Precautionary activities to prevent the fire accident</p> <p>KB16. Various causes of fire</p> <p>KB17. The techniques of using the different fire extinguishers</p> <p>KB18. Different methods of extinguishing fire</p> <p>KB19. Different materials used for extinguishing fire</p> <p>KB20. The rescue techniques applied during a fire hazard</p> <p>KB21. Various types of safety signs and what they mean</p> <p>KB22. Appropriate basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries</p> <p>KB23. The content of written accident report</p> <p>KB24. Potential injuries and ill health associated with incorrect manual handling</p> <p>KB25. Safe lifting and carrying practices</p> <p>KB26. Personal safety, health and dignity issues relating to the movement of a person by others</p> <p>KB27. Potential impact to a person who is moved incorrectly</p> <p>KB28. The basic knowledge of 5S procedures</p> <p>KB29. The various types of 5s practices followed in various areas</p> <p>KB30. The 5S checklists provided in the department/ team</p> <p>KB31. The useful &amp; non useful items</p>
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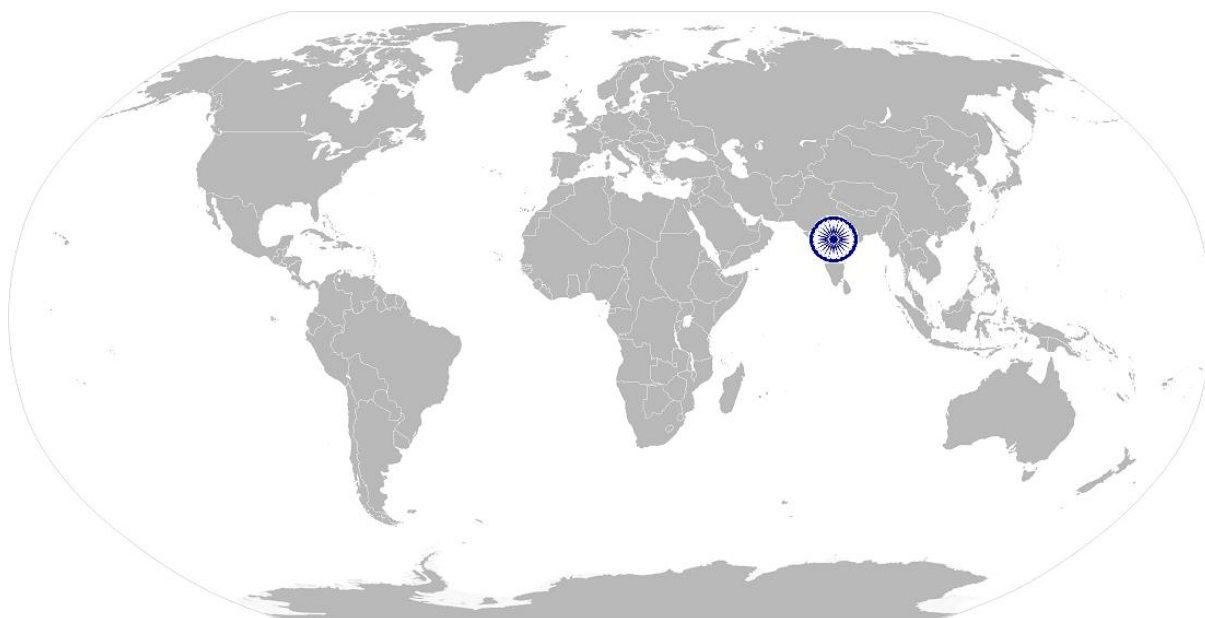
RSC/N4101 (CPC/N0411) Maintain basic health and safety practices at the workplace, 5S.

	KB32. The labels , signs & colours used as indicators KB33. To sort and store various types of tools, equipment, material etc. KB34. To know, how to identify various types of waste products KB35. The impact of waste/ dirt/ dust/unwanted substances on the process/ environment/ machinery/ human body. KB36. The knowledge of best ways of cleaning & waste disposal
<b>Skills (S) [Optional]</b>	
<b>Element</b>	<b>Skills</b>
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The user/ individual on the job needs to know and understand how to: SA1. Observe the basic level notes.
	<b>Reading Skills</b>
	The user/ individual on the job needs to know and understand how to: SA2. Put up safety instructions across the plant premises SA3. Put up safety precautions mentioned in equipment manuals and panels and understand the potential risks associated
	<b>Oral Communication (Listening and Speaking skills)</b>
	<b>The user/individual on the job needs to know and understand how to:</b> SA4. Communicate information to team members effectively SA5. Inform employees in the plant and concerned functions about events, Incidents & potential risks observed related to Safety, Health and Environment. SA6. Question operator/ supervisor in order to understand the safety related issues SA7. Attentively listen with full attention and comprehend the information given by the speaker during safety drills and training programs
	<b>B. Professional Skills</b>
	<b>Plan and Organize</b>
	<b>The user/individual on the job needs to know and understand how to:</b> SB1. Process the work order and jobs received from the internal customers. SB2. Design documents received from internal customers SB3. Understand & organize all process/ equipment manuals so that sorting out information is fast.
	<b>Critical Thinking</b>
	<b>The user/individual on the job needs to know and understand how to:</b> SB4. Use common sense and make judgments during day to day basis SB5. Use intuition to detect any potential problems which could arise during operations
	<b>Analytical Thinking</b>
	<b>The user/individual on the job needs to know and understand how to:</b>



*RSC/N4101 (CPC/N0411) Maintain basic health and safety practices at the workplace, 5S.*

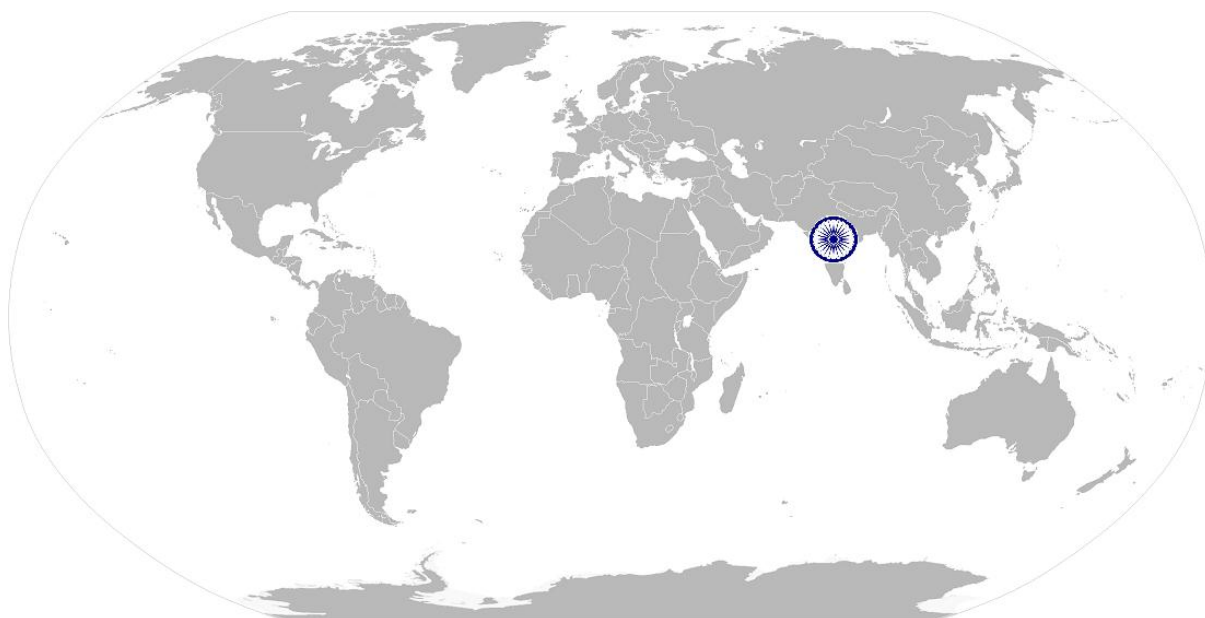
	<p>SB6. Follow instructions and work on areas of improvement identified</p> <p>SB7. Complete the assigned tasks with minimum supervision</p> <p>SB8. Complete the job defined by the supervisor within the timelines and quality norms</p>
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*RSC/N4101 (CPC/N0411) Maintain basic health and safety practices at the workplace, 5S.*

## NOS Version Control

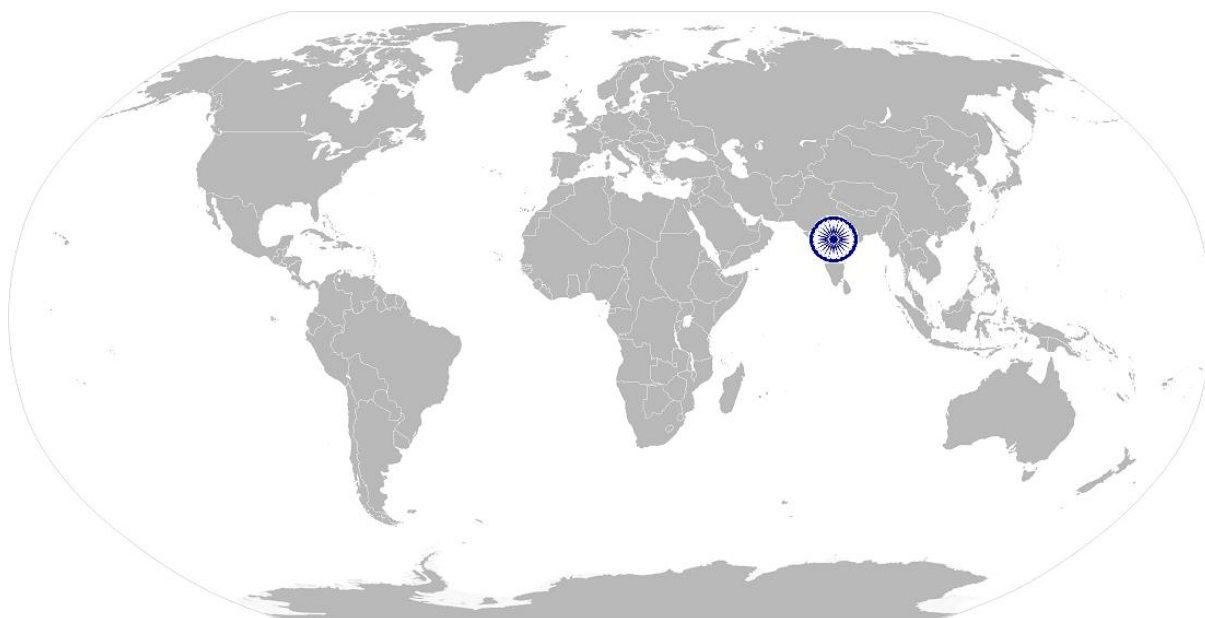
NOS Code	RSC/N4101 (CPC/N0411)		
Credits(NSQF)	3.5	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Plastics Processing	Last reviewed on	26/12/2016
Occupation	Fibre Reinforced Plastics	Next review date	31/12/2021





*RSC/N4823 (CPC/N1026) Develop and maintain suitable housekeeping practices in the shop floor*

# National Occupational Standards



## Overview

This unit is about maintaining proper housekeeping in the shopfloor to ensure effective operation and movement of man and materials.

*RSC/N4823 (CPC/N1026) Develop and maintain suitable housekeeping practices in the shop floor*

<b>Unit Code</b>	<b>RSC/N4823 (CPC/N1026)</b>
<b>Unit Title (Task)</b>	<b>Develop and maintain suitable housekeeping practices in the shop floor.</b>
<b>Description</b>	This unit is about maintaining proper housekeeping in the shop floor to ensure effective operation and movement of man and materials.
<b>Scope</b>	<p>This OS unit / task covers the following:</p> <ul style="list-style-type: none"> <li>• Take an overlook of the Area under House Keeping.</li> <li>• Put appropriate Signage immediately if oily substance / Water spills on the floor to avoid accident</li> <li>• If certain housekeeping activities require to be performed by housekeeping staffs, the Inform them.</li> <li>• If it has to be carried out by self then, Identify the material / equipment required for cleaning the areas.</li> </ul>
<b>Performance criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance criteria</b>
Develop and maintain suitable housekeeping practices in the shop floor.	<p>The individual on the job must be able to:</p> <p>PC1. Take an overlook of the Area under House Keeping.</p> <p>PC2. Put appropriate Signage immediately if oily substance / Water spills on the floor to avoid accident</p> <p>PC3. Follow the certain housekeeping activities require to be performed by housekeeping staffs, then Inform them.</p> <p>PC4. Identify the material / equipment required for cleaning the areas.</p> <p>PC5. Plan the sequence for cleaning the area to avoid re-soiling the cleaned areas and surfaces.</p> <p>PC6. Display the appropriate signage for the work being conducted.</p> <p>PC7. Ensure that there is adequate ventilation for the work being carried out.</p> <p>PC8. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions.</p> <p>PC9. Follow the technique of waste disposal and waste storage in the proper bins as per SOP.</p> <p>PC10. Segregate the items which are labelled as red tag items for the process area and keep them in the correct places.</p> <p>PC11. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions.</p>
<b>Knowledge and Understanding (K) w.r.t. the scope</b>	
<b>Element</b>	<b>Knowledge and Understanding</b>
<b>A. Organizational Context</b> (Knowledge of	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Relevant standards, procedures and policies related to 5S</p>

*RSC/N4823 (CPC/N1026) Develop and maintain suitable housekeeping practices in the shop floor*

the company / organization and its processes)	<p>followed in the company.</p> <p>KA2. know various types 5s practices followed in various areas</p> <p>KA3. Understand the 5S checklists provided in the department/team</p> <p>KA4. Safety policy of the organization and persons concerned for safety.</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Have skills to identify useful &amp; non useful items.</p> <p>KB2. Have knowledge of labels, signs &amp; colors used as indicator.</p> <p>KB3. Basic knowledge of Safety procedures (firefighting, first aid etc.) within the organization.</p> <p>KB4. Basic knowledge of various types of PPEs and their usage</p> <p>KB5. Basic knowledge of risks/hazards associated with each occupation in the organization.</p> <p>KB6. Knowledge of personal hygiene and how an individual can contribute towards creating a highly safe and clean working environment.</p>
<b>Skills (S)w.r.t. the scope</b>	
<b>Element</b>	<b>Skills</b>
<b>A. Core Skills/ Generic Skills</b>	<b>Reading and Writing Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Read work instructions and standard operation procedures (SOP)</p> <p>SA2. Create small notes/work documents for supervisor related to operation.</p> <p>SA3. Read business correspondence e.g. internal memos, circular etc.</p> <p>SA4. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and working processes.</p> <p>SA5. Interpret results of the test with quality.</p>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Effectively understand about operational requirements.</p> <p>SA6. Answer the queries raised by the operative team as well as other.</p> <p>SA7. Effectively communicate with the supervisor related to work expectations, timelines and schedule for completion of the assigned job.</p> <p>SA8. Attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker.</p>

*RSC/N4823 (CPC/N1026) Develop and maintain suitable housekeeping practices in the shop floor*

B. Professional Skills	Critical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Maintain integrity with respect to company property and time.</p> <p>SB2. Communicate with people in a polite manner using respectful language.</p> <p>SB3. Resolve difficulties in relationships with colleagues amicably.</p>
	Analitical Thinking
	<p>The user/ individual on the jobs needs to know and understand how to:</p> <p>SB4. Avoid absenteeism and maintain quality of work.</p> <p>SB5. Work in a disciplined environment and adhere to working norms of the organization.</p> <p>SB6. Be punctual and adhere to timelines.</p>
	Team Work
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Prioritize and execute tasks within the scheduled time limits.</p>



*RSC/N4823 (CPC/N1026) Develop and maintain suitable housekeeping practices in the shop floor*

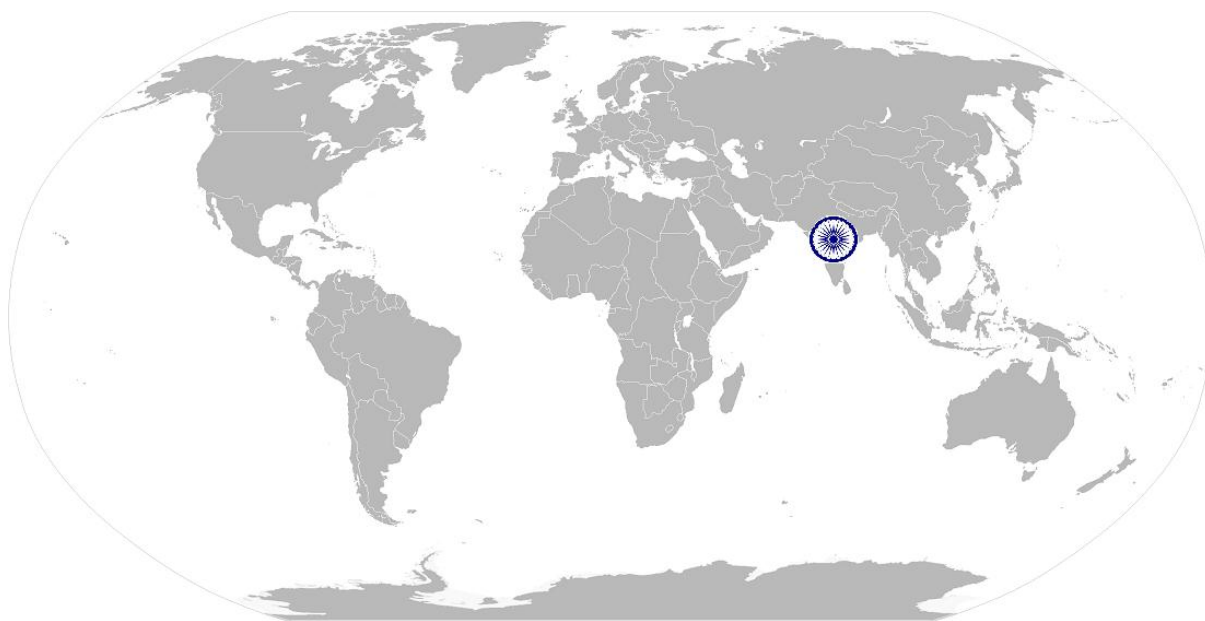
## NOS Version Control

NOS Code	RSC/N4823 (CPC/N1026)		
Credits(NSQF)	3.5	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Plastics Processing	Last reviewed on	26/12/2016
Occupation	Fibre Reinforced Plastics	Next review date	31/12/2021



*RSC/N4203 (CPC/N7014) Effective working with others..*

# National Occupational Standards



## Overview

This unit is about effective working with fellow workers and use proper communication to achieve the goals of the organization.



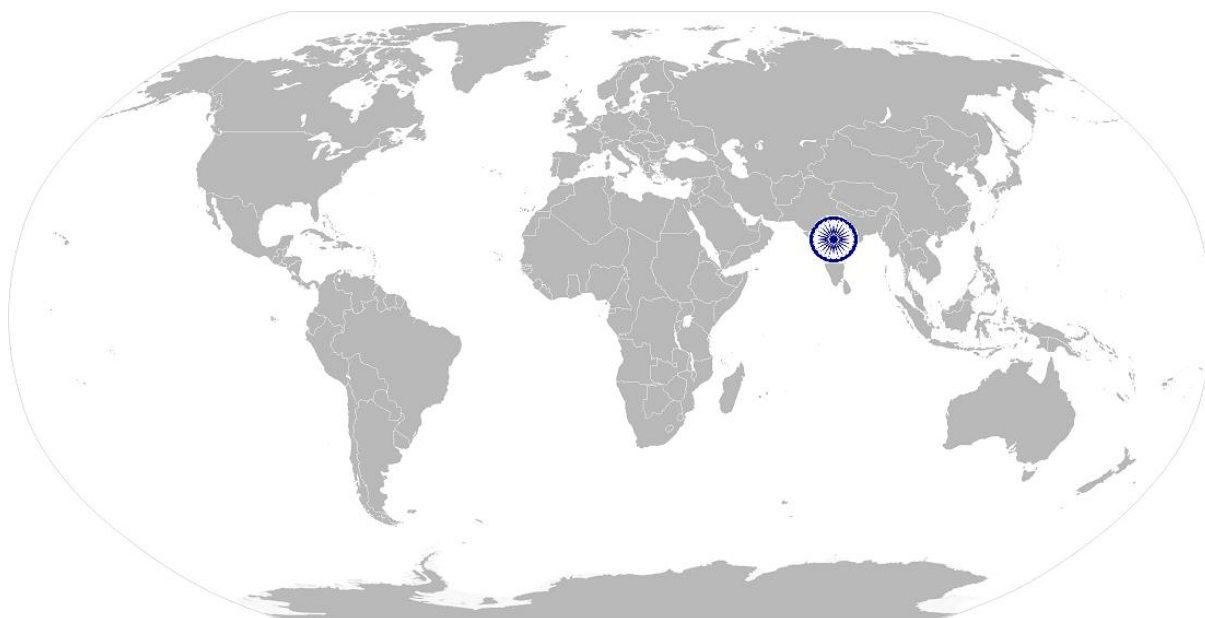
*RSC/N4203 (CPC/N7014) Effective working with others..*

National Occupational Standards	<b>Unit Code</b>	<b>RSC/N4203 (CPC/N7014)</b>
	<b>Unit Title (Task)</b>	<b>Effective working with others</b>
	<b>Description</b>	This unit covers basic etiquette and competencies that an individual is required to possess & demonstrate in their behavior & interactions with others at workplace. These cover areas such as communication, discipline, handling conflict and grievances.
	<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>Effective Working with others</li> </ul>
	<b>Performance Criteria (PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance Criteria</b>
	<b>Effective Working with others</b>	The individual on the job should be able to: PC1. Display appropriate communication etiquette while working PC2. Display active listening skills while interacting with others at work PC3. Demonstrate responsible & disciplined behaviors at the workplace PC4. Receive information and instructions from the supervisor accurately and fellow workers, getting clarification where required PC5. Pass on information to authorized persons accurately who require it & within agreed timescale and confirm its receipt PC6. Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible PC7. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks PC8. Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict.
	<b>Knowledge and Understanding (K)</b>	
	<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. Policies and procedures followed in the company for working with others in an organizational set-up. KA2. Grievance/ conflict handling mechanism of the company KA3. Relevant people and their responsibilities within the work area
	<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: KB1. Importance of effective communication in the workplace KB2. Importance of teamwork in organizational and individual success KB3. Barriers to effective communication KB4. Importance of avoiding casual expletives and unpleasant terms while communicating professional circles KB5. Various categories of people that one is required to communicate and co-ordinate within the organization KB6. Importance of discipline for professional success KB7. Importance of ethics for professional success KB8. Disciplined behavior for a working professional



*RSC/N4203 (CPC/N7014) Effective working with others..*

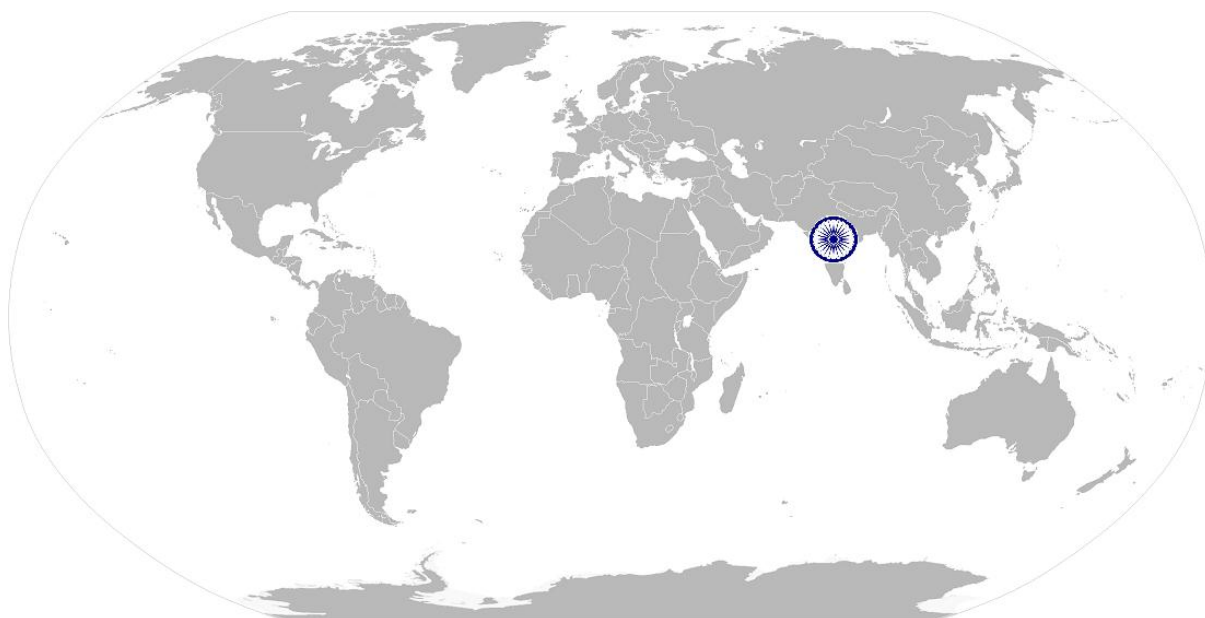
	<p>KB9. Common reasons for interpersonal conflict</p> <p>KB10. Importance and ways of managing interpersonal conflict effectively</p> <p>KB11. Importance of developing effective working relationships for professional success</p> <p>KB12. Expression and address the grievances appropriately and effectively</p>
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*RSC/N4203 (CPC/N7014) Effective working with others..*

## **NOS Version Control**

NOS Code	RSC/N4203 (CPC/N7014)		
Credits(NSQF)	5.0	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Plastics Processing	Last reviewed on	26/12/2016
Occupation	Fibre Reinforced Plastics	Next review date	31/12/2021



*RSC/N4824 (CPC/N1028) Perform the reporting and documentation work required in the shop floor*

# National Occupational Standards



## Overview

This unit is about making reporting and documentation work as required in the shop floor for effective management information system.

*RSC/N4824 (CPC/N1028) Perform the reporting and documentation work required in the shop floor*

<b>Unit Code</b>	<b>RSC/N4824 (CPC/N1028)</b>
<b>Unit Title (Task)</b>	<b>Perform the reporting and documentation work required in the shop floor</b>
<b>Description</b>	This unit is about making reporting and documentation work as required in the shop floor for effective management information system
<b>Scope</b>	<p>This OS unit / task covers the following:</p> <ul style="list-style-type: none"> <li>• Understanding various reports / formats used in the manufacturing industry.</li> <li>• Understanding the importance of the reports.</li> <li>• Filling up of the reports properly.</li> <li>• Develop methodology for report keeping and retrieval.</li> </ul>
<b>Performance criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance criteria</b>
Perform the reporting and documentation work required in the shop floor	<p>The individual on the job should be able to:</p> <p>PC1. Perform various level charts, signage, manuals, operating procedures etc.</p> <p>PC2. Write the small report on incidents and accidents in English or local language.</p> <p>PC3. Fill the of production data, machine log sheet, personal application etc.</p> <p>PC4. Do the Computer Operation on MS Office like MS Word, Excel and Power Point</p> <p>PC5. Do the Page set up and Printing</p> <p>PC6. Make the Posters and Banners</p> <p>PC7. Write the Applications and Notes</p> <p>PC8. Study the forms and formats.</p> <p>PC9. Fill the forms and formats</p> <p>PC10. Study the National &amp; International Standards and specifications as per BIS, ISO, ASTM, etc. for raw materials and finished products</p>
<b>Knowledge and Understanding (K) w.r.t. the scope</b>	
<b>Element</b>	<b>Knowledge and Understanding</b>
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Language of reading and writing used by industry as per location.</p> <p>KA2. Maintain files and reports in such a way so as to protect the secrecy and confidentiality of the contents.</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. The operation of computers and printer for preparation of reports.</p> <p>KB2. Filling up of formats.</p> <p>KB3. Maintenance and retrieval file and documents.</p>

*RSC/N4824 (CPC/N1028) Perform the reporting and documentation work required in the shop floor*

	KB4. Basic correspondence for maintenance of machinery.
Skills (S)w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	Reading and Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Read work instructions and standard operation procedures (SOP)</p> <p>SA2. Create small notes/work documents for supervisor related to operation.</p> <p>SA3. Read business correspondence e.g. internal memos, circular etc.</p> <p>SA4. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and working processes.</p> <p>SA5. Interpret results of the test with quality.</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Effectively understand about operational requirements.</p> <p>SA6. Answer the queries raised by the operative team as well as other.</p> <p>SA7. Effectively communicate with the supervisor related to work expectations, timelines and schedule for completion of the assigned job.</p> <p>SA8. Attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker.</p>
B. Professional Skills	Critical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Maintain integrity with respect to company property and time.</p> <p>SB2. Communicate with people in a polite manner using respectful language.</p> <p>SB3. Resolve difficulties in relationships with colleagues amicably.</p>
	Critical Thinking
	<p>The user/ individual on the jobs needs to know and understand how to:</p> <p>SB4. Avoid absenteeism and maintain quality of work.</p> <p>SB5. Work in a disciplined environment and adhere to working norms of the organization.</p> <p>SB6. Be punctual and adhere to timelines.</p>
	Team Work
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Execute the prioritize tasks within the scheduled time limits.</p>

*RSC/N4824 (CPC/N1028) Perform the reporting and documentation work required in the shop floor*

## NOS Version Control

<b>NOS Code</b>	<b>(CPC/N1028)</b>		
<b>Credits(NSQF)</b>	<b>5.0</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Rubber</b>	<b>Drafted on</b>	<b>18/05/2016</b>
<b>Sub Sector</b>	<b>Plastics Processing</b>	<b>Last reviewed on</b>	<b>26/12/2016</b>
<b>Occupation</b>	<b>Fibre Reinforced Plastics</b>	<b>Next review date</b>	<b>31/12/2021</b>



### Qualifications Pack For Machine operator-FRP

CRITERIA FOR ASSESSMENT OF TRAINEES				
<b>Job Role: Plastic FRP - Operator</b> <b>Qualification Pack Code: RSC/Q 4806 (CPC/N 1004)</b> <b>Sector Skill Council: Rubber Skill Development Council</b>				
<b>Guidelines for Assessment:</b> <ol style="list-style-type: none"> <li>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 laydown proportion of marks for Theory and Skills Practical for each PC.</li> <li>2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.</li> <li>3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below)</li> <li>4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criteria.</li> <li>5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.</li> <li>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.</li> </ol>				
Assessable outcomes		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
<b>RSC/N4817 (CPC/N1019)</b> <b>Use and applications of FRP products. Merits and Demerits</b>	PC1. identify the need of material and mould for required product	12	2	10
	PC2. Find the merits and demerits of FRP products.	12	2	10
	PC3. Select the type of material, machinery, Mould and process for manufacturing the product.	13	3	10
	PC4. Ensure the designing criteria for the FRP products.	13	3	10
	<b>Sub total</b>	<b>50</b>	<b>10</b>	<b>40</b>
<b>RSC/N4818 (CPC/N1020)</b> <b>Basics of thermoplastic s and thermoset materials. Introduction to Resins/fibres used for FRP Molding</b>	PC1. Ensure the use and application of various additives like catalyst, accelerators, hardeners, colorants, etc.	15	3	12
	PC2. Ensure the use and application of various resins and fibers.	15	3	12
	PC3. Prepare of fibres for laying. Percentage loading of fibres.	15	3	12
	PC4. Learn the properties of thermo plastics and thermoset material and their behavior.	15	3	12
	<b>Sub total</b>	<b>60</b>	<b>12</b>	<b>48</b>
<b>RSC/4819 (CPC/N1021)</b> <b>Selection of suitable process for</b>	PC1. Follow the requirements of the product like aesthetic, size & shape, use condition, performance parameters. Finishing after molding, assembly and disassembly requirements.	15	3	12
	PC2. Learn Hand layup process & Spray layup process	15	3	12



### Qualifications Pack For Machine operator-FRP

<b>FRP products manufacturing and Mould development.</b>	PC3. Operate Injection molding of thermosets	15	3	12
	PC4. Operate Pultrusion, centrifugal casting Filament winding.	15	3	12
	PC5. Operate Resin transfer molding, reinforced reaction injection molding. Compression molding.	15	3	12
	PC6. Study the Pattern making with ply wood, plaster of paris, etc. Mould development with various materials like aluminium, steel, FRP composite, etc.	15	3	12
	<b>Sub total</b>	<b>90</b>	<b>18</b>	<b>72</b>
<b>RSC/N4820 (CPC/N1022) Efficient operation of the machinery.</b>	PC1. Learn the capacity and range of operation of the machine. Process capability.	8	2	6
	PC2. Operate skill about various parts and their functions of the machine.	8	2	6
	PC3. Selection of suitable process parameters for the material and product.	9	2	7
	PC4. Start up and shut down procedures	8	2	6
	PC5. Trial production with new materials and molds	8	2	6
	PC6. Process/parameters optimization for quality product manufacturing.	9	2	7
	PC7. Safely loading and unloading of moulds	8	2	6
	PC8. Products ejection and handling.	8	2	6
	PC9. Preventive and Break down Maintenance	8	2	6
	PC10. Understanding the Electrical and hydraulic circuits and their operation.	8	2	6
	PC11. Trouble shooting of defects in manufacturing with regard to mould, material, moulding parameter and machine operation.	8	2	6
	<b>Sub total</b>	<b>90</b>	<b>22</b>	<b>68</b>
<b>RSC/N4821 (CPC/N1023) Finishing/Decoration operations for FRP products.</b>	PC1. Trimming and cutting operations on FRP open molded products.	8	2	6
	PC2. Cleaning, washing and removal of release agents from molded products.	8	2	6
	PC3. Post molding operations like joining, drilling, painting and printing on molded products.	8	2	6
	PC4. Finishing operations aimed at improving aesthetic looks	8	2	6
	PC5. Assembly and disassembly of components for building the final product.	8	2	6
	<b>Sub total</b>	<b>40</b>	<b>10</b>	<b>30</b>
<b>RSC/N4822 (CPC/N1024) Understand and apply the</b>	PC1. Mechanical properties & Thermal properties tests.	9	3.6	5.4
	PC2. Physical & chemical properties	9	3.6	5.4
	PC3. Electrical , Fire & smoke properties	9	3.6	5.4
	PC4. Review effectiveness of corrective action.	9	3.6	5.4

*Qualifications Pack For Machine operator-FRP*

<b>quality control techniques for defect free manufacturing</b>	PC5. Interpret the results of the quality check correctly.	9	3.6	5.4
	PC6. Take up results of the findings with QC in charge/appropriate authority.PC3. Identify non-conformities to quality assurance standards.	9	3.6	5.4
	PC7. Identify potential causes of non-conformities to quality assurance standards.	9	3.6	5.4
	PC8. Identify impact on final product due to non-conformance to prescribed Standards.	9	3.6	5.4
	PC9. Evaluating the need for action to ensure that problems do not reoccur.	9	3.6	5.4
	PC10. Suggest corrective action to address problem.	9	3.6	5.4
	<b>Sub total</b>	<b>90</b>	<b>36</b>	<b>54</b>
<b>RSC/N4101 (CPC/N0411): Maintain basic health and safety practices at the workplace, 5S</b>	PC1. Wear protective clothing/equipment for specific tasks and work conditions	2.5	0.5	2
	PC2. Carry out safe working practices while dealing with hazards to ensure the safety of self and others.	2.5	0.5	2
	PC3. Apply good housekeeping practices at all times	2.5	0.5	2
	PC4. Use the various appropriate fire extinguishers on different types of fires correctly	2.5	0.5	2
	PC5. Demonstrate rescue techniques applied during fire hazard, demonstrate good housekeeping in order to prevent fire hazards, demonstrate the correct use of a fire extinguisher.	2.5	0.5	2
	PC6. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise, and Identify areas in the plant which are potentially hazardous/unhygienic in nature. Conduct regular checks with support of the maintenance team on machine health to identify potential hazards due to wear and tear of machine.	2.5	0.5	2
	PC7. Inform the concerned authorities on the potential risks identified in the processes, workplace area/ layout, materials used etc, Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations.	2.5	0.5	2
	PC8. Create awareness amongst other by sharing information on the identified risks.	2.5	0.5	2
	PC9. Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and un- necessary items are not	2.5	0.5	2

*Qualifications Pack For Machine operator-FRP*

	cluttering the workbenches or work surfaces.			
	PC10. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions	2.5	0.5	2
	PC11. Follow the technique of waste disposal and waste storage in the proper bins as per SOP	1.5	0.5	1
	PC12. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places	1.5	0.5	1
	PC13. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions	1.5	0.5	1
	PC14. Ensure that areas of material storage areas are not overflowing PC15. Properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required	1.5	0.5	1
	PC16. Return the extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area	1.5	0.5	1
	PC17. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards.	1.5	0.5	1
	PC18. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists	1.5	0.5	1
	PC19. Check that the items in the respective areas have been identified as broken or damaged	1.5	0.5	1
	PC20. Follow the given instructions and check for levelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same To avoid spillage, leakage, fire etc.	1.5	0.5	1
	PC21. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions.	1.5	0.5	1
	<b>Sub total</b>	<b>40</b>	<b>10</b>	<b>30</b>
<b>RSC/N4823 (CPC/N1026) Develop and maintain</b>	PC1. Take an overlook of the Area under House Keeping.	6.5	2.5	4
	PC2. Put appropriate Signage immediately if oily substance / Water spills on the floor to avoid accident	6	1	5

*Qualifications Pack For Machine operator-FRP*

<b>suitable housekeeping practices in the shop floor.</b>	PC3. If certain housekeeping activities require to be performed by housekeeping staffs, then Inform them.	6	1	5
	PC4.If it has to be carried out by self then, Identify the material / equipment required for cleaning the areas.	6	1	5
	PC5. Plan the sequence for cleaning the area to avoid re-soiling the cleaned areas and surfaces.	6	1	5
	PC6. Display the appropriate signage for the work being conducted.	6	1	5
	PC7. Ensure that there is adequate ventilation for the work being carried out.	6	1	5
	PC8. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions.	6	1	5
	PC9. Follow the technique of waste disposal and waste storage in the proper bins as per SOP.	6	1	5
	PC10. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places.	6	1	5
	PC11. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions.	6	1	5
		<b>66.5</b>	<b>12.5</b>	<b>54</b>
<b>RSC/N 4203(CPC/ N 7014) Effective working with others</b>	PC1. Display appropriate communication etiquette while working.	2	1	1
	PC2. Display active listening skills while interacting with others at work	2	1	1
	PC3. Demonstrate responsible and disciplined behaviors at the workplace	2	1	1
	PC4. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required	1.5	0.5	1
	PC5. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt	1.5	0.5	1
	PC6. Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible	1.5	0.5	1
	PC7. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks	1.5	0.5	1
	PC8. Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict.	1.5	0.5	1
	<b>Sub total</b>	<b>13.5</b>	<b>5.5</b>	<b>8</b>

*Qualifications Pack For Machine operator-FRP*

<b>RSC/N4824 (CPC/N1028) Perform the reporting and documentation work required in the shop floor</b>	PC1. Perform various level charts, signage, manuals, operating procedures etc.	6	2	4
	PC2. Write of small report on incidents and accidents in English or local language.	6	2	4
	PC3. Fill the production data, machine log sheet, personal application etc.	6	2	4
	PC4. Do Basic Computer Operation on MS Office like MS Word, Excel and Power Point	6	2	4
	PC5. Do the Page set up and Printing	6	1	5
	PC6. Make of Posters and Banners	6	1	5
	PC7. Write the Applications and Notes	6	1	5
	PC8. Study the forms and formats.	6	1	5
	PC9. Fill the forms and formats	6	1	5
	PC10. Study the National & International Standards and specifications as per BIS, ISO, ASTM, etc. for raw materials and finished products	6	1	5
	<b>Sub total</b>	<b>60</b>	<b>14</b>	<b>46</b>
	<b>Grand Total</b>	<b>600</b>	<b>150</b>	<b>450</b>