

APPRENTICESHIP CURRICULUM (OPTIONAL TRADE)

Rubber

Assembling & Curing Operator_Footwear & Sports Good

Course Code: C0072200050

☒NAPS ☐Non-NAPS

NSQF Level: 4



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Course Details

1.	Course Name	Assembling & Curing Operator_Footwear & Sports Good											
2.	Course Code	CO072200050											
3.	Apprenticeship Training Duration: <i>(2 to 4 weeks of BT is embedded in this duration as per the requirement of the establishment)</i>	Months: 12 months											
	Remarks												
4.	Credit	TBD											
5.	NSQF Level <i>(Mandatory for NAPS)</i>	4NSQC Approval Date: 26 th May 2022											
6.	Related NSQF aligned qualification details												
		<table><tr><th>S. No.</th><th>QP/ Qualification/ NOS Name (As applicable)</th><th>QP/ NOS Code & Version</th><th>NQR Code</th></tr><tr><td>1</td><td>Assembling & Curing Operator- Footwear & Sports Good</td><td>RSC/Q3104_V2</td><td>2022/RUB/RSDC/05855</td></tr></table>				S. No.	QP/ Qualification/ NOS Name (As applicable)	QP/ NOS Code & Version	NQR Code	1	Assembling & Curing Operator- Footwear & Sports Good	RSC/Q3104_V2	2022/RUB/RSDC/05855
		S. No.	QP/ Qualification/ NOS Name (As applicable)	QP/ NOS Code & Version	NQR Code								
1	Assembling & Curing Operator- Footwear & Sports Good	RSC/Q3104_V2	2022/RUB/RSDC/05855										
7.	Brief Job Role Description	This unit is about collecting components, preparing the machine and rubber pieces as per the given specifications to undertake building operation for footwear and sports good.											
8.	NCO-2015 Code & Occupation <i>(Access the NCO 2015 volumes from: https://labour.gov.in/organizationsofmole/directorate-general-employment-training-dget)</i>	NCO-2015/NIL											
9.	Minimum Eligibility Criteria <i>(Educational and/ or Technical Qualification)</i>	8th Class (ITI (2 years) in relevant trade + 2 Years of relevant experience) OR 10th Class (2 years of relevant experience) OR											

		12th Class (6 months of relevant experience)
10.	Entry Age for Apprenticeship	18 years
11.	Any Licensing Requirements (wherever applicable)	NA
12.	Is the Job Role amenable to Persons with Disability	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, check the applicable type of Disability <div style="display: flex; flex-wrap: wrap;"> <div style="width: 20%;"><input type="checkbox"/> Locomotor Disability</div> <div style="width: 20%;"><input type="checkbox"/> Leprosy Cured Person</div> <div style="width: 20%;"><input type="checkbox"/> Cerebral Palsy</div> <div style="width: 20%;"><input type="checkbox"/> Dwarfism</div> <div style="width: 20%;"><input type="checkbox"/> Muscular Dystrophy</div> <div style="width: 20%;"><input type="checkbox"/> Acid Attack Victims</div> <div style="width: 20%;"><input type="checkbox"/> Blindness</div> <div style="width: 20%;"><input type="checkbox"/> Low Vision</div> <div style="width: 20%;"><input type="checkbox"/> Deaf</div> <div style="width: 20%;"><input type="checkbox"/> Hard of Hearing</div> <div style="width: 20%;"><input type="checkbox"/> Speech and Language Disability</div> <div style="width: 20%;"><input type="checkbox"/> Intellectual Disability</div> <div style="width: 20%;"><input type="checkbox"/> Specific Learning Disabilities</div> <div style="width: 20%;"><input type="checkbox"/> Autism Spectrum Disorder</div> <div style="width: 20%;"><input type="checkbox"/> Mental Illness</div> <div style="width: 20%;"><input type="checkbox"/> Multiple Sclerosis</div> <div style="width: 20%;"><input type="checkbox"/> Parkinson's Disease</div> <div style="width: 20%;"><input type="checkbox"/> Haemophilia</div> <div style="width: 20%;"><input type="checkbox"/> Thalassemia</div> <div style="width: 20%;"><input type="checkbox"/> Sickle Cell Disease</div> <div style="width: 20%;"><input type="checkbox"/> Multiple Disabilities</div> </div>
		Remarks:
13.	Submitting Body Details	Name: Rubber, Chemical & Petrochemical Skill Development Council E-mail ID: ceo@rcpsdc.in Contact Number: 011-41009347- 48
14.	Certifying Body	Rubber, Chemical & Petrochemical Skill development Council

15.	Employment Avenues/Opportunities	The Apprentices after completion of this course can find opportunities as Assembly line operator, Curing operator, Quality control inspector
16.	Career Progression	Assembling & curing Operator - Footwear & Sports Goodlevel role which leads to supervisor level in Building occupation of rubber product manufacturing Process
17.	Trainer's Qualification & Experience:	Diploma/BE (Chemical/Plastic technology) with 1-2 year relevant experience
18.	Curriculum Creation Date	11 th July 2022
19.	Curriculum Valid up to Date	31 st March 2023

Module Details

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
1	Pre assembling and curing activities of footwear and sports good RSC/N3110_V1	<ul style="list-style-type: none"> • To collecting components, preparing the machine and rubber pieces as per the given specifications • Knowledge of assembly operation • To Prepare tools, equipment and machine • To collect all the components required for product preparation and get rubber pieces in given specification ready • To keep weighing scale and all other tools ready in stand before starting the building process • Follow equipment preparation process as per the SOP • Understand implications of poorly prepared equipment and tools. • Understand the Specifications and quality of components like Rubber sheet , Nylon cloth, Gum, Curing system , Moulding method • To implications of delays in the preparation process. • To know the tolerance levels of various process parameters (such as Pressure , temperature, Time) • To know the type of defects leading to rejections and reason for causes of defects that indicates to help avoiding defective product with its possible solutions. • To Setting up of the lines with required speed, and required dimensions and weights as per required specifications 	50	50	70%	70%

		<ul style="list-style-type: none"> • Monitor the functioning of machine w.r.t the various parameters such as temperature, pressure, speed • To understand the requirement for cutting, stitching and pasting activities as per the specification • Specifications and quality of components like Rubber sheet , Nylon cloth ,Gum, Curing system , cavity • Functioning of machinery and systems • Understand Units of measurement. • Follow the standard operating procedures for controlling the process • Carry out start up and shut down procedures of the controlling element • Impact of various practices on cost, quality, productivity, delivery and safety. • To know the Importance of FIFO and to strictly follow • Identification of Preventive measures • To collect the required quantity of components. • Ensure that all the components required are approved and released by laboratory • To get the Rubber roll properly placed on Rubber/ designated platform • To cut the rubber sheet as per the given specification • To Keep cut rubber pieces bundle wise • To Mark batch no. with the help of crayon on top cut pieces • To Wind up the remaining uncut rubber strip back in roll carefully without any FM/ dust • Importance of identifying non-conforming materials and their storage. • Understand the Properties of Rubber and application of Rubber chemicals like Gum 				
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2	Perform assembling and curing operation RSC/N3111_V1	<ul style="list-style-type: none"> To check if the dimension of each component is as specified in the instructions/ organizations SOP. Ensure loading sequence of components to be strictly followed as per instructions /SOP Understand the requirement for cutting, stitching and pasting activities as per the specification To Know the Extrusion and curing operation and its importance To Know the material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure Understand the building operation of footwear/sports goods To know the Properties of rubber compound Understand functioning of machinery and systems Properties of Rubber and application of Rubber chemicals like Gum etc. Understand Curing technology and operation of press Understand Extrusion operation and curing process. 	50	50	70%	70%
3	Perform post assembling and curing activities RSC/N3112_V1	<ul style="list-style-type: none"> Ensure the appropriateness of raw material/ in - processed material. To operate building machine & Curing Ensure that the dimension of each component is as specified in the instructions/ organizations SOP. Start the machine and follow the processing of material as per the SOP To open Mould with the help of brass awl and clean properly / remove any cured stuck rubber flushes at any part of the mould To Place Rubber cut pieces uniformly in the mould weight should be as per specification To Put pieces very quickly in case the number of cavity is more than one Monitor the functioning of machine w.r.t the various parameters such as temperature, pressure, speed 	50	50	70%	70%

		<ul style="list-style-type: none"> • Ensure precaution against putting Finger / Hand while cutting manually • Understand functioning of machinery and systems • Understand Extrusion operation and curing process. • To know the stitching process and importance of stitching the correct material in the right sequence as per the requirement • To operate and Inspect the prepared product for any defect • To dispose of waste material • To Mark the batch for proper identification for inspection and finishing • To Send sample to lab for testing • Ensure that the output quality is as per the specifications laid down by the technical team • Ensure that the final product is free from any defect and contaminants • Implications of poorly prepared product and power failures. • Importance of identifying non-conforming products and their storage • Understand the escalation matrix and procedures for reporting identified problems • To know the Proper working procedure of moulds • Understand batch marking techniques. • Apply & understand the types of defects leading to rejections and their indicators, reasons and possible solutions 				
4	Carry out housekeeping RSC/N5001_V1	<ul style="list-style-type: none"> • To Carry out housekeeping operation • To Preparing for housekeeping activities • Identify the material requirements for cleaning the areas inspected by considering risk, time, efficiency and type of stain • To Select the suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person 	40	60	70%	70%

		<ul style="list-style-type: none"> • To Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces • To Wear the personal protective equipment required for the cleaning method and materials being used • Ensure that there is no oily substance on the floor to avoid slippage • Apply Process of cleaning the surfaces without causing injury or damages • To know the levels of hygiene required to workplace and important to maintain during work • To return the equipment, materials and personal protective equipment that they were used to right places & to make sure that they are clean, safe and Stored • To ensure the components are marked properly and stored at the designated place • Ensure that all components over left are segregated whether it's usable ones and the non-usable ones & to properly identified, tagged and sent to their designated places. 				
5	Carry out reporting and documentation RSC/N5002_V1	<ul style="list-style-type: none"> • Demonstrate Communication Skill at workplace • Identify Technique of personality development and Team management • To execute motivational Training and behavioural Skills at workplace area • Apply different methods of recording information & Various documents that need to be maintained • Identify QA, QC documentation and Report Documentation Store Documentation • Identify requisition Documentation and the system documentation of industry • To know the practical knowledge of software's PowerPoint, excel, Word • To know the Company procedure for filling/maintaining up the documents • To know the Procedures for reporting to the appropriate authority & recording damage, breakages etc. • To reporting incidents where standard operating procedures are not followed • To know the importance of complete and accurate documentation 	40	60	70%	70%

		<ul style="list-style-type: none"> • Apply the appropriate method for responding to requests for information • To follow reporting procedures to disclosing information to any outside party • Apply the reporting procedures to followed before disclosing information to any outside party 				
6	Carry out quality checks RSC/N5003_V1	<ul style="list-style-type: none"> • Identify non-conformities accordance to quality assurance standards • Identify potential causes of non-conformities to quality assurance standards • Identify impact on final product due to non- conformance to company standards • Evaluate the need for action to ensure that problems do not recur • To Suggest corrective action to address problem • Adherence of quality control procedures • To know the relevance and importance of activities and how they contribute to the achievement of the quality objectives • To know the Proper procedure for selecting the material/product and performing quality checks without affecting the material • Apply the Characteristics of the product/material • Availability and use of monitoring and measuring devices • To know the cost of non-conformance to quality standards • Identification of QC and QA procedure • Apply Proper procedure for selecting the material/product and performing quality checks without affecting the material 	35	65	70%	70%
7	Carry out problem identification and escalation RSC/N5004_V1	<ul style="list-style-type: none"> • Escalation of unresolved identified problems • To Ensure that no delays are caused as a result of failure to take necessary action • To Escalate problem as per laid down escalation matrix • Escalate the problem within stipulated time • Escalate the problem in an appropriate manner 	45	55	70%	70%

		<ul style="list-style-type: none"> • Ensure that no delays are caused as a result of failure to escalate problems • The correct method for carrying out corrective actions outlined for each problem • To Possible solutions for various problems • To Escalation matrix for reporting unresolved problems • Identify solutions to problems • Identify practices that may impact the final product quality • Identify defects/indicators of problems • Identify other operations that might be impacted by the problem • Take appropriate materials with its alternate samples , conduct tests and evaluate results to establish reasons & to confirm suspected reasons for non-conformance (where required) • To perform documented corrective actions and check if further improvements in corrective actions if its required • Take corrective action for problems identified according to the company procedures • Report/document problem and corrective action in an appropriate manner • To know the impact of operations on the final product • To Measures and steps that have been taken to address the previous problems • To Escalation matrix for reporting unresolved problems 				
8	Carry Out Health & Safety RSC/N5007_V1	<ul style="list-style-type: none"> • Follow the organisation's emergency procedures. • Identify the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain • To Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces • To Inform the affected people about the cleaning activity 	30	70	70%	70%

		<ul style="list-style-type: none"> • To Wear the personal protective equipment required for the cleaning method and materials being used • To know the methods and materials that used for cleaning variety of surfaces • Identify individual responsibilities in relation to maintaining workplace health safety and security requirements. • Identify and recommend opportunities for improving health, safety, and security. • To know the requirements of health, safety and security in workplace. • Use fire extinguishers. • Identify and Report unsafe working conditions to seniors • Observe Safety related to Mechanical and Manual Material Handling, Lifting Appliances, Transport / Earthmoving& Material Handling Equipment's. • Apply fire safety concepts in case of fire emergency in industry • To Report supervisor/ Competent of authority in the event of accident or sickness of any staff and record accident • Follow safe working practices when working with tools and machinery • Follow and apply PPE & 5 S guidelines on workplace 				
9	Develop Entrepreneurship Skills RSC/N5013_V1	<ul style="list-style-type: none"> • Identification of business opportunity • To sustain existing business and make continual improvement • To organizing/Directing the factors of production (productivity) • Awareness to identify profitable business opportunity • Understand Cost-benefit analysis of the business opportunity • Taking advantage of market opportunities by planning, organizing and deploying resources • Understand Human resource management • Cost-benefit analysis of the business opportunity 	30	70	70%	70%

		<ul style="list-style-type: none"> • Importance of patent and copyright • Understand Environmental issues and quality standards • Apply Procedures for presenting/discussing new business opportunity • To Planning and organizing activities through administrative and financial management 				
		Total Marks	370	530		

Glossary

Term	Description
Sector	Sector is a conglomeration of different business operations
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.

Acronyms

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

Annexure 1: Tools and Equipment

List of Tools and Equipment

The tools and equipment required are:

S. No.	Tool / Equipment Name	Specification (as per batch of 30 trainees)
1	Safety Goggles,Rubber Gloves, Safety gloves,Fire Extinguisher,Apron,Helmet,First Aid Box with Medicines	10
2	Two Roll Mill/Internal Mixer,/Kneader	1
3	Raw Materials such dry rubber/carbon etc for training purpose	10

Classroom Aids

The aids required to conduct sessions in the classroom are:

- 1 Projector
- 2 Computer/laptops
- 3 Internet connectivity
- 4 Whiteboard

Annexure 2: Assessment Strategy

This section includes the processes involved in identifying, gathering and interpreting information to evaluate the learner on the required competencies of the program.

Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records
- If the batch size is more than 30, then there should be 2 Assessors.

Testing Environment: Assessor must:

- Confirm that the centre is available at the same address as mentioned on SDMS or SIP
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) 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.

Assessment Quality Assurance levels / Framework:

- Question papers created by the Subject Matter Experts (SME)
- Question papers created by the SME should be verified by the other subject Matter Experts along with the approval required from SSC
- Questions are mapped with NOS and PC

- Question papers are prepared considering that level 1 to 3 is for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management Apprenticeship Curriculum: NAPS Jr. Machine Operator – CNC Milling of Plastic Page 20 of 14
- Assessor must be ToA certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

Types of evidence or evidence-gathering protocol:

- Time-stamped & 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 & geotagged assessment (Theory + Viva + Practical) photographs & videos.

Method of verification or validation:

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

Method for assessment documentation, archiving, and access

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

On the Job:

1. Assessment for on the job training to be conducted by the industry partner on the practical competency output defined in the NOS/QP and the assessment criteria.
2. The candidate must score 70% in each module to complete the OJT.
3. Tools of Assessment that can be used are:
 - a. Videos of Trainees during OJT should be shared by employer to RCPSDC.
4. Assessment will ensure that the apprentice will be able to:
 - a. Work effectively and efficiently as per schedules and timelines while complying with the health and hygiene norms.
 - b. Implement safety practices.
 - c. Optimize the use of resources to ensure less wastage and maximum conservation.
 - d. Communicate effectively and develop interpersonal skills.