QUALIFICATIONS PACK- OCCUPATIONAL STANDARDS FOR PLASTICS INDUSTRY

Contents

What are Occupational Standards (OS)?

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

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Introduction

Qualifications Pack- Machine Operator – Plastic Sacks

SECTOR: RUBBER

SUB SECTOR: PLASTICS PROCESSING

OCCUPATION: PLASTIC SACKS

REFERENCE ID: RSC/Q4804 **(**CPC/Q 1104)

ALIGNED TO:

Brief Job Description:
This plastics sacks operator is responsible for producing Tape/yarn from plastics resin by involves operating semi & fully automatic extrusion and post extrusion machines. They are responsible for troubleshooting process problems and performing minor maintenance to ensure continued operation of the production line. They are also responsible for completing the output earn Good Manufacturing Practices.

Personal Attributes:
This job requires the basic communication, numerical & computational abilities for the individuals to be result oriented. At all times he should strive to achieve highest quality standards. The operator is expected to be able to work in a factory environment.

Qualifications Pack for Machine operator plastics Sacks

Job Details

Qualifications Pack Code	**RSC/Q4804 (CPC/Q 1104)**		
Job Role	**Machine Operator Assistant - Plastics Sacks**		
Credits (NSQF)	**48**	**Version number**	**1.0**
Sector	**Rubber**	**Drafted on**	**18/05/2016**
Sub Sector	**Plastics Processing**	**Last reviewed on**	**26/12/2016**
Occupation	**Plastics Sacks**	**Next review date**	**31/12/2021**
NSQC Clearance on	**21/07/2016**		

Job Role	**Machine Operator - Plastics Sacks**
Role Description	Produce a range of woven sacks that combine the operation of various plastics processing machines
NSQF level	4
Minimum Educational Qualifications*	10th Standard
Maximum Educational Qualifications*	
Training (Suggested but not mandatory)	No previous training required
Minimum Job Entry Age	18
Experience	No previous experience required
Applicable National Occupational Standards (NOS)	1. RSC/N4101 (CPC/N0411): Maintain basic health and safety practices at the workplace, 5S. 2. RSC/N4109 (CPC/N 0420): Advanced method for Fitting Tools Measuring Equipments & Practice 3. RSC/N4110 (CPC/N 0421): Introduction and test methods for Polymers & thermoplastics Materials 4. RSC/N4810 (CPC/N1122): Perform the woven sack/raffia plant operations with start up and shut down procedure 5. RSC/N4811 (CPC/N1123): Weaving technology and Loom operation (Circular) 6. RSC/N4806 (CPC/N1116): Auxiliary equipments used in Plastics Sack and Tape Production 7. RSC/N4108 (CPC/N0418) Basic Knowledge of Communication/ soft skills 8. RSC/N4812 (CPC/N1127): Testing and quality control, Conduct quality checks and inspection of the finished products 9. RSC/N4813 (CPC/N1128): Behavior science and entrepreneurship
Performance Criteria	As described in the relevant OS units

Qualifications Pack for Machine operator plastics Sacks

Definitions

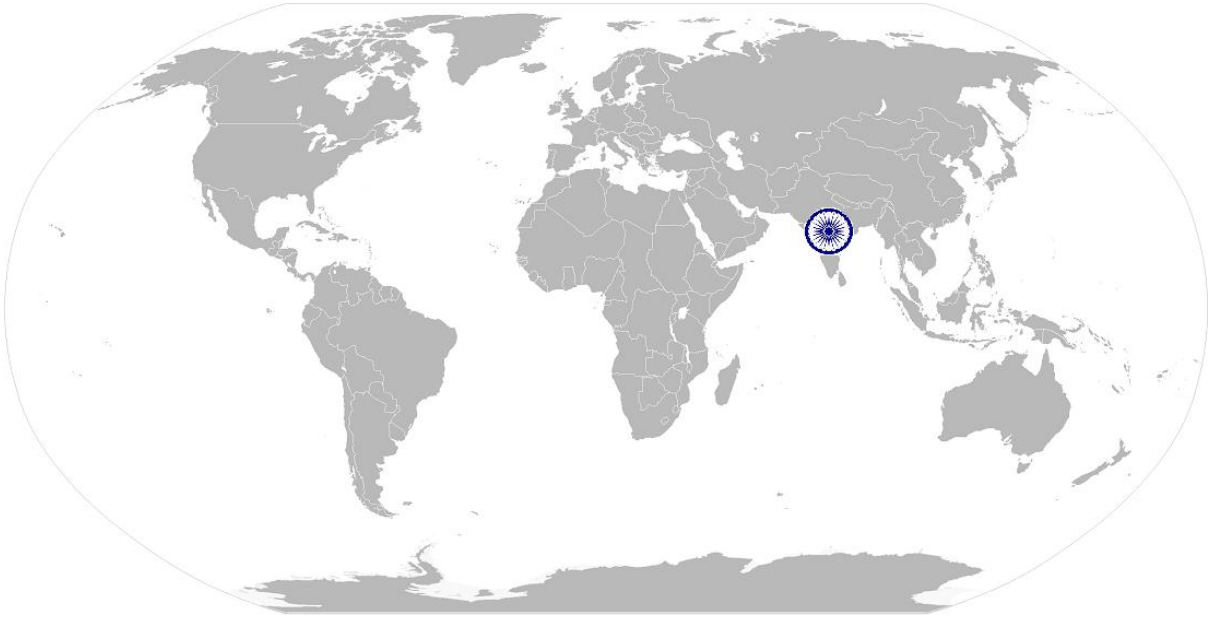
Keywords /Terms	Description
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable 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 Machine operator plastics Sacks

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.
Keywords /Terms	**Description**
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

National Occupational Standards



Overview

This unit is about establishing a Safe, Healthy and Environment friendly also covers safety and security at the workplace. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment.

National Occupational Standards

Unit Code	**RSC/N4101 (CPC/N 0411)**
Unit Title (Task)	**Maintain basic health and safety practices at the workplace, 5S**
Description	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. It includes understanding of risks & 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. This OS is about ensuring all 5S activities both at the shop floor and the office area to facilitate increase in work productivity.
Scope	The role holder will be responsible for • Health and safety procedure. • Fire safety procedure. • Emergencies, rescue and first aid procedures. • Ensure sorting, stream lining, storage and documentation, cleaning, standardization and sustenance across the plant premises of the organization.
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Health and safety	The individual on the job should be able to: PC1. Wear protective clothing/equipment for specific tasks and work conditions PC2. Safe working practices while dealing with hazards to ensure the safety of Self and others. PC3. Keep good housekeeping practices at all times
Fire safety	The individual on the job should be able to: PC4. Use the various appropriate fire extinguishers on different types of fires correctly 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.
Emergencies, rescue and first aid procedures.	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. 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. PC8. Create awareness amongst others by sharing information on the identified

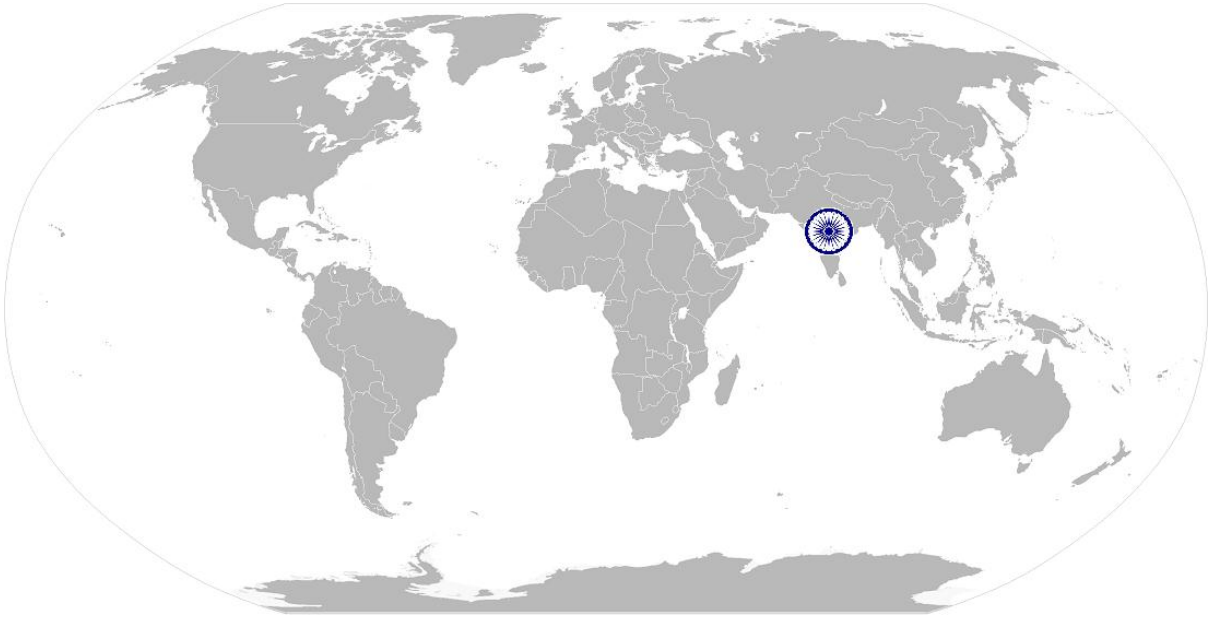
	risks.
Ensure sorting, stream lining, storage and documentation, cleaning, standardization and sustenance across the plant premises of the organization.	PC9. Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and un- necessary items are not cluttering the workbenches or work surfaces. PC10. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions PC11. Follow the technique of waste disposal and waste storage in the proper bins as per SOP PC12. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places 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 PC14. Ensure that areas of material storage are not overflowing 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 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 PC17. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards PC18. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists PC19. Ensure to check the items in the respective areas have been identified as broken or damaged 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. PC21. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. The relevant standards, procedures and policies related to Health, Safety and Environment followed in the company KA2. The emergency handling procedures & hierarchy for escalation
B. Technical Knowledge	**The user/individual on the job needs to know and understand:** KB1. The basic knowledge of Safety procedures (fire fighting, first aid) within the organization

	KB2. The basic knowledge of various types of PPEs and their usage KB3. The basic knowledge of risks/hazards associated with each occupation in the organization 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. KB5. The meaning of "hazards" and "risks" KB6 The health and safety hazards commonly present in the work environment and related precautions KB7. The possible causes of risk, hazard or accident in the workplace and why risk and/or accidents are possible KB8. The Possible causes of risk and accident (due to oil leakage) KB9. Methods of accident prevention KB9. Safe working practices when working with tools and machines KB10. Safe working practices while working at various hazardous sites KB11. The general health and safety equipment in the workplace KB12. Various dangers associated with the use of electrical equipment KB13. Preventative and remedial actions to be taken in the case of exposure to toxic materials KB14. The Importance of using protective clothing/equipment while working KB15. Precautionary activities to prevent the fire accident KB16. Various causes of fire KB17. The techniques of using the different fire extinguishers KB18. The different methods of extinguishing fire KB19. To know the different materials used for extinguishing fire KB20. The Rescue techniques applied during a fire hazard KB21. Various types of safety signs and what they mean KB22. The appropriate basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries KB23. The content of written accident report KB24. Potential injuries and ill health associated with incorrect manual handing KB25. Safe lifting and carrying practices KB26. Personal safety, health and dignity issues relating to the movement of a person by others KB27. Potential impact to a person who is moved incorrectly KB28. 5S procedures KB29. Various types 5s practices followed in various areas KB30. 5S checklists provided in the department/ team KB31. The useful & non useful items KB32. The knowledge of labels , signs & colours used as indicators KB33. The knowledge on how to sort and store various types of tools, equipment, material etc. KB34. The various types of waste products

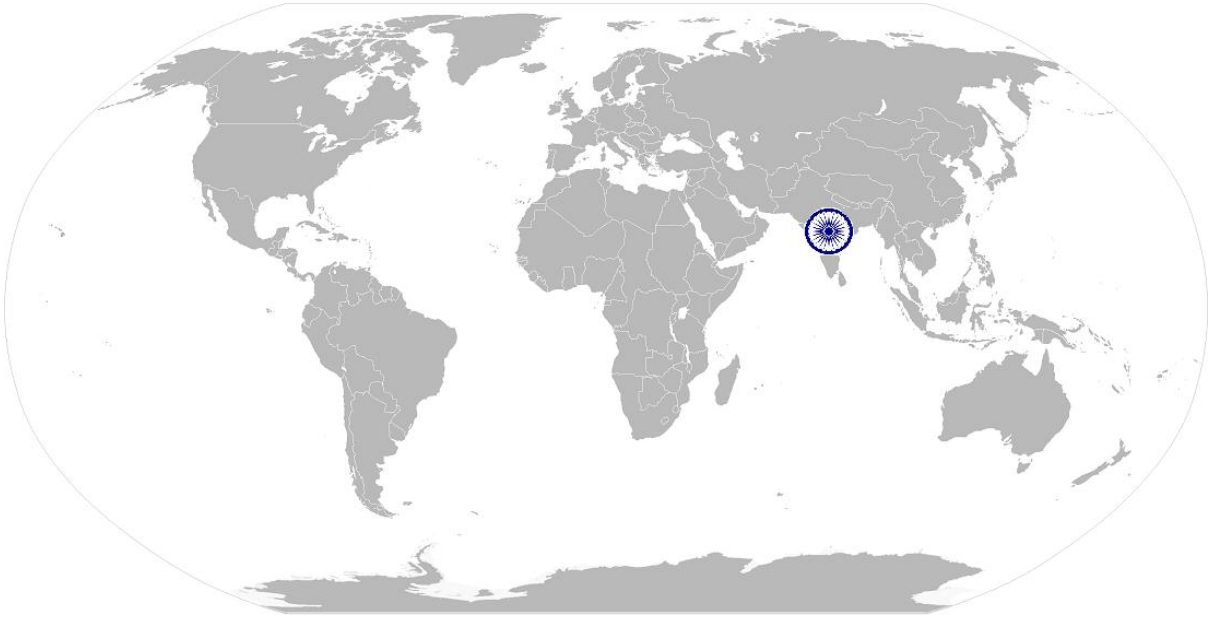
	KB35. The impact of waste/ dirt/ dust/unwanted substances on the process/ environment/ machinery/ human body. KB36. The best ways of cleaning & waste disposal
Skills (S) [Optional]	
Element	**Skills**
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Understand basic level notes and observations.
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA2. Safety instructions put up across the plant premises SA3. Safety precautions mentioned in equipment manuals and panels and understand the potential risks associated
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: 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. Professional Skills	**Plan and Organize**
	The user/individual on the job needs to know and understand how to: 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.
	Critical Thinking
	The user/individual on the job needs to know and understand how to: 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
	Team Work
	The user/individual on the job needs to know and understand how to: SB6. Follow instructions and work on areas of improvement identified SB7. Complete the assigned tasks with minimum supervision SB8. Complete the job defined by the supervisor within the timelines and quality norms

NOS Version Control

NOS Code	**RSC/N4101 (CPC/N0411)**		
Credits(NSQF)	**2.5**	**Version number**	1.0
Sector	**Rubber**	**Drafted on**	**18/05/2016**
Sub Sector	**Plastics Processing**		
Occupation Sector	**Plastics Sacks**	**Last reviewed on**	**26/12/2016**
		Next review date	**31/12/2021**



National Occupational Standards



Overview

This unit covers fitting operations on machining components using hand tools to make shape of the component from raw material as per given drawing specifications.

National Occupational Standards

Unit Code	RSC/N4109 (CPC/N 0420)
Unit Title (Task)	**Advanced method for Fitting Tools Measuring Equipments and Practice**
Description	This unit covers fitting of machining components using measuring tools and manually operated machines, to form the shape of a component from raw material, as per given specifications in the drawing and products. This involves carrying out the fitting operations like filing, drilling, and manual lapping and shaping in order to fit a component as per specifications. The candidate will be expected to perform under minimum supervision, taking self-interest at work and for the quality and accuracy of the work.
Scope	The blow molding operator will be responsible for • Working safely • Preparing for fitting operations • Marking components • Measure the dimensions-thickness, length, width etc. • Performing fitting operation to maintain sack and tape manufacturing machine & dies for that.
Performance criteria (PC) w.r.t. the Scope	
Element	**Performance criteria**
Working safely	The individual on the job should be able to: PC1. Comply with health and safety, environmental & other relevant regulations PC2. Adhere the procedures and guidelines for personal protective equipment (PPE) and other relevant safety regulations while performing die fitting operations PC3. Work following laid down procedures and instructions PC4. Ensure work area is clean and safe from hazards PC5. Ensure that all tools, equipment, power tool cables, extension leads are in a safe and usable condition
Preparing for fitting operations	The individual on the job should be able to: PC6. Obtain job specification from a valid and approved source PC7. Read & understand job requirements from the job specification document properly PC8. Report and rectify incorrect information in job specification documents as per job requirement PC9. Prepare for the fitting operations as per procedure PC10. Ensure that all calibrated measuring instruments used. PC11. Ensure that the components used are free from foreign objects, dirt and corrosion PC12. Obtain correct work pieces & consumables as per job requirements PC13. Obtain appropriate tools and measuring instruments. PC14. Set the work pieces as per job requirements using appropriate holding devices

Marking components	The individual on the job should be able to: PC15. Mark specified features with the help of marking-out methods on the work pieces as per job specification by using appropriate measuring and marking tools. PC16. Mark out templates for tracing/transferring the specified features on the work pieces as per drawing PC17. Trace or transfer the specified features from the templates onto the work pieces as per drawing
Performing fitting operations on machining components using hand tools and conventional machines e.g. Drilling and Shaper	The individual on the job should be able to: PC18. Perform fitting operations on various forms of metal components using a range of hand tools and manually operated machines PC19. Follow the specified machining sequence and procedure as per job specifications PC20. Check the Measurement help to: · evaluate environmental performance; · analyze root causes of problems; · assess compliance with legal requirements; · identify areas requiring corrective action, · improve performance and increase efficiency. PC21. Check the quality of the output as per required standards, using visual checks and measurement of dimensional parameters using measuring instruments. PC22. Produce components with various features as per standards applicable to the process PC23. Check the finished components as per job requirement PC24. Complete documentation during & post operations as per procedures PC25. Return all tools and equipment to the correct location on completion of the fitting activities PC26. Leave the work area in a safe and tidy condition on completion of job activities
Knowledge and Understanding (K)	
A. Organizational Context (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 relevant to own employment and performance conditions KA2. Health and safety requirements in the work place KA3. Working in clean and safe environment KA4. Job responsibilities and information related to employment terms, entitlements, job role and responsibilities KA5. The Reporting mechanism, department functions and procedures in the work place KA6. Related workforce and their responsibilities within the work area KA7. Procedures for reporting at work and employment related issues KA8. Documentation and related procedures applicable related to employment and

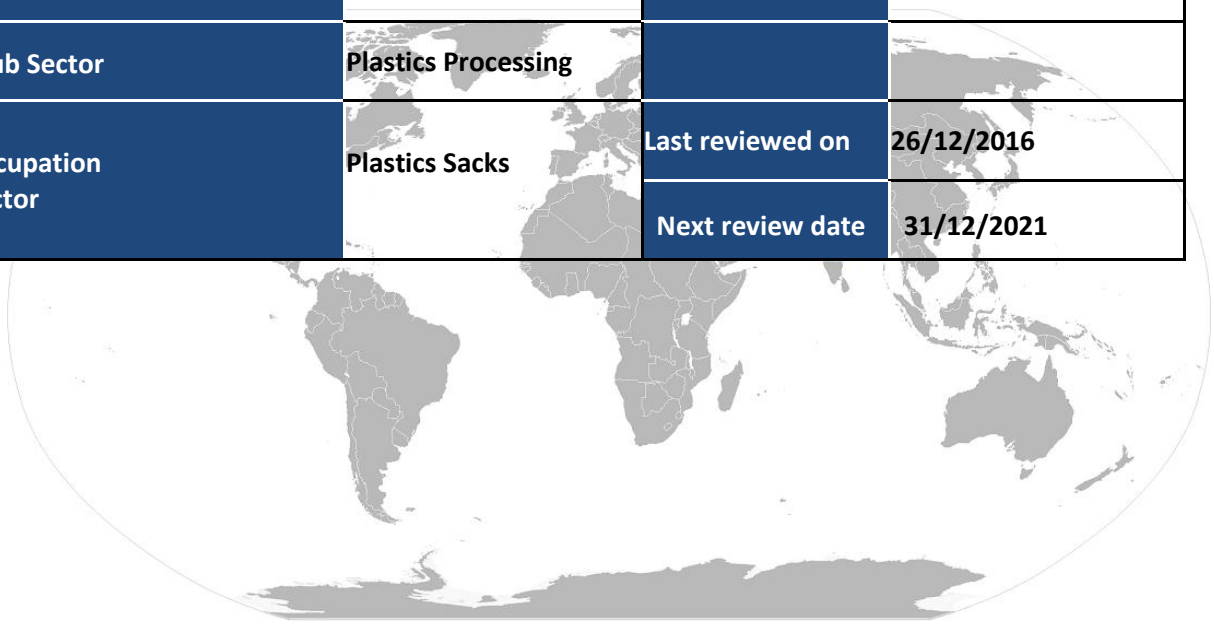
	work KA9. Documentation in connection with employment and work
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. Specific safe working practices, fitting procedures KB2. Hazards associated with carrying out the fitting operations and how can they be minimized KB3. Personal protective equipment to be used during the fitting activities and where can it be obtained KB4. Types and sources of appropriate job specifications KB5. Common terminology used in fitting KB6. Importance of following specified fitting sequences and procedures KB7. Importance and procedures of ensuring suitability of work piece and consumables for the specified job KB8. Tools and equipment used for the fitting operations KB9. Importance and procedures to ensure that tools and equipment are in a safe and usable condition KB10. Correct techniques and procedures to carry out specific fitting operations by hand tools and manually operated machines KB11. Importance of securing the work piece correctly using appropriate devices and mechanisms KB12. Common problems that can occur in the fitting operations and their implications KB13. Correct procedures to address problems commonly encountered during fitting operations KB14. Importance of reporting problems immediately and accurately KB15. Meaning and importance of quality in relation to final and intermediate job output KB16. The correctness of the shaped components against the specified quality standards KB17. Range of materials used in relevant fitting applications
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Writing Skills** The individual on the job needs to know and understand how to: SA1. Read and interpret information correctly from various job specification

	documents, manuals, health and safety instructions, etc. SA2. Fill up appropriate technical forms, process charts, log sheet as per organizational format SA3. Convey and share technical information clearly using appropriate language SA4. Check and clarify task-related information SA5. Liaise with appropriate authorities using correct protocol SA6. Communicate with people in respectful form and manner in line with organizational protocol
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA7. Read and interpret engineering drawing and sketches SA8. Read equipment manuals and process documents to understand the equipment and processes better SA9. Read instructions especially safety instructions especially symbols while using the equipment in the plant area SA10. Read internal drawings send by internal customers (other functions within the organization)
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA 11. Discuss task lists, schedules, and work-loads with co-workers SA 12. Question internal customers/ Moulding shop supervisor appropriately in order to understand the nature of the problem and make a diagnosis
B. Professional Skills	**Problem Solving**
	The user/individual on the job needs to know and understand how to: SB1. Identify problems with work planning, procedures, output and behavior and their implications SB2. Prioritize and plan for problem solving SB3. Communicate problems appropriately to others SB4. Identify sources of information and support for problem solving SB5. Seek assistance and support from other sources to solve problems SB6. Identify effective resolution techniques SB7. Select and apply resolution techniques SB8. Seek evidence for problem resolution
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB9. Plan, prioritize & sequence work operations as per job requirements SB10. Organize and analyze information relevant to work SB11. Basic concepts of shop-floor work productivity including waste reduction,

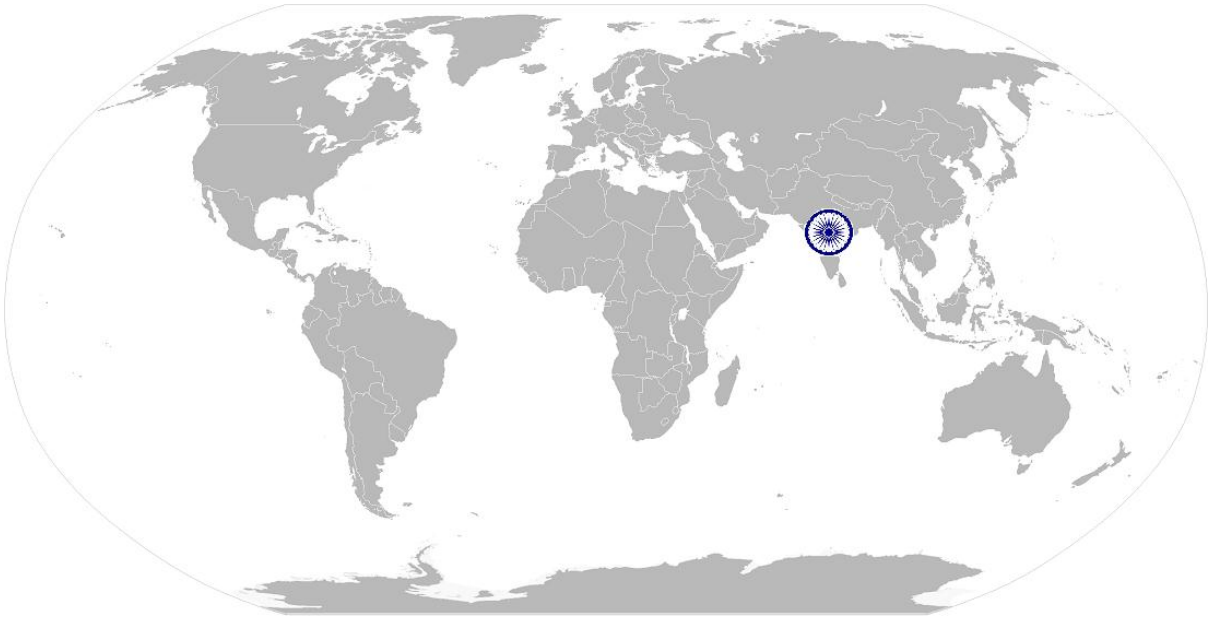
	efficient material usage and optimization of time
	Initiative and Enterprise
	The individual on the job needs to know and understand how to: SB12. Undertake and express new ideas and initiatives to others SB13. Modify work plan to overcome unforeseen difficulties or developments that occur as work progresses SB14. Participate in improvement procedures including process, quality and customer relationships SB15. Competencies in new and different situations to achieve more
	Team work
	The user/individual on the job needs to know and understand how to: SB16. Follow instructions and work on areas of improvement identified SB17. Complete the assigned tasks with minimum supervision SB18. Complete the job defined by the supervisor within timelines and quality norms

NOS Version Control

NOS Code	**RSC/N4109 (CPC/N 0420)**		
Credits(NSQF)	**3.5**	**Version number**	**1.0**
Sector	**Rubber**	**Drafted on**	**18/05/2016**
Sub Sector	**Plastics Processing**		
Occupation Sector	**Plastics Sacks**	**Last reviewed on**	**26/12/2016**
		Next review date	**31/12/2021**



National Occupational Standards



Overview

This unit covers the fundamentals polymers and demonstrating their properties relationship with molecular structure. Polymerization techniques used for manufacturing polymers and

classifications. Thermoplastics materials and their properties and end use application as a sack and tapes.

National Occupational Standa

Unit Code	RSC/N4110 (CPC/N 0421)
Unit Title (Task)	Introduction and Test methods for Polymers & Thermoplastics Materials
Description	This unit is about Introduction to Polymers Thermoplastics Materials 1. Understanding fundamental of polymers. 2. Indicate how the properties of polymeric materials can be exploited by a product designer. 3. Become familiar with thermoplastics materials. 4. Recognize the potential value of polymeric materials and their areas of application.
Scope	The Sack/tape machine operator will be learning about. Nomenclature of polymers, sources of raw materials, methods of manufacture, General character & properties , processing behavior and applications Use of Polymers and their applications in industries like tapes, films and filaments in the field of packaging sack manufacturing and non-woven bag manufacturing etc.
Performance criteria (PC) w.r.t. the Scope	
Element	**Performance criteria**
Introduction To Polymers	The individual on the job should be able to: PC1. Learn the Basic Importance of polymers in Human Life. PC2. Study the fundamental terminology of polymers PC3. Study the classification of polymers- polymer structure and morphology, etc.
Study of Plastics Material	PC4. Study the Introduction to monomers and Polymers Types of Polymers-Thermoplastics, Elastomers PC5. Study about Polymerization PC6. Study the Types of Polymerization- Condensation-Addition-Copolymerization PC7. Study the Characterization PC8. Study the Polymer Solution PC9. Learn the Measurement of Molecular weight & sizes-Structure & properties of Polymers.
Thermoplastic Materials	PC10. Study the Commodity Polymers: Polyolefin: LDPE – HDPE – LLDPE, PP etc. PC11. Study the Engineering Polymers: PC, ABS, PMMA, POM, PA-NYLON etc. PC12. Study the Special Polymers: FEP, PVDF etc. PC13. Study the PP And HDPE for the tape and sack production

Identification of Plastics Material	PC14. Determine Conventional Methods of Identification:-Drop Test, water floatation Test ,Scratch test PC15. Determine Advanced Methods of Identification:-MFI, Melting etc.
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. Relevant standards specified to identify the polymers KA2. Basic process to be followed for inspection of the lot. KA3. Batch size, material grade and nomenclature.
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Processes and procedures followed for identification of polymers. KB2. Techniques of using instruments burner, copper rods, solvents, weighing scales & other instruments and machineries to identify the polymers and its properties. KB3. Methods to identify quality defects. KB4. The working knowledge & procedure of testing & identifying machines. KB6. The various quality standards in India (ISO) used by the organization
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Note the values and process of polymer with specification. SA2. Identify different type of format relevant to the polymer identification.
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA3. Read values and equipment manuals to understand the working of the equipment SA4. Read measuring instruments reading to identify any deviations from the dimensions given in the standards.
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA5. Inform supervisor of any quality related defects arising out of the manufacturing process SA6. Question internal customers/ supervisor appropriately in order to understand the nature of the problem and make a diagnosis
B. Professional Skills	**Plan and Organize**
	The user/individual on the job needs to know and understand how to: SB1. Plan & organize the work order and jobs received from the supervisor according to the polymer. SB2. Organize all process/ equipment manuals so that sorting/ identifying

	information is easy SB3. Keep fixtures, tools, drawings, Work Instructions, SOP manuals as per the part number, colour codes etc as defined under the 5S systems
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB4. Use common sense and make judgments during day to day basis use reasoning skills to identify and resolve basic problems SB5. Carefully analyze the body part for various assembling defects at every station SB6. carefully analyze each defect observed during inspection and try to find solution for the defect along with the assembly line operator
	Quality Consciousness
	The user/individual on the job needs to know and understand how to: SB7. identify defective materials in the manufacturing line by comparing manufactured hollow articles(container; bottles) with the work standard SB8. Link the defect observed with the overall impact on the performance of the output.

RSC/N4810 (CPC/N1122) Perform the woven sack/raffia plant operations with start-up and shut down procedure

NOS Version Control

LO Code	**RSC/N4110 (CPC/N 0421)**		
Credits(NSQF)	**3.5**	**Version number**	**1.0**
Sector	**Rubber**	**Drafted on**	**18/05/2016**
Sub Sector	**Plastics Processing**		
Occupation Sector	**Plastics Sacks**	**Last reviewed on**	**26/12/2016**
		Next review date	**31/12/2021**

RSC/N4810 (CPC/N1122) Perform the woven sack/raffia plant operations with start-up and shut down procedure

National Occupational Standards

Overview

This unit is for an overview of plastics processing methods with respect to plastics sack. Formulations to make plastic sack /tape with help of process parameters.

RSC/N4810 (CPC/N1122) Perform the woven sack/raffia plant operations with start-up and shut down procedure

National Occupational Standards

Unit Code	RSC/N4810 (CPC/N1122)
Unit Title (Task)	Perform the woven sack/raffia plant operations with start up and shut down procedure
Description	This unit is about Basics of Plastics Processing methods 1. There are a variety of methods used to process sack. Each method has its Advantages and disadvantages and are better suited for specific applications. 2. Plastics processing encompasses the processing, design, development, and Manufacture of plastics sack/Tape.
Scope	1. Assisting in setting up and operating the plastics Sack machine. 2. Development and growth of various key sectors. 3. Assist in checking the operations of the equipment 4. To understand the basic knowledge of fundamental of sack/tape process. 5. This unit/task covers the following: • Plastics sack/tape Extruders and their parts • Sack Extrusion Process and Parameters. • Machine Operation and Controls. • Common faults and remedies.
Performance criteria (PC) w.r.t. the Scope	
Element	**Performance criteria**
Introduction to Sack/ Tape Process	To be competent, the user/individual on the job should be able to PC1. Learn the needs for plastics sack/tape process principle. PC2. Ensure the merits and demerits of sack/tape process to over the all others plastic Process. PC3. Learn the definition and terminology related to sack/tape process. PC4. Ensure finishing operation including surface treatment of the fabricated product if required as per SOP, PC5. Follow start up procedure.
Classification of different extrusion process plant	PC6. Learn the tape extrusion line and its terminology-as quenching, heating and orientation by stretching annealing, winding etc. PC7. Perform Film extrusion: - Types & specification requires. Blown film, Flat film, cast film. PC8. Perform Special film extrusion: - Tubular quench film (TQ), expanded film, and Co extruded film & sheet etc. PC9. Perform Pipe / tube extrusion process: - Introduction, development different features. Construction & operation Pipe extrusion line according to various material & sizes. PC10. Observe Sizing method, take off method & post operation method. PC11. Learn the Pipe extruder die, constructive feature, size and specification. PC12. Perform Special extrusion process- Tapes, woven sack, monofilament manufacturing process. PC13. Study the Introduction technology development

RSC/N4810 (CPC/N1122) Perform the woven sack/raffia plant operations with start-up and shut down procedure

Processing methods	PC14. Learn the type of process to be used depends on a variety of factors PC15. Set the Parameters, including product shape and size, plastic type, quantity to be produced, PC16. Ensure the Quality and accuracy (Tolerances) required, PC17. Ensure the Design load performance, cost limitation, and time schedule. PC18. Set the Common Process Parameter like Temperature, Pressure and Speed and its controls. PC19. Learn the Effect of process parameters on Product Properties PC20. Take Trial Production and checking product stabilization. PC21. Observe Actual Production and Parameter / Process Control. PC22. Follow Quality Check and Continuous Production. PC23. Follow Post production and storing. PC24. Study the Machine Operation and process parameter of sack/tape PC25. Machine: as per manual, semiautomatic, fully automatic and parameters – time, temperature, pressure and speed etc. PC26. Learn the Shut down procedure- extruder, tape line/ circular looms and weaving machines etc. PC27. Learn the Type of Conversion Techniques: Lamination Sealing cutting, Printing and Other processes.
Process selection	PC28. Select the Material to be criteria processed PC29. Study the End Applications of using tape/sack. PC30. Perform Process Limitations PC31. Follow the Quality PC32. Perform Safety Equipment's and Its Use.
Feed the cleaned, dried and separated plastic waste in the hopper and conduct a trial with the setting of the parameter	PC33. Perform preheating and pre operations of plastic if required PC34. Ensure that the plastic material are mixed with additives, fillers (if any) before being fed into the hopper PC35. Conduct a test process and produce a sample output as per requirement. PC36. Feed the required operation code in the apparatus for heaters to melt the plastic material at the predefined temperature PC37. Enter process temperature, volume of plastic material and weight settings in the machine as per data sheet PC38. Enter machine and process parameters such as pressure and time as per the data sheet
Conduct the actual process with final setting as per product approval	PC39. Ensure that the inspection and dimension of the output tape/sack are inspected and measured as per the process given in the Work Instructions/ SOP PC40. Start the production process if the test product or tape/sack matches the quality of the final output, start the production process PC41. Make modifications in the process parameters (by selecting the right program from the machine control system) PC42. Follow the check-list procedure to ensure quality of final product.

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Knowledge and Understanding (K)	
Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. Relevant standards specified for the Processing KA2. Basic process followed through manual. KA3. Quality Management policy of the organization KA4. Organizational Coding system of raw material, compounds and products KA5. Different quality management systems KA6. Importance of identifying non-conforming materials. KA7. Risk and impact of not following defined procedures/work instructions. KA8. Escalation matrix for reporting identified problems. KA9. Types of documentation in organization and importance of the same.
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Processes and procedures followed for Processing the lot/ pieces/ products. KB2. Techniques of using measurement instruments like rulers, Vernier calipers, micrometers, weighing scales etc. KB3. Methods to identify quality defects in the Processing. KB4. Impact of defects on the overall working of the product. KB5. Methods used for cutting, finishing which can repair lot with minor defects KB6. Various quality standards in India (ISO) used by the organization
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Note the number of lot with defects which can be repaired to number of lot which will be discarded
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA2. Read process and equipment manuals to understand the working of the equipment SA3. Read measuring instruments reading to identify any deviations from the dimensions given in the product engineering drawing
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. Inform supervisor of any quality related defects arising out of the manufacturing process SA5. Question internal customers/ supervisor appropriately in order to understand the nature of the problem and make a diagnosis

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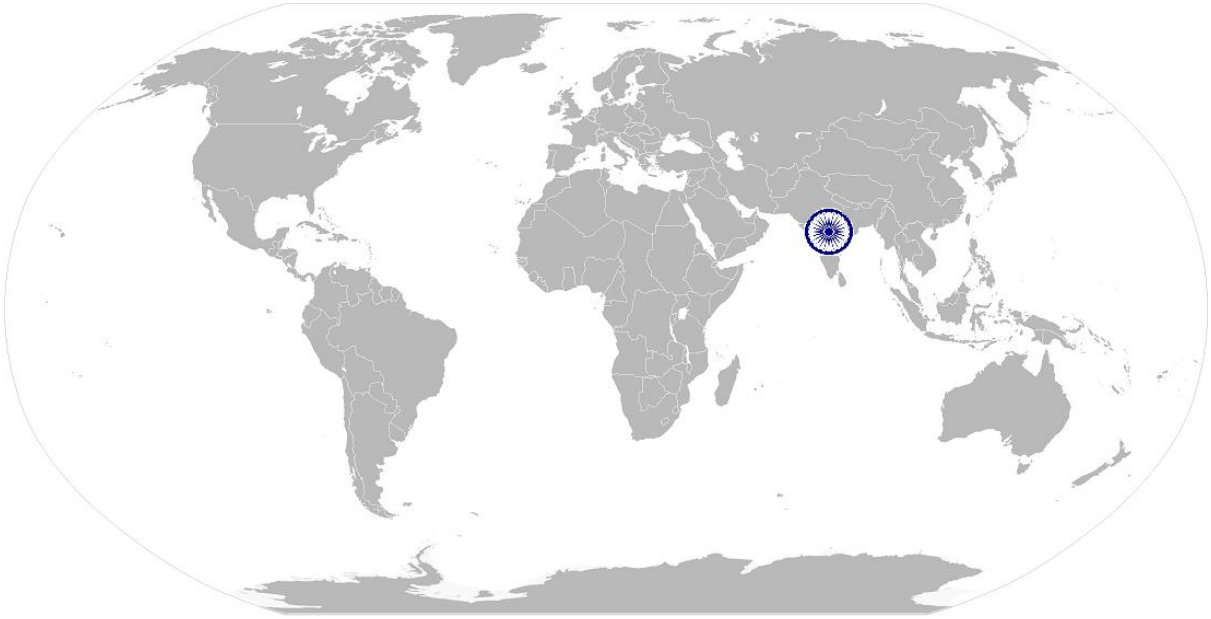
B. Professional Skills	**Plan and Organize**
	The user/individual on the job needs to know and understand how to: SB1. Plan & organize the work order and jobs received from the supervisor. SB2. Organize all process/ equipment manuals so that sorting/ identifying information is easy SB3. keep fixtures, tools, drawings, Work Instructions, SOP manuals as per the part number, colour codes etc. as defined under the 5S systems
	Critical Thinking & Judgment
	The user/individual on the job needs to know and understand how to: SB4. Use common sense and make judgments during day to day basis use reasoning skills to identify and resolve basic problems SB5. Carefully analyze the body part for various assembling defects at every station SB6. carefully analyze each defect observed during inspection and try to find solution for the defect along with the assembly line operator
	Quality Consciousness
	The user/individual on the job needs to know and understand how to: SB7. Identify defective materials in the manufacturing line by comparing manufactured hollow articles(container; bottles) with the work standard SB8. Link the defect observed with the overall impact on the performance of the output.

RSC/N4810 (CPC/N1122) Perform the woven sack/raffia plant operations with start-up and shut down procedure

NOS Version Control

NOS Code	**RSC/N4810 (CPC/N1122)**		
Credits(NSQF)	**20**	**Version number**	**1.0**
Sector	**Rubber**	**Drafted on**	**18/05/2016**
Sub Sector	**Plastics Processing**		
Occupation Sector	**Plastics Sacks**	**Last reviewed on**	**26/12/2016**
		Next review date	**31/12/2021**

National Occupational Standards



Overview

In this unit represent to address the trained manpower needs of weaving and loom operators and related segments including Sack and tape manufacturing developing a cohesive and integrated framework of training based on the industry needs. To increase the employability of residents of the target areas through imparting of skills in the Sack and tape manufacturing, and related segments.

National Occupational Standards

Unit Code	**RSC/N4811 (CPC/N1123)**
Unit Title (Task)	**Weaving technology and Loom operation (Circular)**
Description	This unit is about Weaving technology and Loom operation (Circular). The operator will gain a knowledge and understanding of Weaving technology and Loom operation- 1. The weaving and loom process and its basic principles. 2. The detailed types of weaving and loom process. 3. Continuous and intermittent weaving and loom machines. 4. Set up, operate, or tend machines that knit, loop, weave, or draw in sack process.
Scope	The blow molding operator will be responsible for • Weaver's knotting • Feeding / Replacing looms • Attending to Weft Break • Loom operation • Other Work Practices on weaving and loom machine • checking the operations of the equipment
Performance criteria (PC) w.r.t. the Scope	
Element	**Performance criteria**
Principles and basics Of Weaving technology and Loom operation	The individual on the job should be able to: PC1. Study the Principle of Weaving technology and Loom operation. PC2. Ensure basic Need of Tools and Accessories and Machineries. PC3. Select the raw Material for Loom , weaving machines operation
Typologies of Weaving technology and Loom operation	PC4.Perform Various types of Loom, weaving machines operation process. PC5. Perform Various types of Loom: - shuttle, projectile loom, rapier loom water jet loom, air jet loom and circular looms etc. PC6 Learn about Type of weaving – single phase and multiphase
Loom , weaving machines operation	PC7. Set Loom , weaving Machine operation merits and demerits/over other Process PC8. Check the identified feed strip for dimension uniformity/identified tape PC9. Make tiny & firm weaver's knots PC10. Find out broken warp ends, find out the location of the broken end, by bringing the hands under the dropper bars, with mechanical droppers. detect the location using the indication lamp & by bringing the hands over the droppers, with electrical warp stop motion PC11. Mind the broken warp end in the sized beams with the thrums of the same count of the sized beams, using "weavers ' knots" PC12. Draw the mended warp yarn through the helds properly, as per the drawing order. PC13. Run the loom by pulling the starting handle with full torque. PC14. Correct the tape defects like wrong drawing, wrong denting, end out, double

	end etc., immediately and also ensure that the other tape defects too are corrected at the earliest, before continuing further production. PC15. Clean the machines & work area, so as to ensure good working atmosphere, without damaging the tape in the looms where the cleaning work is carried out as well as in the adjacent & opposite looms . Should not misuse "air". Can use air for cleaning, only in the areas. PC16. Ensure that the loose threads are hanged in higher. Accordingly, and trimmed, after attending to the warp breaks. PC17. Avoid pulling out warp ends unnecessarily. If end is getting cut often in the selvedge, the same has to be brought to the notice of the mechanics/ fitters/ superiors & get it corrected.
Check the operations of the equipment used in Loom , weaving machines process	PC18. Check for operation of weaving and loom apparatus as per the checklist provided PC19. Fix the desired loom to the weaving and loom machine apparatus in order to achieve the desired operation as per the Work Instructions/ SOPs PC20. Make modifications in the process parameters (by selecting the right program from the machine control system) if required and ensure alignment with the prescribed standards
New technology in looms and weaving machineries	PC21. Know about the Modern developments in weaving and looms PC22. Develop the work on producing tape from new generation polymeric material. PC23. Compare with common and moderns weaving machine PC24. Observe the New development in- shuttle, projectile loom, rapier loom water jet loom, air jet loom and circular looms etc. PC25. Follow the Modern techniques- Electronic Braking System, Automatic Pick Controller, Quick step filling presenter, PFL, QSC, EISY, PSO, and FDEI etc. PC26. Ensure the functionality and assembly of weaving and loom machine as per SOP. PC27. Adjust the weaving and loom machine controlling and program with the help of tools and software as per requirement. PC28. Learn the molding procedure and process to be adopted for completing the work order from the supervisor by referring the Work Instruction document/ SOP manual PC29. Ensure that the required material is procured from the store before starting the process PC30. Ensure the type of looms and weaving required for executing the required operation and ensure that the same is available for operations

Perform the visual inspection of the output and finishing operation	PC31. Ensure the functionality and assembly of weaving and loom machine as per SOP. PC32. Adjust the weaving and loom machine controlling and program with the help of tools and software as per requirement. PC33. Learn the molding procedure and process to be adopted for completing the work order from the supervisor by referring the Work Instruction document/ SOP manual PC34. Ensure that the required material is procured from the store before starting the process PC35. Study the type of looms and weaving required for executing the required operation and ensure that the same is available for operations PC36. Ensure pouring in line with defined standards and specifications PC37. Ensure the functionality and assembly of weaving and loom machine as per SOP. PC38. Adjust the weaving and loom machine controlling and program with the help of tools and software as per requirement. PC39. Ensure the molding procedure and process to be adopted for completing the work order from the supervisor by referring the Work Instruction document/ SOP manual PC40. Follow the molding procedure and the Work Instruction document/ SOP manual file method. PC41. Ensure that the required material is procured from the store before starting the process PC42. Ensure the type of looms and weaving required for executing the required operation and ensure that the same is available for operations PC43. Ensure pouring in line with defined standards and specifications PC44. Record the feeding observations like interrupted pouring or any abnormality PC45. Conduct a test process and produce a sample output as per the sketches/ engineering drawing shared with the supervisor. PC46. Ensure that the dimensions of the output product are measured as per the process given in the Work Instructions/ SOP PC47. Measure the parts dimensions, In case the parts are not as per the given measurements, send the same for further processing in terms of cutting, finishing etc. PC48. Note down the observations of the basic inspection process and Identify pieces which are OK and also not meeting the specified standards PC49. Discard the batch which are beyond repair and repair the ones which need minor modifications in settings. PC50. Maintain records of each category of work outputs as per the batch etc. so that correction can be organized. PC51. Establish the linkage between rejection of output and the pertinent causes for the same (process/ material etc.); Recommend the means for rejection

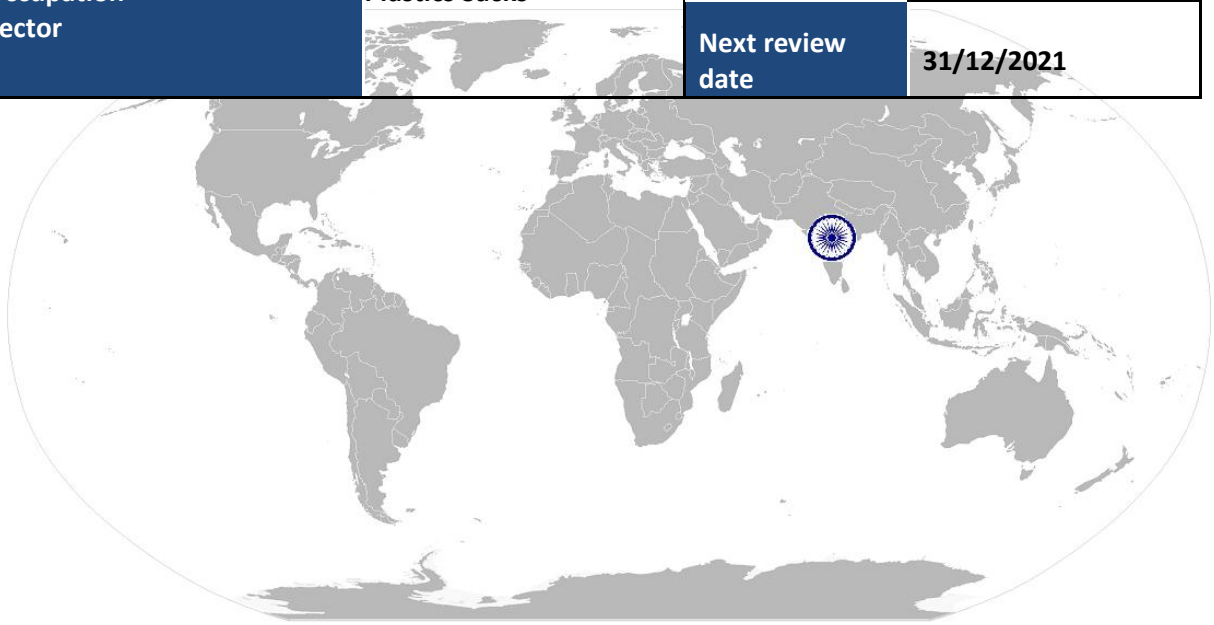
	control. PC52. Rectify minor defects like dimension variation, thickness variation etc. by control process parameters etc. PC53. Escalate all issues related to change in surface properties, Tensile strength etc. so that the manufacturing equipment can be reset to achieve the specified output. PC54. Provide first and last output from each batch to the lab for quality check on its composition, properties etc. PC55. Obtain clearance for the entire batch from the lab
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. The organization's policies & standard operating procedures (sop) and its process KA2. The awareness, knowledge of customers KA3. Potential hazards associated with the machines and the safety precautions must be taken KA4. Protocol to obtain more information on work related tasks KA5. Contact person in case of queries on procedure or products and for revolving issues related to defective machines, tools, materials & equipment's KA6. Details of the various job rolls & responsibilities KA7. Documentation and reporting formats KA8. Work targets & review machine with superiors KA9. Protocol and format for reporting work related risks/ problems KA10. Method of obtaining /giving feedback with respect to performance KA11. Importance of team work and harmonious working relationships KA12. Process for offering /obtaining work related assistance KA13. Responsibilities under health, safety and environmental legislation KA14. Guidelines for storage & disposal of waste materials
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. The minimum quality requirements of the product with respect to permissible/non-permissible defects KB2. Fabric quality particulars such as ends & picks per inch, width, products weave etc.kb5. Operation of moulding machine (equipment working, possible setting levels, typical process followed for different batches)
About the Raw materials	KB3. Yarns from natural fibers - cotton, silk, wool KB4. Yarns from manmade fibers - polyester, nylon, viscose kb6. Blended yarns - polyester cotton, polyester viscose
About different types of Looms	KB5. Hand loom KB6. Power loom - conventional loom KB7. Auto loom - shuttle looms

	KB8. Shuttle less looms - rapier , projectile , air jet, water jet KB9. Tappet loom/ cam loom/ crank loom , dobby loom, jacquard loom
About types of weave	KB10. Plain weave, twill , drill, plain satin, stripe satin , dobby designs , jacquard designs
Causes for fabric defects: due to weaver, due to loom, due to other reasons	KB11. Wrong drawing , wrong denting, end out , double end, broken pick, double pick, missing pick, hand stain , hole, wrong weft, bad selvedge, KB12. End out, let-off, take- up problem, temple mark, temple cut, emery hole/ emery cut/ emery mark, broken pick, missing pick, double pick, short pick, snarls, impression mark, oil stain, lashing in, weft catching, selvedge cut, loops, weft stitches, warp stitches, bumping mark, weft crack, cloth torn , bad shedding, warp floats, weft floats, reed mark, bad selvedge, starting KB13. Weaving faults - thin place, thick place, neps, kitties, contamination, color flies, yarn variation, shade variation kb15. Sizing faults - shade variation, size patches, sizing oil, bead formation, kb16. Weaving faults - wrong weft, wrong pattern, less width, low epi, low ppi, wrong warp.
Safety Mechanism	KB14. The safety mechanisms of the machines & should ensure that the same are in order KB15. The stop motions & should ensure that the same are in order KB16. The indication lamps & should ensure that the same are in order
Machine Operators	KB17. The functional operations of the machines, where he/she is working
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Note the number of lot with defects which can be repaired to number of lot which will be discarded
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA2. Read process and equipment manuals to understand the working of the equipment SA3. Read measuring instruments reading to identify any deviations from the dimensions given in the product engineering drawing
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. Inform supervisor of any quality related defects arising out of the manufacturing process SA5. Question internal customers/ supervisor appropriately in order to understand the nature of the problem and make a diagnosis

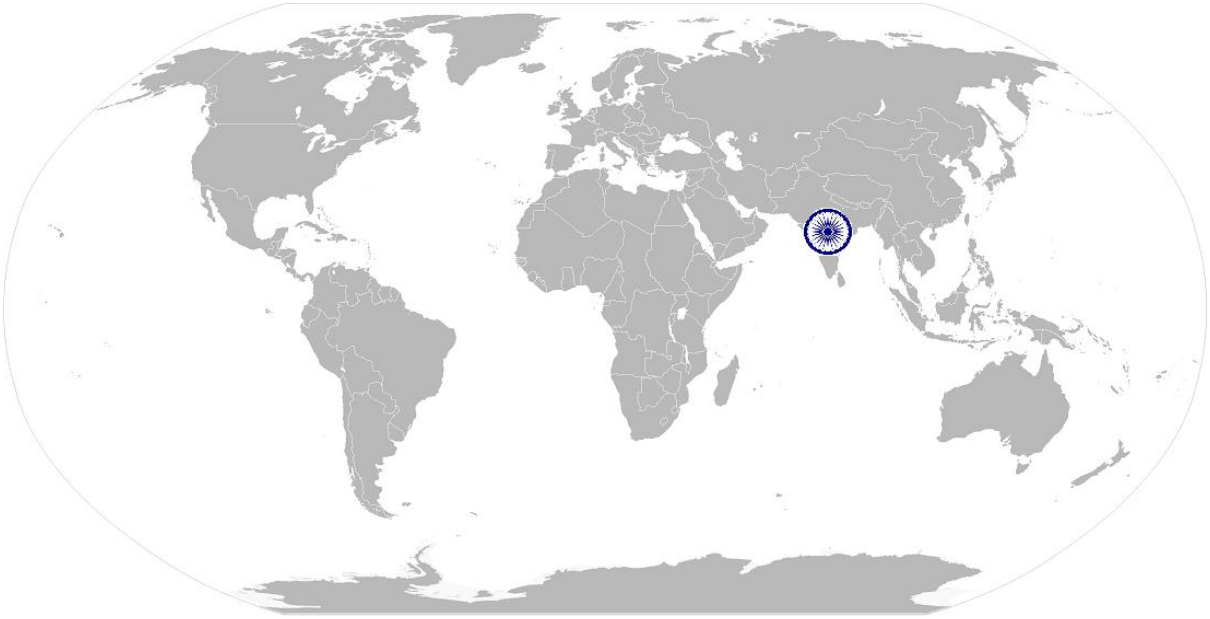
B. Professional Skills	**Plan and Organize**
	The user/individual on the job needs to know and understand how to: SB1. Plan & organize the work order & jobs received from the supervisor SB2. Organize all process/ equipment manuals so that sorting/ accessing information is easy SB3. Keep fixtures, tools, drawings, Work Instructions, SOP manuals as per the part number, colour codes etc as defined under the 5S systems
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB4. Use common sense and make judgments during day to day basis use reasoning skills to identify and resolve basic problems SB5. Carefully analyze the body part for various assembling defects at every station SB6. Carefully analyze each defect observed during inspection and try to find solution for the defect along with the assembly line operator
	Quality Consciousness
	The user/individual on the job needs to know and understand how to: SB7. identify defective parts in the manufacturing line by comparing manufactured (lot/articles) with the work standard SB8. Link the defect observed with the overall impact on the performance of the output. SB9. Participate in the various programs/ meetings that will be conducted by the superiors & put forth the suggestions in the interest of the company SB10. Participate in the " quality circles" that will be formed by the superiors SB11. Support and adapt to the various procedures that SB6. will be adopted by the company with respect to compliances for the different certifications like " ISO 9001", " ISO 14001", SA 8001",GOTS certification " fair trade " etc.

NOS Version Control

NOS Code	**RSC/N4811 (CPC/N1123)**		
Credits(NSQF)	5	**Version number**	**1.0**
Sector	**Rubber**	**Drafted on**	**18/05/2016**
Sub Sector	**Plastics Processing**		
Occupation Sector	**Plastics Sacks**	**Last reviewed on**	**26/12/2016**
		Next review date	**31/12/2021**



National Occupational Standards



Overview

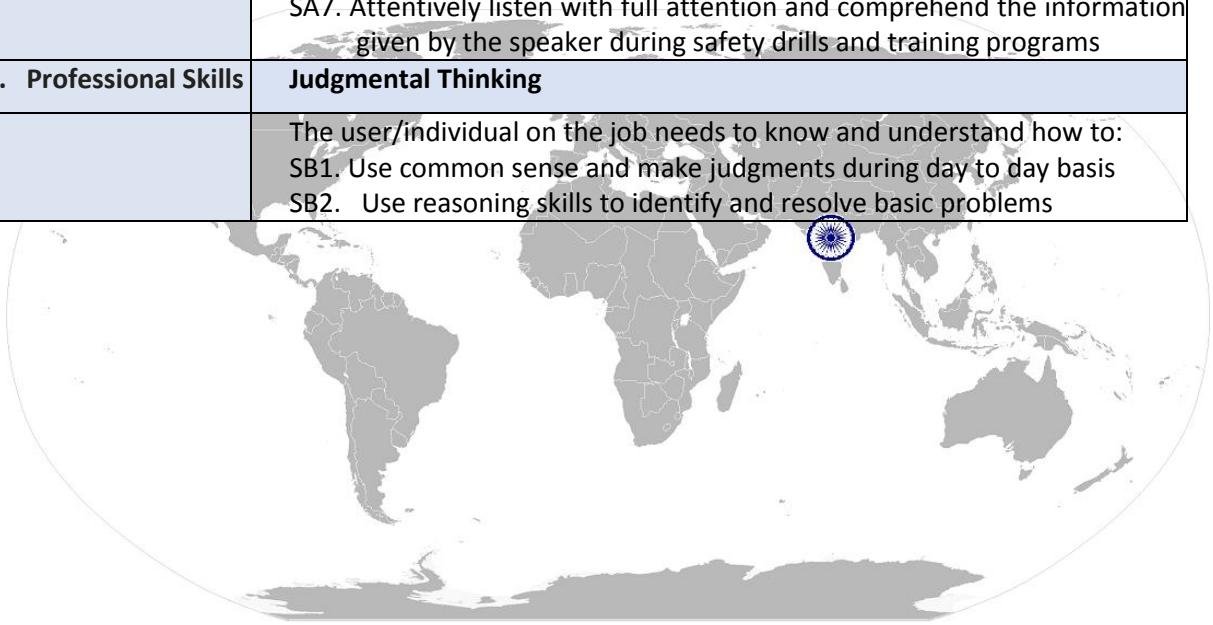
This unit is about establishing Plastic auxiliary equipment consists of several components, such as material management, reclamation, heat transfer. Auxiliary equipment provides the source for every possible processing advantages in terms of productivity and quality output.

National Occupational Standards

Unit Code	**RSC/N4806 (CPC/N1116)**
Unit Title (Task)	**Auxiliary equipments used in Plastics Sack and Tape Production.**
Description	This OS unit is about Control and maintains auxiliary equipment, such as chillers pumps, fans, compressors, condensers, feed water heaters, filters, and chlorinators that supply water, fuel, lubricants, air, and auxiliary power for chillers.
Scope	The role holder will be responsible for • Opens and closes valves and switches in sequence upon signal from other worker to start or shut down auxiliary units. • Understand working of auxiliary machineries with the sack/tape process
Performance criteria (PC) w.r.t. the Scope	
Element	**Performance criteria**
Basic requirement of Auxiliary Equipment's and machineries	**To be competent, the user/individual on the job should be able to** PC1. Inspect, monitor, operating fuel systems, fuel oil transfer, supply lines & associated equipment and fossil fuel chillers. PC2. Operate condensate and feed water systems, circulating and cooling water systems, condensate and makeup systems, circulating service water treatment equipment, auxiliary lube oil systems, emission control equipment and miscellaneous equipment. Pass onsite training programs. Follow the safety rules, regulations and procedures. PC3. Connects basic plant services as needed to meet production requirements and makes initial checks of operating conditions before initiating production runs. PC4. Assist in cleaning and lubrication of equipment and tooling and performs various preventative maintenance tasks as needed.
Different type of Auxiliary Equipment	PC5. Study adout different types of Predrier-Hot air Oven, Hopper Driers, Dehumidifiers etc. PC6. Study the basics of Chiller, Cooling Tower for the controlling temperature of Mould, machine and Fluids. PC7. Ensure the basic Operation and Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly. PC8. Study about the Compressor and Scrap Grinder.
Study process of operation and maintenance of auxiliary equipment	PC9. Ensure the equipment maintenance -- Performing routine maintenance on equipment and determining when and what kind of maintenance is needed. PC10. Ensure the Equipment Selection -- Determining the kind of tools and equipment needed to do a job.

	PC11. Follow the instructions given on the equipment manual describing the operating process of the equipment PC12. Follow the Safety, Health and Environment related practices developed by the organization PC13. Ensure relevant safety board's/ signs are placed on the shop floor PC14. Operate the machine using the recommended Personal Protective Equipment (PPE) and ensure team members also use the related PPEs at the workplace PC15. Maintain a clean and safe working environment near the work place and ensure there is no spillage of chemicals, production waste, oil, solvents etc. PC16. Attend all safety and fire drills to be self-aware of safety hazards and preventive techniques PC17. Maintain high standards of personal hygiene at the work place PC18. Ensure that the waste disposal is done in the designated area and manner as per organization SOP.
Knowledge and Understanding (K)w.r.t. the scope	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. Relevant standards, procedures and policies related to auxiliaries machineries followed in the company KA2. Emergency handling procedures & hierarchy for escalation
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Start up procedure as per SOP KB2. Basic knowledge of Safety procedures(firefighting, first aid) within the organization KB3. Basic knowledge of various types of PPEs and their usage KB4. Basic knowledge of risks/hazards associated with each occupation in the organization KB5. Knowledge of personal hygiene and how an individual an contribute towards creating a highly safe and clean working environment KB6. Basic knowledge of various operations of machineries and equipment as per the operation manual. KB7. The Shut down procedure as per SOP
Skills (S)w.r.t. the scope	
Element	**Skills**
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. Write basic level notes and observations
	Reading Skills
	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
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: 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. Professional Skills	**Judgmental Thinking**
	The user/individual on the job needs to know and understand how to: SB1. Use common sense and make judgments during day to day basis SB2. Use reasoning skills to identify and resolve basic problems



NOS Version Control

NOS Code	**RSC/N4806 (CPC/N1116)**		
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	**Plastics Sacks**	**Next review date**	**31/12/2021**

National Occupational Standards

Overview

This unit is about the understanding of soft skills include situational awareness and the ability to read a situation as it unfolds to decide upon a response that yields the best result for all involved.

National Occupational Standards

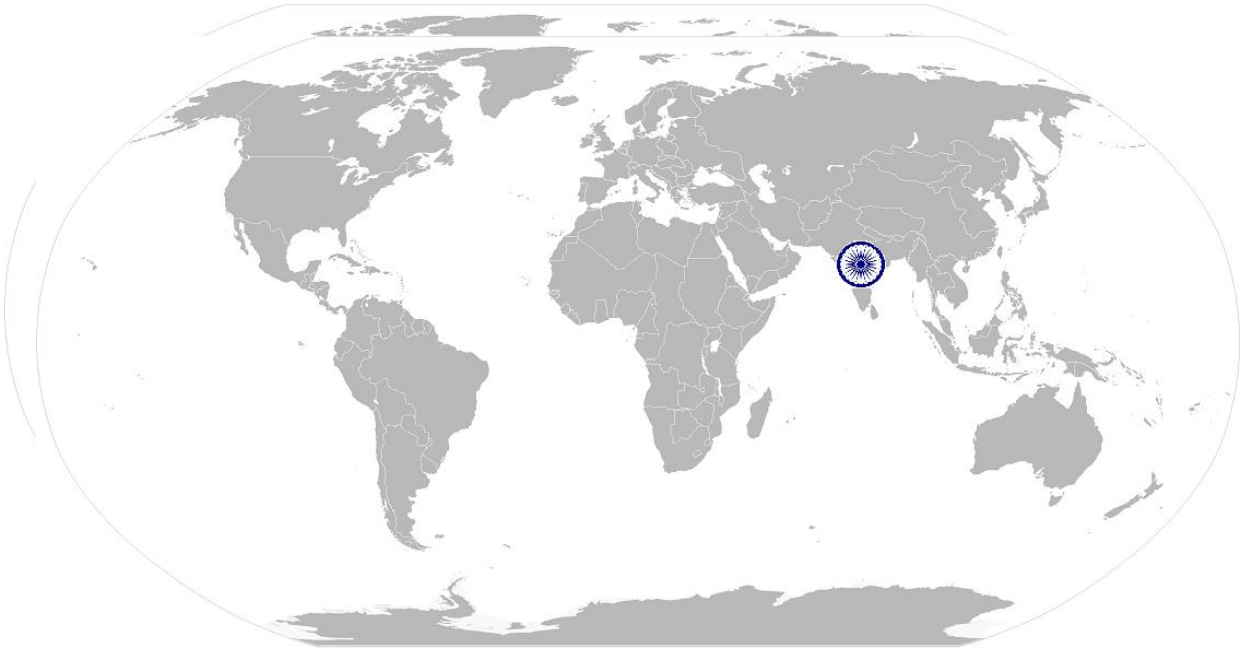
Unit Code	**RSC/N4108 (CPC/N0418)**
Unit Title (Task)	**Basic Knowledge of Communication/soft skills**
Description	This OS is about ensuring a Person with this attribute has the ability to work in various situations equally well and move from one situation to another with ease and grace. The ability to be diplomatic and respectful even when there are disagreements is also a key soft skill. This skill requires the employee to maintain a professional tone and demeanor even when frustrated.
Scope	The individual needs to understand the following: • Basic Knowledge on functions of computer & its operations. • Effective communication & Inter-personal skills
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Basic Knowledge on functions of computer & its operations.	**The individual on the job should be able to:** PC1. Perform basic computer operartions. PC2. Learn about basic functions in a Computer
Effective communication & Inter-personal skills	PC3. Receive information and instructions accurately from the supervisor/operator and fellow workers, getting clarification where required PC4. Pass on information to authorized persons accurately who require it and within agreed timescale and confirm its receipt PC5. Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible PC6. Consult and assist others to maximize the effectiveness and efficiency in carrying out tasks PC7. Display active listening skills while interacting with others at work PC8. Use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism PC9. Behave as a responsible person at the workplace PC10. Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict
Knowledge and Understanding (K) w.r.t. the scope	
Element	**Knowledge and Understanding**
A. Organizational Context (Knowledge of	**The individual on the job needs to know and understand:** KA1. Standards, policies, and procedures followed in the company relevant to own employment and performance conditions

the company / organization and its processes)	KA2. Reporting structure, inter-dependent functions, lines and procedures in the work area KA3. Relevant people and their responsibilities within the work area
Elements and Principles of Communication	KA4. Basic Study of Elements of Soft communication skills: •Principle of Communication Process •Clarity •Conciseness •Objectivity •Consistency •Completeness •Relevancy •Audience Knowledge •Receiver •Barriers
How does a computer work?	KA5. Computer functions in the following manner: •Turning the Computer On and Logging On •The computer accepts input •Performs useful operations •Stores data •Produces output
B. Technical Knowledge	**The individual on the job needs to know and understand:** KB1. Various categories of people that one is required to communicate and co-ordinate with in the organization KB2. The importance of effective communication in the workplace KB3. The Key elements of active listening KB4. The value and importance of active listening and assertive communication KB5. The importance of tone and pitch in effective communication KB6. The importance of ethics for professional success KB7. The importance of discipline for professional success. KB8. The Importance of developing effective working relationships for professional success. KB9. Expression and address the grievances appropriately and effectively KB10. The importance and ways of managing interpersonal conflict effectively

NOS Version Control

NOS Code	**RSC/N4108 (CPC/N0418)**		
Credits(NSQF)	**2.5**	**Version number**	**1.0**
Sector	**Rubber**	**Drafted on**	**18/05/2016**
Sub Sector	**Plastics Processing**	**Last reviewed on**	**26/12/2016**
Occupation	**Plastics Sacks**	**Next review date**	**31/12/2021**

National Occupational Standards



Overview

This unit is about understand you your requirements better and turn any challenges into opportunities for product improvement and greater success, and conducting inspection of the finished products produced and repair the bad quality items produced in the manufacturing process. This unit is about conducting Quality Checks and inspection of the finished products produced with reference to the approved product.

RSC/N4812 (CPC/N1127) Testing and quality control, Conduct quality checks and inspection of the finished products

National Occupational Standards

Unit Code	RSC/N4812 (CPC/N1127)
Unit Title (Task)	Testing and quality control, Conduct quality checks and inspection of the finished products
Description	This unit is about carrying out quality control activities
Scope	The quality management system shall ensure that the provider has the capability to establish and maintain an environment fit for delivering education and training to specified standard and ensure continuous improvement of system. This unit/task covers the following: 1. Inspection: Carrying out quality checks to identify problems 2.Analysis: Take corrective actions 3. Reporting the results
Performance criteria (PC) w.r.t. the Scope	
Element	**Performance criteria**
Introduction to quality control Conduct quality checks	The individual on the job should be able to: PC1. Study and understand significance of raw material and product testing PC2. Need of quality control of Product. PC3. Learn the Concept of quality control, Conduct quality checks. PC4. Learn the TQM Philosophy. PC5. Learn the need for Quality system. PC6. Study & understand of Total Quality control tools-ISO, 5S, Six Sigma, OHSAS 18001 and ASTMD
Inspection	To be competent, the user/individual on the job must be able to PC7. Ensure that total range of checks as per the prescribed national and International standards on regular intervals throughout the shifts. PC8. Use appropriate measuring instruments, equipment, tools, accessories etc., as prescribed / required
Analysis	PC9. Identify non-conformities to quality assurance standards. PC10. Identify potential causes of non-conformities to quality assurance standards PC11. Identify impact on final product due to non-conformance to prescribed Standards. PC12. Evaluate the need for action to ensure that problems do not reoccur. PC13. Suggest corrective action to address problem. PC14. Review effectiveness of corrective action.
Reporting	PC15. Interpret the results of the quality check correctly PC16. Take up results of the findings with QC in charge/appropriate authority. PC17. Take up the results of the findings within stipulated time PC18. Record of results of action taken.

	PC19. Record adjustments not covered by established procedures for future reference. PC20. Review effectiveness of action taken. PC21. Follow reporting procedures where the cause of defect cannot be identified.
Perform Batch Quality Procedure	PC22. Provide first and last output from each batch to the lab for quality check on its composition, contamination and properties etc. PC23. Obtain clearance for the entire batch from the lab

Knowledge and Understanding (K) w.r.t. the scope	
Element	**Knowledge and Understanding**
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1.The individual on the job needs to know and understand: KA2. Standards, policies & procedures followed in the company relevant to own employment and performance conditions KA3. Reporting structure, inter-dependent functions, lines and procedures in the work area KA4. Relevant people and their responsibilities within the work area KA5. Escalation matrix and procedures for reporting work and employment.
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. Various categories of people that one is required to communicate and co-ordinate within the organization KB2. Importance of effective communication in the workplace KB3. Importance of teamwork in organizational and individual success KB4. Various components of effective communication KB5. Key elements of active listening KB6. Value and importance of active listening and assertive communication KB7. Barriers to effective communication KB8. Importance of tone and pitch in effective communication KB9. Importance of avoiding casual expletives and unpleasant terms while communicating professional circles KB10. The poor communication practices can disturb people, environment and cause problems for the employee, the employer and the customer KB11. Importance of ethics for professional success KB12. Importance of discipline for professional success KB13. disciplined behavior for a working professional KB14. Common reasons for interpersonal conflict. KB15. Importance of developing effective working relationships for professional success. KB16. Expression and address the grievances appropriately and effectively

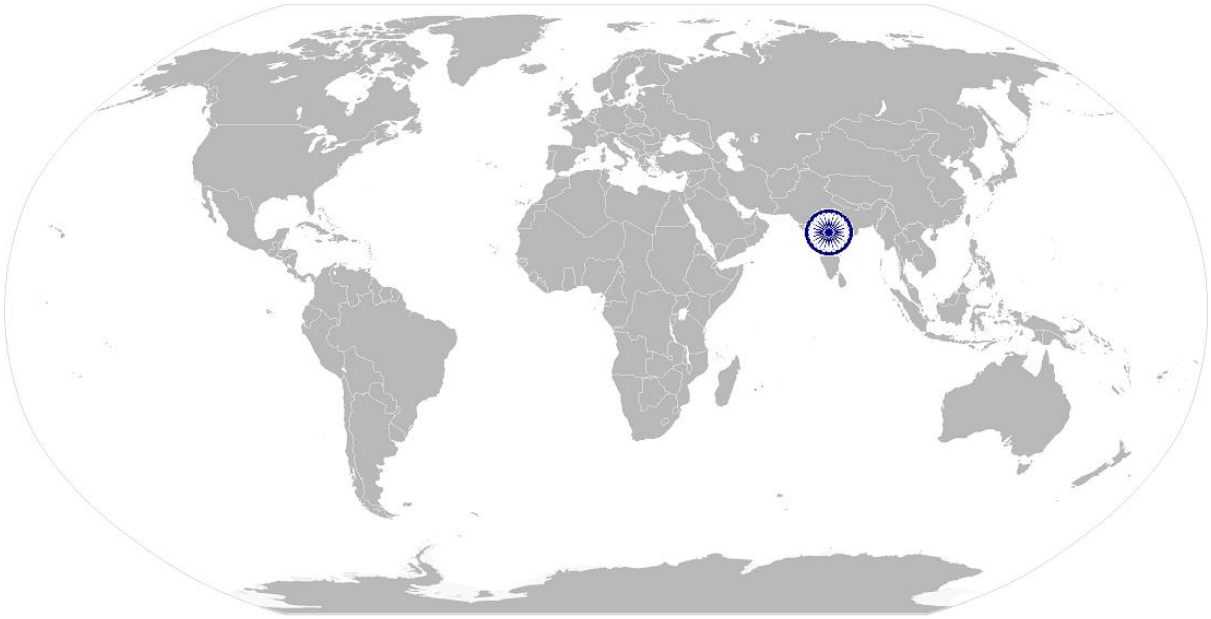
	KB17. Importance and ways of managing interpersonal conflict effectively
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Note the number of lot with defects which can be repaired to number of lot which will be discarded
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA2. Read process and equipment manuals to understand the working of the equipment SA3. Read measuring instruments reading to identify any deviations from the dimensions given in the product engineering drawing
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. Inform supervisor of any quality related defects arising out of the manufacturing process SA5. Question internal customers/ supervisor appropriately in order to understand the nature of the problem and make a diagnosis
B. Professional Skills	**Plan and Organize**
	The user/individual on the job needs to know and understand how to: SB1. Plan & organize the work order & jobs received from the supervisor SB2. Organize all process/ equipment manuals so that sorting/ accessing information is easy SB3. Keep fixtures, tools, drawings, Work Instructions, SOP manuals as per the part number, colour codes etc as defined under the 5S systems
	Critical Thinking and Judgment
	The user/individual on the job needs to know and understand how to: SB4. Use common sense and make judgments during day to day basis use reasoning skills to identify and resolve basic problems SB5. Carefully analyze the body part for various assembling defects at every station SB6. Carefully analyze each defect observed during inspection and try to find solution for the defect along with the assembly line operator
	Quality Consciousness
	The user/individual on the job needs to know and understand how to: SB7. Identify defective parts in the manufacturing line by comparing manufactured (sack/tape) with the work standard SB8. Link the defect observed with the overall impact on the performance of the (sack/tape)

RSC/N4812 (CPC/N1127) Testing and quality control, Conduct quality checks and inspection of the finished products

NOS Version Control

NOS Code	**RSC/N4812 (CPC/N1127)**		
Credits(NSQF)	**3**	**Version number**	**1.0**
Sector	**Rubber**	**Drafted on**	**18/05/2016**
Sub Sector	**Plastics Processing**	**Last reviewed on**	**26/12/2016**
Occupation	**Plastics Sacks**	**Next review date**	**31/12/2021**

National Occupational Standards



Overview

This unit is about understand Behaviour science and Entrepreneurship.

National Occuapational Standards

Unit Code	**RSC/N4813 (CPC/N1128)**
Unit Title (Task)	**Behaviour science and Entrepreneurship**
Description	This unit is about understanding Behaviour science and Entrepreneurship
Scope	This unit/task covers the following: • Behavioral science • Market Information Management • Client Relation Management • Marketing

Performance criteria (PC) w.r.t. the Scope	
Element	**Performance criteria**
Introduction	The individual on the job should be able to: PC1. Study the principle of Behaviour science and Entrepreneurship PC2. Significance of Behaviour science and Entrepreneurship. PC3. Learn the Concept of Behaviour science and Entrepreneurship.
Economics and Finances	To be competent, the individual on the job must be able to: PC4. Plan and Budget with reference to various Plastic sack and tape for the next process PC5. Keep the books of accounts and various transactions PC6. Arrange for financial assistance from various quarters in the light of various schemes available in setup for Plastic sack
Market Information Management	PC7. Ascertain the prices of various inputs and products from the market PC8. Assess the influence of various quality parameters of products/pellets on the product pricing
Client Relation Management	PC9. Establish cordial relations with various clients for the benefit of industry PC10. Assess the needs and requirement of the clients and assess one's own unique selling proposition PC11. Extract critical market information that is otherwise not in the public domain
Marketing	PC12. Choose appropriate buyer in a given situation of market parameters PC13. Identify best ways of attracting market price for one's produce PC14. Ensure quality before & during the sale activity to ensure good returns.
Behavioral science and Entrepreneurship development	PC15. Study and understand of Behavioral Science. PC16. Study the Different between Behavioral Science and Social Science. PC17. Study the Categories of Behavioral Science. PC18. Study the Theories of Behavioral Psychology, Entrepreneurship development, preparing project report selecting a particular plastic product of their choice and submission. PC19. Analyze environmental setup relating to industry and business.

Knowledge and Understanding (K) w.r.t. the scope	
Element	**Plastics sack/tape Economics and Finances**
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. Basic steps of Plastic sack planning and budgeting KA2. Basic principles of keeping books of accounts KA3. Various Government and other schemes / products / offers available for startup and support of Plastic sack. KA4. Relevant people and their responsibilities within the work area KA5. Escalation matrix and procedures for reporting work and employment.
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Different players selling various Plastic Recycling products and their prices KB2. Different players buying Plastic sack & raffia KB3. Various methods of updating oneself with market information such as mobile, Internet etc. KB4. Usage, contact with key informants, tie up government agencies etc. KB5 Needs and options available with various clients KB6. Advantages and disadvantages of doing business with each one of the clients KB7. The quality parameters of Plastic sack/tape and their market prices KB8. Pricing mechanism of various buyers of Plastic sack/tape KB9. Costing of various logistic arrangements towards the sale Plastic sack/tape at different markets and consumer points. KB10. Expression and address the grievances appropriately and effectively KB11. Importance and ways of managing interpersonal conflict effectively
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Mention the data which are required for record keeping purpose SA2. Report problems to the appropriate personnel in a timely manner SA3. Write descriptions and details about incidents in reports
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA4. Keep abreast with the latest knowledge by reading brochures, pamphlets and product information sheets SA5. Read instruction manuals for hand tool and equipment's SA6. Read instructions on work orders and procedures
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA7. Discuss task lists, schedules, and work-loads with co-workers SA8. Question customers appropriately in order to understand the nature of

	the problem and make a diagnosis SA9. Give clear instructions to customers SA10. Keep customers informed about progress SA11. Avoid using jargon, slang or acronyms when communicating with a customer, unless it is required
B. Professional Skills	**Plan and Organize**
	The user/individual on the job needs to know and understand how to: SB1. Plan & organize the work order & jobs received from the supervisor SB2. Organize all process/ equipment manuals so that sorting/ accessing information is easy SB3. Keep fixtures, tools, drawings, Work Instructions, SOP manuals as per the part number, colour codes etc as defined under the 5S systems
	Critical Thinking and Judgment
	The user/individual on the job needs to know and understand how to: SB4. Use common sense and make judgments during day to day basis use reasoning skills to identify and resolve basic problems SB5. Carefully analyze the body part for various assembling defects at every station SB6. Carefully analyze each defect observed during inspection and try to find solution for the defect along with the assembly line operator
	Quality Consciousness
	The user/individual on the job needs to know and understand how to: SB7. Identify defective parts in the manufacturing line by comparing manufactured (lot/extrudate) with the work standard SB8. Link the defect observed with the overall impact on the performance of the (lot/extrudate)

NOS Version Control

NOS Code	**RSC/N4813 (CPC/N1128)**		
Credits(NSQF)	**2.5**	**Version number**	**1.0**
Sector	**Rubber**	**Drafted on**	**18/05/2016**
Sub Sector	**Plastics Processing**	**Last reviewed on**	**26/12/2016**
Occupation	**Plastics Sacks**	**Next review date**	**31/12/2021**

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Machine Operator Plastics Sacks
Qualification Pack Code:RSC/Q4804 (CPC/Q1104)
Sector Skill Council: Rubber Skill Development Council

Guidelines for Assessment:

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.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criteria.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

Assessable outcomes			**Marks Allocation**		
NOS	**Performance Criteria**		**Total**	**Theory**	**Practical**
1. RSC/N4101 (CPC/N0411): Maintain basic health and safety practices at the workplace, 5S.	PC1	Wear protective clothing/equipment for specific tasks and work conditions	1.5	0.5	1
	PC2	Carry out safe working practices while dealing with hazards to ensure the safety of self and others.	1.5	0.5	1
	PC3	Keep good housekeeping practices at all times	1.5	0.5	1
	PC4	use the various appropriate fire extinguishers on different types of fires correctly	1.5	0.5	1
	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 cluttering the workbenches or work surfaces.	2.5	0.5	2
	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	2.5	0.5	2
	PC12 Segregate the items which are labelled as red tag items for the process area and keep them in the correct places	2.5	0.5	2
	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	2.5	0.5	2
	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	2.5	0.5	2
	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 labelling 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
	Sub total	**40**	**10**	**30**
RSC/N4109 (CPC/N 0420) Advanced method for Fitting Tools Measuring	PC1. Comply with health and safety, environmental and other relevant regulations and guidelines at work.	6	2	4
	PC2. Adhere to procedures and guidelines for personal protective equipment (PPE) and other relevant safety regulations while performing die fitting operations	6	2	4
	PC3. Work following laid down procedures and instructions	6	2	4

Equipments & Practice	PC4. Ensure work area is clean and safe from hazards	6	2	4
	PC6. obtain job specification from a valid & approved source	5	1	4
	PC7. read and understand job requirements from the job specification document properly	4	1	3
	PC8. report & rectify incorrect information in job specification documents as per job requirement	4	1	3
	PC9. preparation for the fitting operations as per procedure	4	1	3
	PC10. Ensure that all calibrated measuring instruments used.	4	1	3
	PC11. ensure that the components used are free from foreign objects, dirt and corrosion	4	1	3
	PC12. obtain correct work pieces and consumables as per job requirements	4	1	3
	PC13. Obtain appropriate tools and measuring instruments.	3	1	2
	PC14. Setting of work pieces as per job requirements using appropriate holding devices	3	1	2
	PC15. Mark specified features with the help of marking-out methods on the work pieces as per job specification by using appropriate measuring and marking tools.	3	1	2
	PC15. Mark specified features with the help of marking-out methods on the work pieces as per job specification by using appropriate measuring and marking tools.	3	1	2
	PC16. mark out templates for tracing/transferring the specified features on the work pieces as per drawing	3	1	2
	PC17. Trace or transfer the specified features from the templates onto the work pieces as per drawing	2.5	0.5	2
	PC18. perform fitting operations on various forms of metal components using a range of hand tools and manually operated machines	2.5	0.5	2
	PC19. follow the specified machining sequence and procedure as per job specifications	2.5	0.5	2
	PC20. check the machined components to ensure completeness of work	2.5	0.5	2
	PC21. Check the quality of the output as per required standards, using visual checks and measurement of dimensional parameters using measuring instruments.	2.5	0.5	2
	PC22. Produce components with various features as per standards applicable to the process.	2.5	0.5	2
	PC23. Check the finished components as per job requirement	2.5	0.5	2
	PC24. complete documentation during and post operations as per procedures	1.5	0.5	1
	PC25. return all tools and equipment to the correct location on completion of the fitting activities	1.5	0.5	1
	PC26. leave the work area in a safe and tidy condition on completion of job activities	1.5	0.5	1

	Sub total	**90**	**25**	**65**
RSC/N4110 (CPC/N 0421) Introduction and test method for Polymers & thermoplastics Materials	PC1. Leave the Basic Importance of polymers in Human Life.	2	1	1
	PC2. Study of fundamental terminology of polymers	2	1	1
	PC3. Study the Classification of polymers- polymer structure & morphology, etc.	5	1	4
	PC4. Study the Introduction to monomers and Polymers	5	1	4
	PC5. Study the Types of Polymers-Thermoplastics, Thermoset and elastomers.	5	1	4
	PC6. Study the Types of Polymerization- Condensation- Addition- Copolymerization	5	1	4
	PC7.Study the Characterization	8	2	6
	PC8.Study the Polymer Solution	7	1	6
	PC9. Learn Measurement of Molecular weight and sizes- Structure and properties of Polymers.	5	1	4
	PC10. Study the Commodity Polymers: Polyolefin: LDPE – HDPE – LLDPE, PP etc.	5	1	4
	PC11. Study the Engineering Polymers: PC, ABS, PMMA, POM and PA- Nylon etc.	5	1	4
	PC12. Study the Special Polymers: FEP, PVDF etc.	2	1	1
	PC15. Determine Methods of Identification:-Drop Test ,water floatation Test, Scratch test	2	1	1
	PC16. Determine advanced Methods of Identification:-MFI, Melting etc.	2	1	1
	Sub total	**60**	**15**	**45**
RSC/N4810 (CPC/N1122) Perform the woven sack/raffia plant operations with start up and shut down procedure	PC1. Learn the needs for plastics sack/tape process principle.	3	1	2
	PC2. Ensure merits and demerits of sack/tape process to over the all others plastic Process.	3	1	2
	PC3. Learn the definition and terminology related to sack/tape process.	3	1	2
	PC4. Ensure finishing operation including surface treatment of the fabricated product if required as per SOP,	3	1	2
	PC5. Follow start up procedure.	3	1	2
	PC6. Learn the tape extrusion line and its terminology-as quenching, heating and orientation by stretching annealing, winding etc.	3	1	2
	PC7. Perform Film extrusion: - Types & specification requires. Blown film, Flat film, cast film.	3	1	2
	PC8. Special film extrusion: - Tubular quench film (TQ), expanded film, Co extruded film & sheet etc.	3	1	2
	PC9. Perform Pipe / tube extrusion process: - Introduction, development different features. Construction & operation Pipe extrusion line according to various material & sizes.	3	1	2
	PC10.Observe Sizing method, take off method & post	2.5	0.5	2

	operation method.			
	PC11. Learn the Pipe extruder die, constructive feature, size and specification.	2.5	0.5	2
	PC12. Perform Special extrusion process- Tapes, woven sack, monofilament manufacturing process.	2.5	0.5	2
	PC13. Study the Introduction technology development	2.5	0.5	2
	PC14. Learn The type of process to be used depends on a variety of factors	2.5	0.5	2
	PC15.Set the Parameters, including product shape and size, plastic type, quantity to be produced,	2.5	0.5	2
	PC16. Ensure the Quality and accuracy (Tolerances) required,	2.5	0.5	2
	PC17.Ensure the Design load performance, cost limitation, and time schedule.	2.5	0.5	2
	PC18. Set the Common Process Parameter like Temperature, Pressure and Speed and its controls.	2.5	0.5	2
	PC19.Learn the Effect of process parameters on Product Properties	2.5	0.5	2
	PC20. Take Trial Production and checking product stabilization.	2.5	0.5	2
	PC21.Observe Actual Production and Parameter / Process Control.	2.5	0.5	2
	PC22. Follow Quality Check and Continuous Production.	2.5	0.5	2
	PC23. Follow Post production and storing.	2.5	0.5	2
	PC24. Study the Machine Operation and process parameter of sack/tape PC25. Machine: as per manual, semiautomatic, fully automatic and parameters –time, temperature, pressure and speed etc.	2.5	0.5	2
	PC26.Learn the Shut down procedure- extruder, tape line/ circular looms and weaving machines etc.	2.5	0.5	2
	PC27. Learn the Type of Conversion Techniques: Lamination Sealing cutting, Printing and Other processes.	2.5	0.5	2
	PC28. Select the Material to be criteria processed	2.5	0.5	2
	PC29. Study the End Applications of using tape/sack.	2.5	0.5	2
	PC30. Perform Process Limitations	2.5	0.5	2
	PC31. Follow the Quality	2.5	0.5	2
	PC32. Perform Safety Equipment and Its Use.	2.5	0.5	2
	PC33. Perform preheating and pre operations of plastic if required	2.5	0.5	2
	PC34. Ensure that the plastic material are mixed with additives, fillers (if any) before being fed into the hopper	2.5	0.5	2
	PC35. Conduct a test process and produce a sample output as per requirement.	2.5	0.5	2
	PC36. Feed the required operation code in the apparatus for heaters to melt the plastic material at the predefined	1.5	0.5	1

	temperature			
	PC37. Enter process temperature, volume of plastic material and weight settings in the machine as per data sheet	1.5	0.5	1
	PC38. Enter machine and process parameters such as pressure and time as per the data sheet	1.5	0.5	1
	PC39. Ensure that the inspection and dimension of the output tape/sack are inspected and measured as per the process given in the Work Instructions/ SOP	1.5	0.5	1
	PC40. , start the production process ,In case the test product or tape/sack matches the quality of the final output	1.5	0.5	1
	PC41. Make modifications in the process parameters (by selecting the right program from the machine control system)	1.5	0.5	1
	PC42. Follow the Check-list procedure to ensure quality of final product.	1.5	0.5	1
	Sub total	**100**	**25**	**75**
RSC/N4811 (CPC/N1123) Weaving technology and Loom operation (Circular)	PC1. Study the Principle of Weaving technology and Loom operation.	1.5	0.5	1
	PC2. Ensure basic Need of Tools and Accessories and Machineries.	1.5	0.5	1
	PC3Select the raw Material for Loom , weaving machines operation	1.5	0.5	1
	PC4. Perform various types of Loom, weaving machines operation process.	2.5	0.5	2
	PC5. Perform various types of Loom:- shuttle , projectile loom, rapier loom water jet loom, air jet loom and circular looms etc.	2.5	0.5	2
	PC6- Learn Type of weaving – single phase and multiphase	2.5	0.5	2
	PC7. Set Loom , weaving Machine operation merits and demerits/over other Process	2.5	0.5	2
	PC8. Check the identified feed strip for dimension uniformity/identified tape	2.5	0.5	2
	PC9. Make tiny & firm weaver's knots	2.5	0.5	2
	PC10. Find out broken warp ends, find out the location of the broken end, by bringing the hands under the dropper bars, with mechanical droppers. detect the location using the indication lamp & by bringing the hands over the droppers, with electrical warp stop motion	2.5	0.5	2
	PC11. Mind the broken warp end in the sized beams with the thrums of the same count of the sized beams, using “weavers ' knots" PC12.Draw the mended warp yarn through the helds properly, as per the drawing order.	2.5	0.5	2
	PC13. Run the loom by pulling the starting handle with full	2.5	0.5	2

	torque.			
	PC14. Correct the tape defects like wrong drawing, wrong denting, end out, double end etc., immediately and also ensure that the other tape defects too are corrected at the earliest, before continuing further production.	2.5	0.5	2
	PC15. Clean the machines & work area, so as to ensure good working atmosphere, without damaging the tape in the looms where the cleaning work is carried out as well as in the adjacent & opposite looms . Should not misuse “air”. Can use air for cleaning, only in the areas.	2.5	0.5	2
	PC16. Ensure that the loose threads are hanged in higher. Accordingly, and trimmed, after attending to the warp breaks.	2.5	0.5	2
	PC17. Avoid pulling out warp ends unnecessarily. If end is getting cut often in the selvedge, the same has to be brought to the notice of the mechanics/ fitters/ superiors & get it corrected.	2.5	0.5	2
	PC18. Check for operation of weaving and loom apparatus as per the checklist provided	2.5	0.5	2
	PC19. Fix the desired loom to the weaving and loom machine apparatus in order to achieve the desired operation as per the Work Instructions/ SOPs	2.5	0.5	2
	PC20. Make modifications in the process parameters (by selecting the right program from the machine control system) if required and ensure alignment with the prescribed standards	2.5	0.5	2
	PC21.Know about the Modern developments in weaving and looms	2.5	0.5	2
	PC22. Develop the work on producing tape from new generation polymeric material.	2.5	0.5	2
	PC23.Compare with common and moderns weaving machine	2.5	0.5	2
	PC24. Observe the New development in- shuttle , projectile loom, rapier loom water jet loom, air jet loom and circular looms etc.	2.5	0.5	2
	PC25. Follow the Modern techniques- Electronic Braking System, Automatic Pick Controller, Quick step filling presenter, PFL, QSC, EISY, PSO, and FDEI etc.	3	1	2
	PC26. Ensure the functionality and assembly of weaving and loom machine as per SOP.	3	1	2
	PC27. Adjust the weaving and loom machine controlling and program with the help of tools and software as per requirement.	3	1	2
	PC28. Learn the molding procedure and process to be adopted for completing the work order from the supervisor by referring the Work Instruction document/ SOP manual	3	1	2
	PC29. Ensure that the required material is procured from the	3	1	2

	store before starting the process			
	PC30. Ensure the type of looms and weaving required for executing the required operation and ensure that the same is available for operations	3	1	2
	PC31. Ensure pouring in line with defined standards and specifications	3	1	2
	PC32. Record the feeding observations like interrupted pouring or any abnormality	3	1	2
	PC33. Conduct a test process and produce a sample output as per the sketches/ engineering drawing shared with the supervisor.	3	1	2
	PC34. Ensure that the dimensions of the output product are measured as per the process given in the Work Instructions/ SOP	3	1	2
	PC35. In case the parts are not as per the given measurements, send the same for further processing in terms of cutting, finishing etc.	3	1	2
	PC36. Note down the observations of the basic inspection process and Identify pieces which are OK and also not meeting the specified standards	3	1	2
	PC37. Ensure the functionality and assembly of weaving and loom machine as per SOP.	3	1	2
	PC38. Adjust the weaving and loom machine controlling and program with the help of tools and software as per requirement.	3	1	2
	PC39. Ensure the molding procedure and process to be adopted for completing the work order from the supervisor by referring the Work Instruction document/ SOP manual	3	1	2
	PC40. Follow the molding procedure and the Work Instruction document/ SOP manual file method.	3	1	2
	PC41. Ensure that the required material is procured from the store before starting the process	2.5	0.5	2
	PC42. Ensure the type of looms and weaving required for executing the required operation and ensure that the same is available for operations	2.5	0.5	2
	PC43. Ensure pouring in line with defined standards and specifications	2.5	0.5	2
	PC44. Record the feeding observations like interrupted pouring or any abnormality	2.5	0.5	2
	PC45. Conduct a test process and produce a sample output as per the sketches/ engineering drawing shared with the supervisor.	2.5	0.5	2
	PC46. Ensure that the dimensions of the output product are measured as per the process given in the Work Instructions/ SOP	2.5	0.5	2

	PC47. In case the parts are not as per the given measurements, send the same for further processing in terms of cutting, finishing etc.	2.5	0.5	2
	PC48. Note down the observations of the basic inspection process and Identify pieces which are OK and also not meeting the specified standards	2.5	0.5	2
	PC49. Discard the batch which are beyond repair and repair the ones which need minor modifications in settings.	2.5	0.5	2
	PC50. Maintain records of each category of work outputs as per the batch etc. so that correction can be organized.	2.5	0.5	2
	PC51. Establish linkage between rejection of output and the pertinent causes for the same (process/ material etc.); Recommend the means for rejection control.	2.5	0.5	2
	PC52. Rectify minor defects like dimension variation, thickness variation etc. by control process parameters etc.	2.5	0.5	2
	PC53. Escalate all issues related to change in surface properties, Tensile strength etc. so that the manufacturing equipment can be reset to achieve the specified output.	2.5	0.5	2
	PC54. Provide first and last output from each batch to the lab for quality check on its composition, properties etc.	2.5	0.5	2
	PC55. Obtain clearance for the entire batch from the lab	2.5	0.5	2
	Sub total	**140**	**35**	**105**
RSC/N4806 (CPC/N1116) Auxiliary equipments used in Plastics Sack and Tape Production	PC1 Inspect, monitor, operating fuel systems, fuel oil transfer & supply lines & associated equipment and fossil fuel chillers.	1.5	0.5	1
	PC2 Operate condensate & feed water systems, circulating & cooling water systems, condensate & makeup systems, circulating service water treatment equipment, auxiliary lube oil systems, emission control equipment and miscellaneous equipment. Pass onsite training programs. Follow safety rules, regulations and procedures.	1.5	0.5	1
	PC3 Connects basic plant services as needed to meet production requirements and makes initial checks of operating conditions before initiating production runs.	1.5	0.5	1
	PC4 Assist in cleaning and lubrication of equipment and tooling and performs various preventative maintenance tasks as needed.	1.5	0.5	1
	PC5 Study about different types of Predrier-Hot air Oven, Hopper Driers, Dehumidifiers etc.	1.5	0.5	1
	PC6 Study about Chiller, Cooling Tower for the controlling temperature of Mould, machine and Fluids.	2.5	0.5	2
	PC7 Study the basic Operation and Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly.	2.5	0.5	2

	PC8 Study the basic Compressor and Scrap Grinder.	2.5	0.5	2
	PC9 Ensure Equipment Maintenance -- Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.	3	1	2
	PC10 Ensure Equipment Selection -- Determining the kind of tools and equipment needed to do a job.	3	1	2
	PC11 Follow the instructions given on the equipment manual describing the operating process of the equipment	2.5	0.5	2
	PC12 Follow the Safety, Health and Environment related practices developed by the organization	2.5	0.5	2
	PC13 Ensure relevant safety board's/ signs are placed on the shop floor	2.5	0.5	2
	PC14 Operate the machine using the recommended Personal Protective Equipment (PPE) and ensure team members also use the related PPEs at the workplace	2.5	0.5	2
	PC15 Maintain a clean and safe working environment near the work place and ensure there is no spillage of chemicals, production waste, oil, solvents etc.	2.5	0.5	2
	PC16 Attend all safety and fire drills to be self-aware of safety hazards and preventive techniques	2.5	0.5	2
	PC17 Maintain high standards of personal hygiene at the work place	2.5	0.5	2
	PC18 Ensure that the waste disposal is done in the designated area and manner as per organization SOP.	1.5	0.5	1
	Sub total	**40**	**10**	**30**
RSC/N4108 (CPC/N0418) Basic Knowledge of Communication/soft skills.	PC1 Perform basic computer operartions.	4	1	3
	PC2 Learn about basic functions in a Computer	4	1	3
	PC3 Receive information and instructions accurately from the supervisor/operator and fellow workers, getting clarification where required	4	1	3
	PC4 Pass on information to authorized persons accurately who require it and within agreed timescale and confirm its receipt	4	1	3
	PC5 Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible	4	1	3
	PC6 Consult and assist others to maximize the effectiveness and efficiency in carrying out tasks	4	1	3
	PC7 display active listening skills while interacting with others at work	4	1	3

	PC8 use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism	4	1	3
	PC9 demonstrate responsible and disciplined behaviours at the workplace	4	1	3
	PC10 Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict.	4	1	3
	Sub total	**40**	**10**	**30**
RSC/N4812 (CPC/N1127) Testing and quality control, Conduct quality checks and inspection of the finished products	PC1. Study and understand significance of raw material and product testing	1.25	0.25	1
	PC2. Need of quality control of Product.	1.25	0.25	1
	PC3. Understand the Concept of quality control, Conduct quality checks.	1.25	0.25	1
	PC4. Understanding the TQM Philosophy.	2.5	0.5	2
	PC5. Understanding the need for Quality system.	2.5	0.5	2
	PC6. Study & understand of Total Quality control tools-ISO, 5S, Six Sigma, OHSAS 18001 and ASTMD	2.5	0.5	2
	PC7. Ensure that total range of checks as per the prescribed national and International standards on regular intervals throughout the shifts.	2.5	0.5	2
	PC8. Use appropriate measuring instruments, equipment, tools, accessories etc, as prescribed / required	2.5	0.5	2
	PC9. Identify non-conformities to quality assurance standards.	2.5	0.5	2
	PC10. Identify potential causes of non-conformities to quality assurance standards	2.5	0.5	2
	PC11. Identify impact on final product due to non-conformance to prescribed Standards.	2.5	0.5	2
	PC12. Evaluating the need for action to ensure that problems do not reoccur.	2.5	0.5	2
	PC13. Suggest corrective action to address problem.	2.5	0.5	2
	PC14. Review effectiveness of corrective action.	2.5	0.5	2
	PC15. Interpret the results of the quality check correctly	2.5	0.5	2
	PC16. Take up results of the findings with QC in charge/appropriate authority.	2.5	0.5	2
	PC17. Take up the results of the findings within stipulated time	2.5	0.5	2
	PC18. Record of results of action taken.	2.5	0.5	2
	PC19. Record adjustments not covered by established procedures for future reference.	2.5	0.5	2
	PC20. Review effectiveness of action taken.	2.5	0.5	2
	PC21. Follow reporting procedures where the cause of defect cannot be identified.	1.25	0.25	1
	PC22. Provide first and last output from each batch to the lab for quality check on its composition, contamination and	1.25	0.25	1

	properties etc.			
	PC23. Obtain clearance for the entire batch from the lab.	1.25	0.25	1
	Sub total	**50**	**10**	**40**
RSC/N4813 (CPC/N1128) Behavior science and entrepreneurship	PC1. Study the principle of Behavior science and Entrepreneurship	1.5	0.5	1
	PC2. Significance of Behavior science and Entrepreneurship.	1.5	0.5	1
	PC3. Learn the Concept of Behavior science and Entrepreneurship.	1.5	0.5	1
	PC4. Plan and Budgeting with reference to various Plastic sack and tape for the next process	1.5	0.5	1
	PC5. Keep books of accounts and various transactions	1.5	0.5	1
	PC6. Arrange for financial assistance from various quarters in the light of various schemes available in setup for Plastic sack	1.5	0.5	1
	PC7. Ascertain the prices of various inputs and products from the market	2.5	0.5	2
	PC5. Assess the influence of various quality parameters of products/pellets on the product pricing	2.5	0.5	2
	PC8. Establish cordial relations with various clients for the benefit of industry	2.5	0.5	2
	PC9. Assess the needs and requirement of the clients and assess one's own unique selling proposition	3	1	2
	PC10. Extract critical market information that is otherwise not in the public domain.	2.5	0.5	2
	PC11. Choose appropriate buyer in a given situation of market parameters	2.5	0.5	2
	PC12. Identify best ways of attracting market price for one's produce	2.5	0.5	2
	PC13. Ensure quality before & during the sale activity to ensure good returns.	2.5	0.5	2
	PC13. Study and understand of Behavioral Science.	2.5	0.5	2
	PC14. Study theDifferent between Behavioral Science and Social Science.	2.5	0.5	2
	PC15. Study the Categories of Behavioral Science.	2.5	0.5	2
	PC16. Study the Theories of Behavioral Psychology, Entrepreneurship development, preparing project report selecting a particular plastic product of their choice and submission.	1.5	0.5	1
	PC17. Analyze environmental setup relating to industry and business.	1.5	0.5	1
	Sub total	**40**	**10**	**30**
	Total	**600**	**150**	**450**