

QUALIFICATIONS PACK- OCCUPATIONAL STANDARDS FOR PLASTICS INDUSTRY

What are Occupational Standards (OS)?

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

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Introduction

Qualifications Pack- Machine Operator Assistant - Injection Moulding

SECTOR: RUBBER

SUB SECTOR: MANUFACTURING / PLASTICS PROCESSING

OCCUPATION: INJECTION MOULDING

REFERENCE ID: RSC/Q4501 (CPC/Q0203)

ALIGNED TO:

Brief Job Description:

The individual at work, assists in setting up and in operation of the Injection moulding machine to produce good quality products for different applications from Plastics materials.

Personal Attributes:

This job requires the basic communication, basic numerical & computational abilities for the individuals to work under close supervision. The Junior operator is expected to be able to work in a factory environment and have the ability to work in standing position for long hours.

Qualifications Pack for Machine operatorAssistant - Injection Moulding

Job Details	Qualifications Pack Code	RSC/Q4501 (CPC/Q0203)		
	Job Role	Machine Operator Assistant - Injection Moulding		
	Credits (NSQF)	24	Version number	1.0
	Sector	Rubber	Drafted on	18/05/2016
	Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
	Occupation	Injection moulding	Next review date	31/12/2021
	NSQC Clearance on	21/07/2016		

Job Role	Machine Operator Assistant- Injection Moulding
Role Description	Set up basic machine controls and operate injection moulding Machine in order to produce good quality moulding as per approved specifications by operator.
NSQF level	3
Minimum Educational Qualifications*	VIII th 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)	Compulsory: <ol style="list-style-type: none"> RSC/N4501 (CPC/N0214): Understand basic concepts, job requirements & basics knowhow related to process. RSC/N4502 (CPC/N0215): Assist in performing the Injection moulding related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of Operator. RSC/N4503 (CPC/N0216): To conduct basic quality check of finished products with reference to approved product. RSC/N4101 (CPC/N0411): Maintain basic health and safety practices at the workplace, 5S. RSC/N4504 (CPC/N0219): Basics of computer and data entry in MS OFFICE/office Open source suite Software
Performance Criteria	As described in the relevant OS units

Qualifications Pack for Machine operatorAssistant - Injection Moulding

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.	

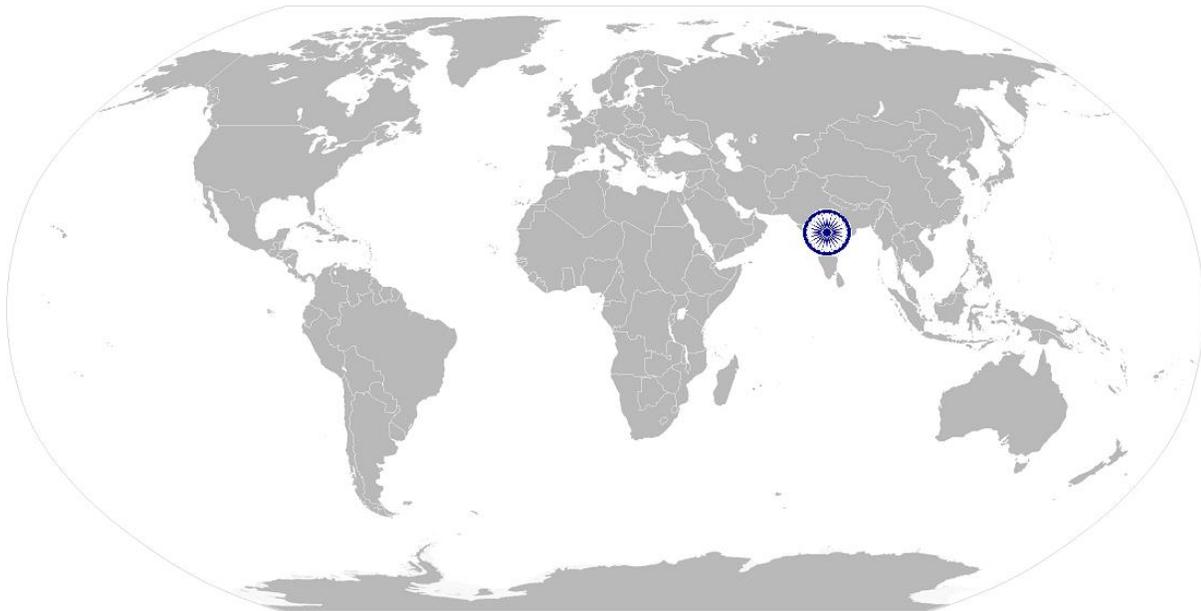
Qualifications Pack for Machine operatorAssistant - Injection Moulding

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
NOS	National Occupational Standard(s)
QP	Qualifications Pack
PC	Performance Criteria

Acronyms

RSC/N4501 (CPC/N0214) Understand basic concept, job requirements and basics knowhow related to the Injection moulding process

National Occupational Standards



Overview

This unit is about understanding the job requirement and the activities & equipment associated with the process to complete the job requirement

RSC/N4501 (CPC/N0214) Understand basic concept, job requirements and basics knowhow related to the Injection moulding process

National Occupational Standards	Unit Code	RSC/N4501 (CPC/N0214)
	Unit Title (Task)	Understand basic concept, job requirements and basics knowhow related to the Injection moulding process
	Description	This OS unit is about understanding the job requirement, operating the injection moulding machine under the guidance/ instruction of operator in order to produce good quality plastic parts using given material and mould.
	Scope	This unit/ task covers the following: <ul style="list-style-type: none"> Understanding the work order and the process requirement from the operator Arranging the required raw material and Moulds for the process Assist in cleaning the equipment and the moulds for the process
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	Understand the work and the process requirements from Operator	To be competent, the user/individual on the job must be able to: PC1. Interact with the operator in order to understand the production schedule PC2. Help in planning the day's production activities based on the operator's instructions PC3. Ensure availability of consumables and plastics materials for production in sufficient quantity as per production plan/operators instructions. PC4. Ensure that clearly understanding the does and don'ts of the manufacturing process as defined in sops/ Work Instructions or defined by operator. PC5. Check availability of the personal protective equipments (PPE) like Gloves, Goggles etc. PC6. Follow the molding procedure and process to be adopted for completing the work order from the operator by referring the Work Instruction document/ SOP manual.
	Help in arrange for the material to be moulded and Mould required for the same	PC7. Ensure that the required material is procured from the store before starting the process PC8. Ensure that Mould required for execute the molding operation and ensure that the same is available for operation. PC9. Collect the mould from tool room If mould is not available PC10. Install and bolt the mould in place and slide the safety door shut. PC11. Add the raw material in the machine using material loader or by manual feeding.
	Clean the apparatus and the components before executing the process	PC12. Ensure moulds are clean if not clean with soft cotton cloth. PC13. Ensure that cleaning of other auxiliaries tools, (if any) before the initiation of the moulding and trimming process PC14. Ensure that cleaning of the area around the apparatus for any oil, grease, combustible substances etc. So as to prevent any accident PC15. Ensure availability of the coolant and working of valves to circulate the coolant to cool and solidify plastic

RSC/N4501 (CPC/N0214) Understand basic concept, job requirements and basics knowhow related to the Injection moulding process

Check materials and apparatus for Operations	PC16. Identify the raw material like plastics granules, fillers, bonding additives etc. required for executing the activity
Escalations of queries on the given job	PC17. Refer the queries to supervisor if they cannot be resolved by the operator PC18. Confirm self - understanding to the operator once the query is resolved so that all doubts & queries can be resolved before the actual process execution
Process Compliances	Comply with relevant legislation, standards, policies and procedures
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 company's code of conduct KA2. The different types of products manufactured by the company KA3. Functional processes like Procurement, Store management, inventory management, quality management, incentives, personnel management KA4. The importance of individual's role in the work flow KA5. Organization culture KA6. The company's reporting structure KA7. The company's documentation policy
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. The general principles of moulding procedure and process knowledge mould loading and unloading procedure. KB2. The types of plastics like thermoplastics and the additives & grades to be used tonnage and capacity of the machine being operated. KB3. The different types of tools and machinery to process the plastic and trim the output KB4. The various types of cooling systems and their properties. KB5. How to perform moulding machine safety check KB6. Hazards and safety aspects involved in tape production and usage of relevant PPEs KB7. Safety procedures to be adopted to complete mould removal process
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Reading and Writing Skills The user/ individual on the job needs to know and understand how to: SA1. Read warnings, instructions and other text material on product labels, components etc SA2. Enter into the history card details of the fault identified in the plastic product manufactured read equipment manuals and process documents to understand the equipment and processes better its SA3. Read instructions especially safety instructions especially symbols while using the equipment in the plant area logs.
	Oral Communication (Listening and Speaking skills) The user/individual on the job needs to know and understand how to: SA4. Discuss task lists, schedules, and work-loads with co-workers

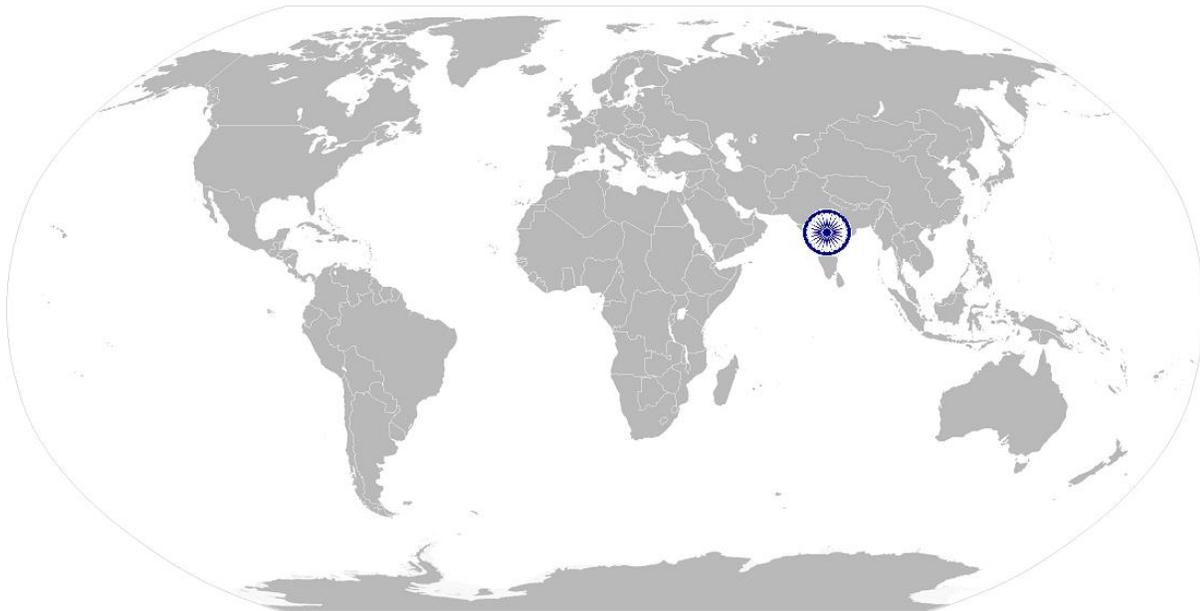
RSC/N4501 (CPC/N0214) Understand basic concept, job requirements and basics knowhow related to the Injection moulding process

	<p>SA5. Question internal customers/ Shop floor operator appropriately in order to understand the nature of the problem and make a diagnosis</p> <p>SA6. Avoid using jargon, slang or acronyms when communicating with an operator /fellow subordinates etc. Unless it is required.</p>
B. Professional Skills	Decision Making and Problem solving
	Detect problems in day to day tasks:
	SB1. To support operator in using specific problem solving techniques and detailing out the problems
	SB2. To discuss possible solution with the operator for problem solving.
	Plan and Organize
	The user/individual on the job needs to know and understand how to:
	SB3. Plan and organize the work order and jobs received from the internal customers/ operator.
	SB4. Organize all process/ equipment manuals so that sorting out
	Desire to learn and take initiatives
	The user/individual on the job needs to know and understand how to:
SB5. Follow instructions and work on areas of improvement identified	
SB6. Complete the assigned tasks with minimum supervision	
SB7. Complete the job defined by the operator within the timelines and quality.	
Judgments and Critical Thinking	
The user/individual on the job needs to know and understand how to:	
SB8. Use common sense and make judgments during day to day basis	
SB9. Use basic reasoning skills to identify and resolve basic problems	
SB10. Use intuition to detect any potential problems which could arise during operations.	

RSC/N4501 (CPC/N0214) Understand basic concept, job requirements and basics knowhow related to the Injection moulding process

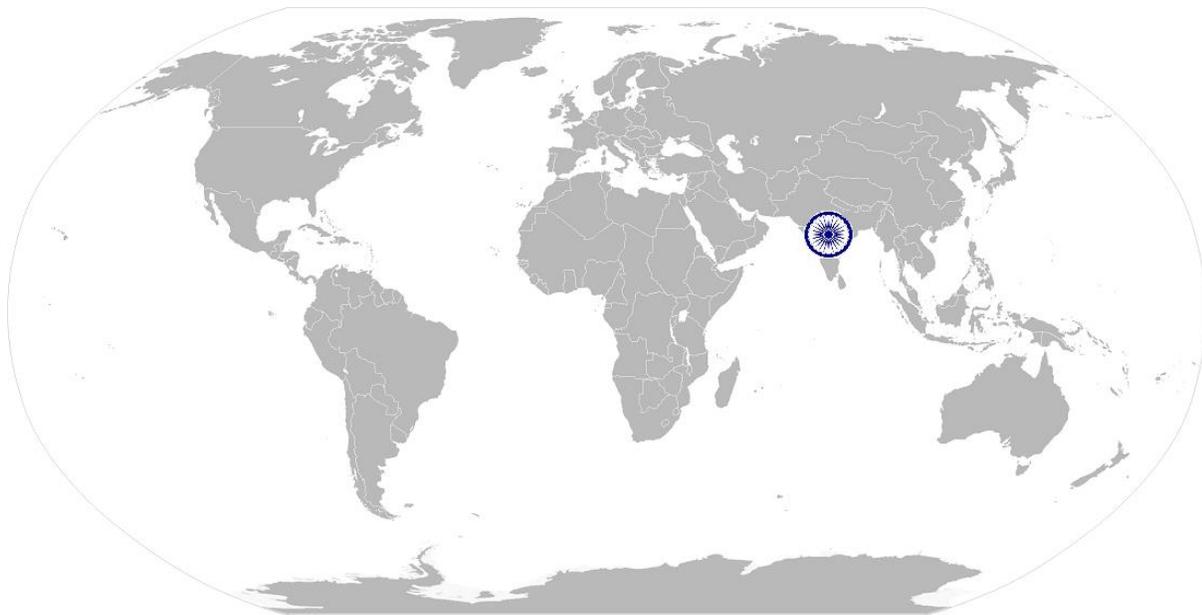
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NOS Code	RSC/N4501 (CPC/N0214)		
Credits (NSQF)	4	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Injection moulding	Next review date	31/12/2021



RSC/N4502 (CPC/N0215) Assist in performing the Injection moulding related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of Operator

National Occupational Standards



Overview

This unit is about molding the plastic in the desired moldings as instructed by the operator and as per the final output specifications and the standards specified by the organization.

RSC/N4502 (CPC/N0215) Assist in performing the Injection moulding related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of Operator

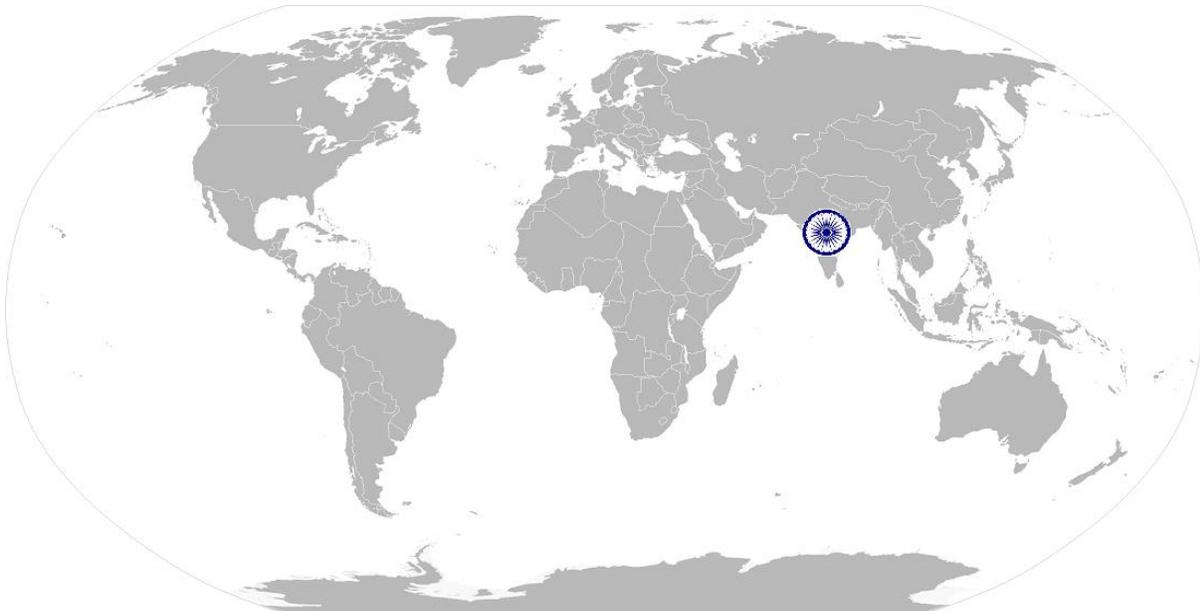
National Occupational Standards	Unit Code	RSC/N4502 (CPC/N0215)
	Unit Title (Task)	Assit in performing the Injection molding related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of operator.
	Description	This OS unit is about assisting in producing good quality moldings in line with the required specifications
	Scope	The Injection Moulding Machine Operator Assistant will be responsible for <ul style="list-style-type: none"> • Assist in checking the operations of the equipment • Feeding the granules as per requirement • Assisting in setting up and operating the Injection moulding machine • Perform visual Check of output products • Report problems to operator if any
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	Check the operations of the equipment used in the molding process	To be competent, the user/individual on the job must be able to: PC1. Check for operation of molding apparatus like hopper, heaters etc. as per the checklist provided PC2. Fix the desired Mould to the injection moulding machine in order to achieve the desired operation as per the Work Instructions/ SOPs PC3. 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 as guided by Operator.
	Feed the plastic granules in the hopper and inform operator for readiness of the machine for setting the parameters	PC4. Perform preheating of plastic granules (In case of Engineering plastics) PC5. Ensure that the plastic granules are mixed with additives (if any) before being fed into the hopper PC6. Conduct a test process and produce a sample output as per the required PC7. Ensure that the dimensions of the output product are measured as per the process given in the Work Instructions/ SOP under guidance of operator. PC8. Start the production process as instructed by Operator.
	Assist in Conducting the actual process with parameter setting as per operator guidance	PC9. Feed the required operation code in the apparatus for heaters to melt the plastic granules at the predefined temperature PC10. Run the machine in Semi-Auto or Automatic mode of operation as guided by the operator. PC11. Check-list procedure to ensure quality of final product
	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: <ul style="list-style-type: none"> KA1. Departments code of conduct KA2. Different types machines in the company, its specifications etc. KA3. Department documentation policy 	

RSC/N4502 (CPC/N0215) Assist in performing the Injection moulding related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of Operator

<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand: KB1. The General principles of moulding machine operations, Startup, Shutdown etc. KB2. Basic process parameters setting, producing good product etc.</p>
<p>Skills (S) [Optional]</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Reading and Writing Skills</p> <p>The user/ individual on the job needs to know and understand how to: SA1. Read instructions especially safety instructions especially symbols while using the equipment in the plant area SA2. Note measurements, equipment panel readings for various process parameters in the required reporting formats SA3. Visualize final product output and hence decide on the key steps to be followed SA4. Safety precautions to be taken for entire Injection moulding and post injection moulding activities. SA6. Avoid defects in machine operation and final product manufacture.</p>
	<p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job needs to know and understand how to: SA7. Discuss task lists, schedules, and work-loads with co-workers/operator SA8. Question internal customers/ Moulding shop operator appropriately in order to understand the nature of the problem and make a diagnosis</p>
<p>B. Professional Skills</p>	<p>Decision Making and Problem solving</p> <p>The user/individual on the job needs to know and understand how to: SB1. Detect problems in day to day tasks SB2. Support operator in using specific problem solving techniques and detailing out the problems SB3. Discuss possible solution with the operator for problem solving SB4. Make decisions in emergency conditions in case the operator is not available (as per the authority matrix defined by the organization)</p> <p>Plan and Organize</p> <p>The user/individual on the job needs to know and understand to plan and organise: SB5. The job needs SB6. All process/ equipment manuals so that sorting out information is Fast SB7. Apparatus etc. in an orderly manner at proper designated areas SB8. How to visualize final product output and hence decide on the key steps to be followed.</p> <p>Desire to learn and take initiatives</p> <p>The user/individual on the job needs to know and understand how to: SB12. Follow instructions and work on areas of improvement identified SB13. Complete the assigned tasks with minimum supervision</p>

RSC/N4502 (CPC/N0215) Assist in performing the Injection moulding related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of Operator

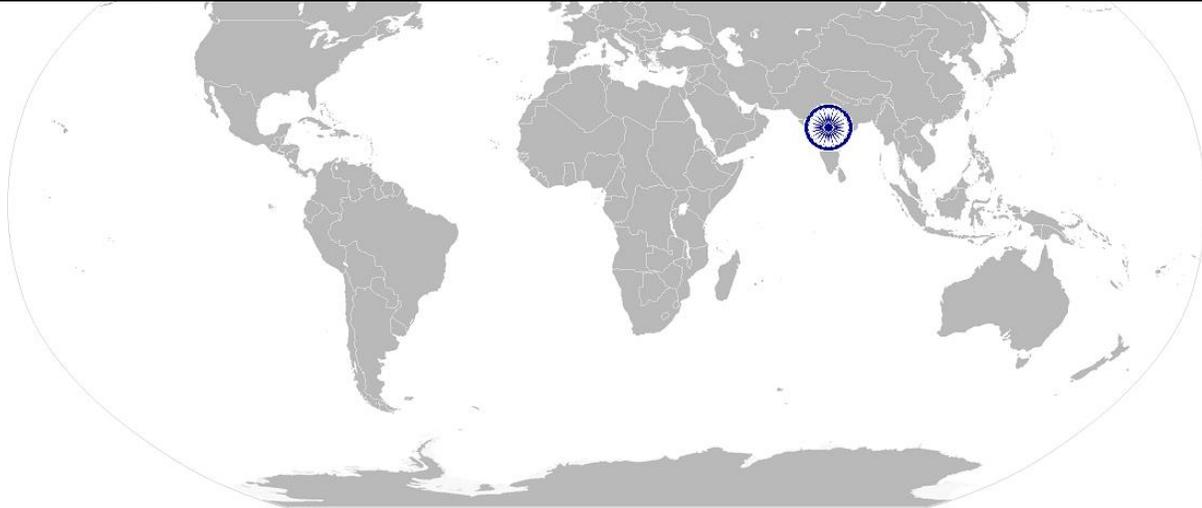
	SB14. Complete the job defined by the operator within the timelines and Quality
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB15. Visualize the final job product after understanding the given standard product. SB16. Finalize the optimum levels of physical parameters with operator guidance so that the job output meets the prescribed job standards



RSC/N4502 (CPC/N0215) Assist in performing the Injection moulding related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of Operator

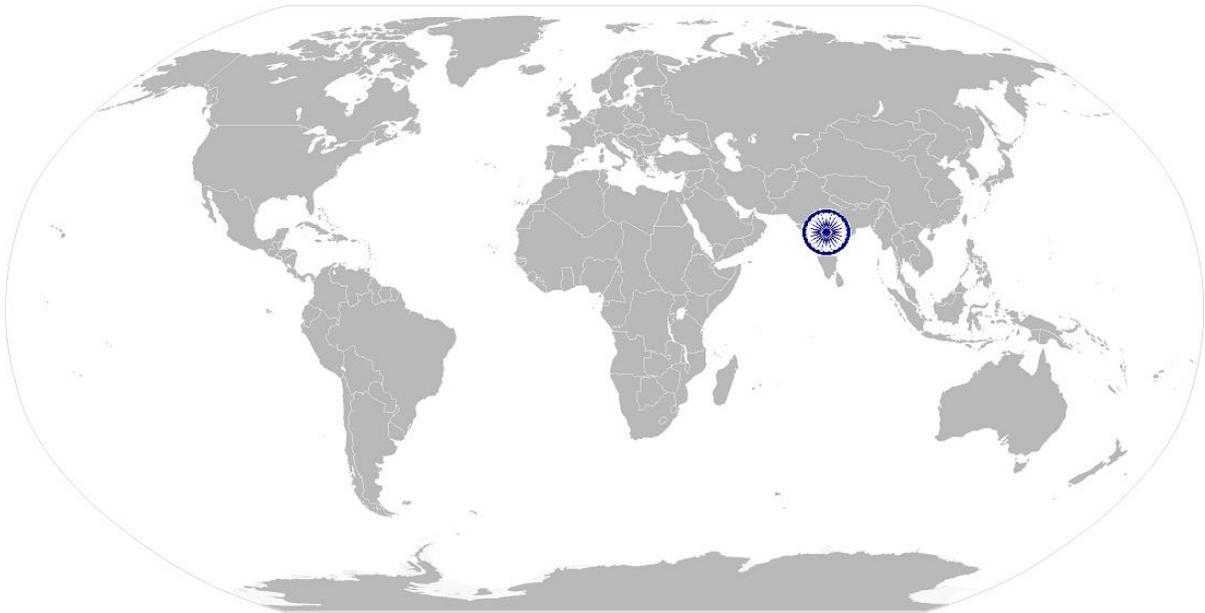
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NOS Code	RSC/N4502 (CPC/N0215)		
Credits (NSQF)	14	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Injection moulding	Next review date	31/12/2021



RSC/ N4503 (CPC/N0216) To conduct basic quality check of finished products with reference to approved product.

National Occupational Standards



Overview

This unit is about conducting basic Quality Checks of the finished products produce with reference to the approved product.

RSC/N4503 (CPC/N0216) To conduct basic quality check of finished products with reference to approved product.

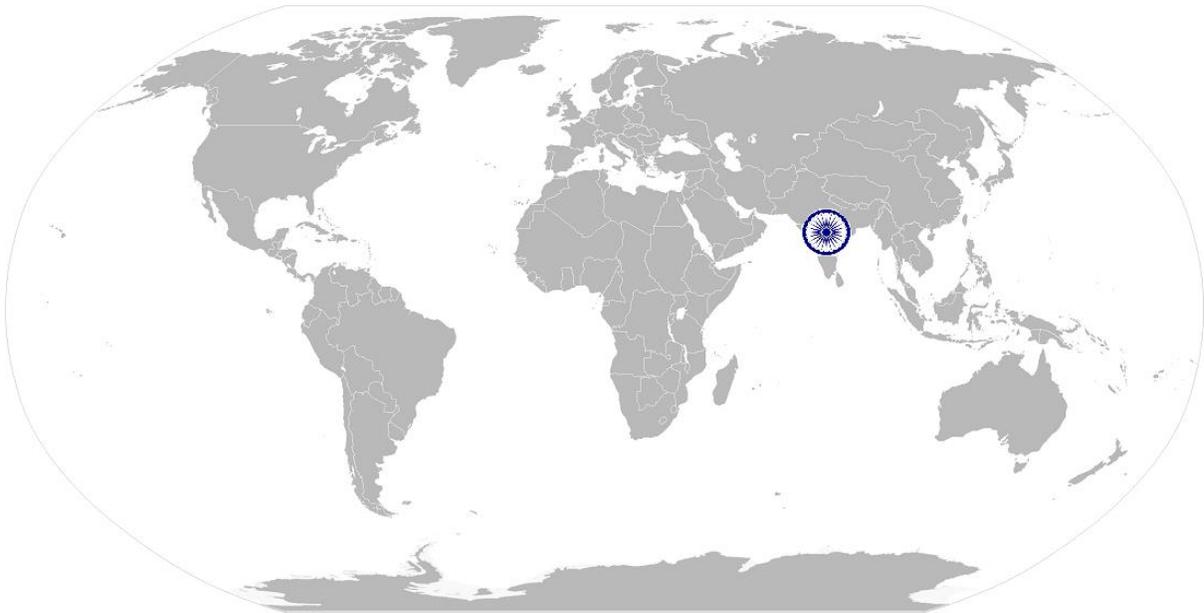
National Occupational Standards	Unit Code	RSC/N4503 (CPC/N0216)
	Unit Title (Task)	Conduct basic quality checks of the finished products with reference to the approved product.
	Description	This OS unit is about checking the finished goods produced for any damages, deformities and further repairing the parts produced so that the damaged/ defective pieces can be corrected and right quality components are supplied to <ol style="list-style-type: none"> The customer/ end user Internal manufacturing team
	Scope	The Injection moulding operator assistant will be responsible for <ul style="list-style-type: none"> checking the finished components conducting minor repair/deflashing if any on output parts which can be reworked Will help operator in interacting with maintenance team and material management team for good output.
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	checking of finished goods for detect or any deviations from the approved product	To be competent, the user/individual on the job must be able to PC1. Compare texture, colour, surface properties, hardness and strength etc. with the given approved product.
	Assisting in Corrective batch process with minor defects	PC2. Rectify minor defects like dimension variation, thickness variation etc. by control process parameters etc and informing operator.
	Perform Batch Quality Procedure	PC3. Provide first and last output from each batch to the lab for quality check on its composition, properties etc. PC4. Obtain clearance for the entire batch from the lab and submit the operator.
	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: <ul style="list-style-type: none"> KA1. Relevant standards specified for the manufacturing process KA2. Basic process followed for inspection of the lot. KA3. Quality Management policy of the organization. 	
B. Technical Knowledge	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KB1. The Processes and procedures followed for manufacturing the lot/ pieces/ products. 	

RSC/ N4503 (CPC/N0216) To conduct basic quality check of finished products with reference to approved product.

	<p>KB2. The techniques of using measurement instruments like rulers, weighing scales etc.</p> <p>KB3. The methods to identify quality defects in the lot.</p> <p>KB4. The Impact of defects on the overall working of the Injection Moulding machine.</p> <p>KB5. The Methods used for cutting, finishing which can repair lot (Moulded products) with minor defects.</p>
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Note the number of lot with defects which can be repaired to number of lot which will be discarded.</p>
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA2. Read process and equipment manuals, material data sheets etc. to understand the working of the equipment & material properties.</p>
	Oral Communication (Listening and Speaking skills)
<p>The user/individual on the job needs to know and understand how to:</p> <p>SA3. Inform operator of any quality related defects arising out of the manufacturing process.</p> <p>SA4. Question internal customers/ operator appropriately in order to understand the nature of the problem and make a diagnosis.</p>	
B. Professional Skills	Plan and Organize
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Organize all process/ equipment manuals so that sorting/ accessing information is easy.</p> <p>SB2. Keep fixtures, tools, drawings, Work Instructions, SOP manuals as per the part number, colour codes etc. as defined under the 5S systems.</p>
	Critical Thinking and Judgment
<p>The user/individual on the job needs to know and understand how to:</p> <p>SB4. Use common sense and make judgments during day to day basis use reasoning skills to identify and resolve basic problems</p> <p>SB5. Carefully analyze each defect observed and try to find solution for the defect along with the operator.</p>	

RSC/ N4503 (CPC/N0216) To conduct basic quality check of finished products with reference to approved product.

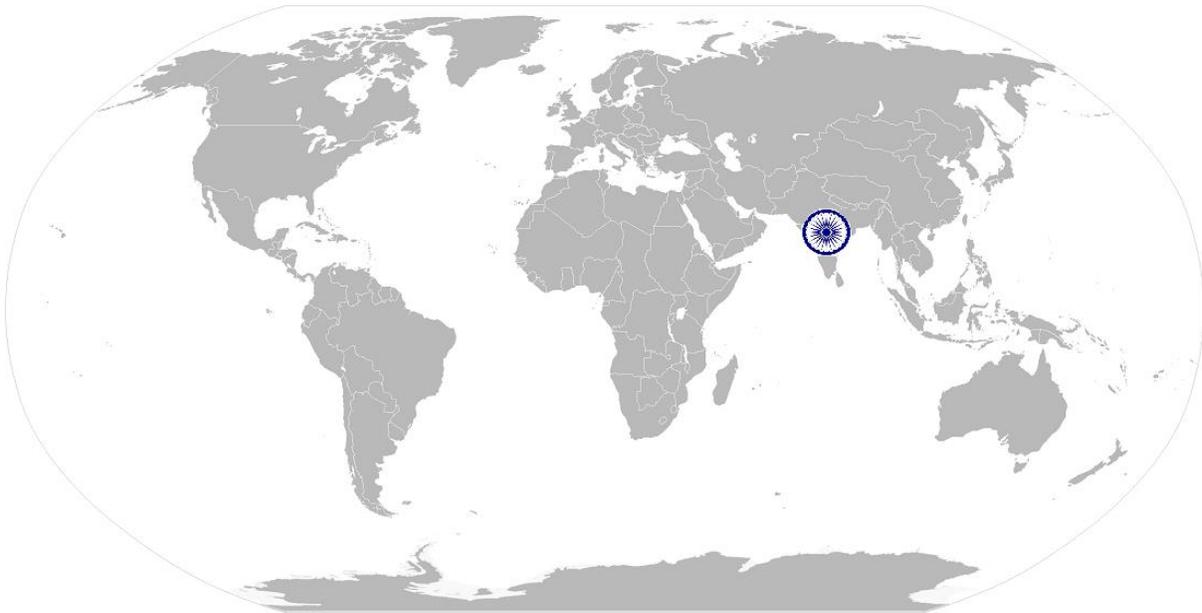
	Quality Consciousness
	The user/individual on the job needs to know and understand how to: SB6. Identify defective parts in the manufacturing line by comparing manufactured with the work standard. SB7. Link the defect observed with the overall impact on the performance of the lot/production).



RSC/ N4503 (CPC/N0216) To conduct basic quality check of finished products with reference to approved product.

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NOS Code	RSC/N4503 (CPC/N0216)		
Credits (NSQF)	1.8	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Injection moulding	Next review date	31/12/2021



RSC/N 4101 (CPC/N 0411) Maintain basic health & Safety Practices at the workplace, 5S

National Occupational Standards



Overview

This unit Covers health, safety and security at the work place. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment.

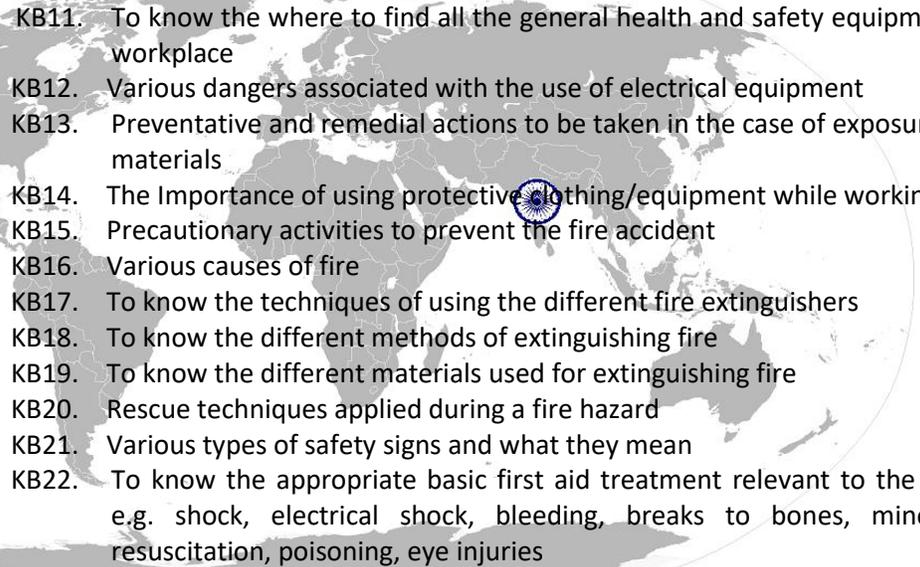
RSC/N 4101 (CPC/N 0411) Maintain basic health & Safety Practices at the workplace, 5S

National Occupational Standards	Unit Code	RSC/N4101 (CPC/N 0411)
	Unit Title (Task)	Maintain basic health and safety practices at the workplace, 5S
	Description	<p>This OS unit is about knowledge and practices relating to health, safety and security that candidates need to use in the workplace. It covers responsibilities towards self, others, assets and the environment.</p> <p>It includes understanding of risks & hazards in the workplace, along with common techniques to minimize risk, deal with accidents, emergencies etc. It covers knowledge of fire safety, common first aid applications and safe practice.</p> <p>This OS is about ensuring all 5S activities both at the shop floor and the office area to facilitate increase in work productivity.</p>
	Scope	<p>The role holder will be responsible for</p> <ul style="list-style-type: none"> • 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	<p>The individual on the job should ensure:</p> <p>PC1. Wear protective clothing/equipment for specific tasks and work conditions</p> <p>PC2. Carry out safe working practices while dealing with hazards to ensure the safety of Self and others.</p> <p>PC3. Ensure good housekeeping practices at all times</p>	
Fire safety	<p>The individual on the job should be able to:</p> <p>PC4. Use appropriate fire extinguishers on different types of fires correctly</p> <p>PC5. Demonstrate rescue techniques applied during fire hazard, demonstrate good housekeeping in order to prevent fire hazards, demonstrate the correct use of a fire extinguisher.</p>	
Emergencies, rescue and first aid procedures.	<p>PC6. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise, and Identify areas in the plant which are potentially hazardous / unhygienic in nature. Conduct regular checks with support of the maintenance team on machine health to identify potential hazards due to wear and tear of machine.</p> <p>PC7. Inform the concerned authorities on the potential risks identified in the processes, workplace area/ layout, materials used etc, Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations.</p> <p>PC8. Create awareness amongst others by sharing information on the identified risks.</p>	

RSC/N 4101 (CPC/N 0411) Maintain basic health & Safety Practices at the workplace, 5S

<p>Ensure sorting, stream lining, storage and documentation, cleaning, standardization and sustenance across the plant premises of the organization.</p>	<p>PC9. Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and unnecessary items are not cluttering the workbenches or work surfaces.</p> <p>PC10. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions</p> <p>PC11. Follow the technique of waste disposal and waste storage in the proper bins as per SOP</p> <p>PC12. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places</p> <p>PC13. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions</p> <p>PC14. Ensure that areas of material storage areas are not overflowing</p> <p>PC15. Ensure properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required</p> <p>PC16. Return of extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area</p> <p>PC17. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards</p> <p>PC18. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists</p> <p>PC19. Ensure to check the items in the respective areas have been identified as broken or damaged</p> <p>PC20. Follow the given instructions and check for labelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.</p> <p>PC21. To make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions</p>
Knowledge and Understanding (K)	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. The relevant standards, procedures and policies related to Health, Safety and Environment followed in the company</p> <p>KA2. The emergency handling procedures & hierarchy for escalation</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. The basic knowledge of Safety procedures (fire fighting, first aid) within the organization</p> <p>KB2. The basic knowledge of various types of PPEs and their usage</p>

RSC/N 4101 (CPC/N 0411) Maintain basic health & Safety Practices at the workplace, 5S

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- 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. To know the where to find all 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. To know the techniques of using the different fire extinguishers
 - KB18. To know the different methods of extinguishing fire
 - KB19. To know the different materials used for extinguishing fire
 - KB20. Rescue techniques applied during a fire hazard
 - KB21. Various types of safety signs and what they mean
 - KB22. To know 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. To know the content of written accident report
 - KB24. Potential injuries and ill health associated with incorrect manual handling
 - 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. To have basic knowledge of 5S procedures
 - KB29. To know the various types 5s practices followed in various areas
 - KB30. Understand to the 5S checklists provided in the department/ team
 - KB31. To have skills to identify useful & non useful items
 - KB32. To have knowledge of labels , signs & colours used as indicators
 - KB33. To have knowledge on how to sort and store various types of tools, equipment, material etc.
 - KB34. To know , how to identify various types of waste products
 - KB35. Understand to the impact of waste/ dirt/ dust/unwanted substances on the

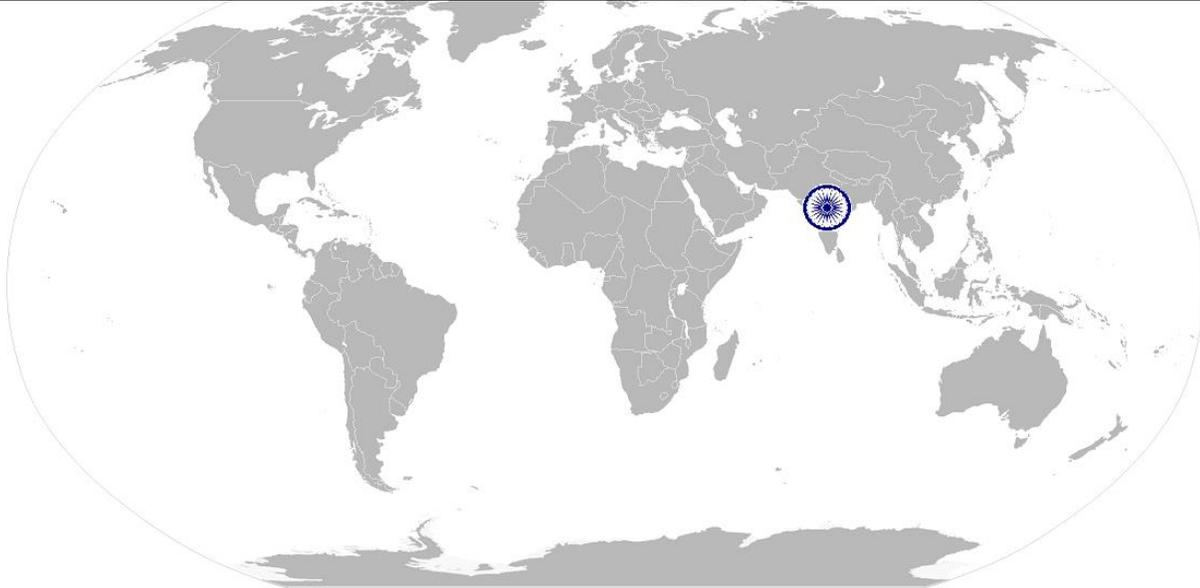
RSC/N 4101 (CPC/N 0411) Maintain basic health & Safety Practices at the workplace, 5S

	process/ environment/ machinery/ human body. KB36. To have knowledge of best ways of cleaning & waste disposal
Skills (S) [Optional]	
Element	Skills
C. 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 about the: 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. Effectively communicate information to team members 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
D. 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.
	Judgment and 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
	Desire to learn and take initiatives
	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

RSC/N 4101 (CPC/N 0411) Maintain basic health & Safety Practices at the workplace, 5S

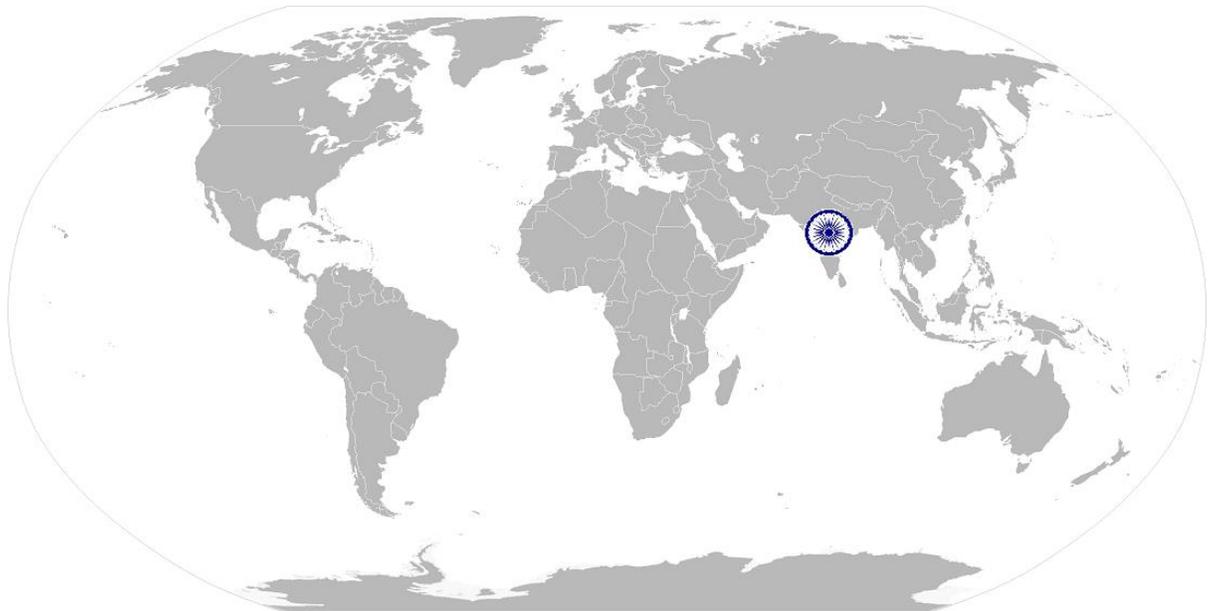
NOS Version Control

NOS Code	RSC/N4101 (CPC/N 0411)		
Credits (NSQF)	2	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Injection Moulding	Next review date	31/12/2021



RSC/N4504 (CPC/N0219) Basics of computer and data entry in MS OFFICE/office Open source suite Software

National Occupational Standards



Overview

This unit is about Basics of computer and data entry in MS OFFICE/office Open source suite Software.

RSC/N4504 (CPC/N0219) Basics of computer and data entry in MS OFFICE/office Open source suite Software

Unit Code	RSC/N4504 (CPC/N0219)
Unit Title (Task)	Basics of computer and data entry in MS OFFICE/office Open source suite Software
Description	This OS unit is about the Data Entry Operation for Injection Moulding like entering, updating and maintain Job work related data the computer systems having MS Office software
Scope	This unit / task covers the following <ul style="list-style-type: none"> Enter, update and maintain data in MS Office system
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Enter, update and maintain data	<p>To be competent, the user/individual on the job must be able to :</p> <p>PC1. Fill and process mandated forms for receiving, processing, or tracking data, enter data from source documents (such as trial report, process sheet etc.) in to Computer application having MS OFFICE software/Office Opensource software.</p> <p>PC2. Scan source documents in accordance with specific instructions.</p> <p>PC3. Verify data entered with source documents, checks for compliance and corrects all typographical errors and missing or repeated data.</p> <p>PC4. Maintain files of source documents or other information related to data entered.</p> <p>PC5. Investigate and confirm data that is unclear before entering, generate reports of data entry, store completed work in designated locations and perform backup operations.</p> <p>PC6. Update database information to reflect most current source information</p> <p>PC7. Assist in the filing and storage of security and back up data files</p> <p>PC8. Respond to requests for information and access relevant files</p>
Process Compliances	Comply with relevant legislation, standards, policies and procedures
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Data management applications/tools used by the company</p> <p>KA2. Data entry protocol</p> <p>KA3. Data integrity and security policies of the company</p> <p>KA4. Approved methods for carrying document control and archiving</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. About basics of computers and its terminology</p> <p>KB2. About working on different software needed for report writing including MS office.</p>
Skills (S) [Optional]	

RSC/N4504 (CPC/N0219) *Basics of computer and data entry in MS OFFICE/office Open source suite Software*

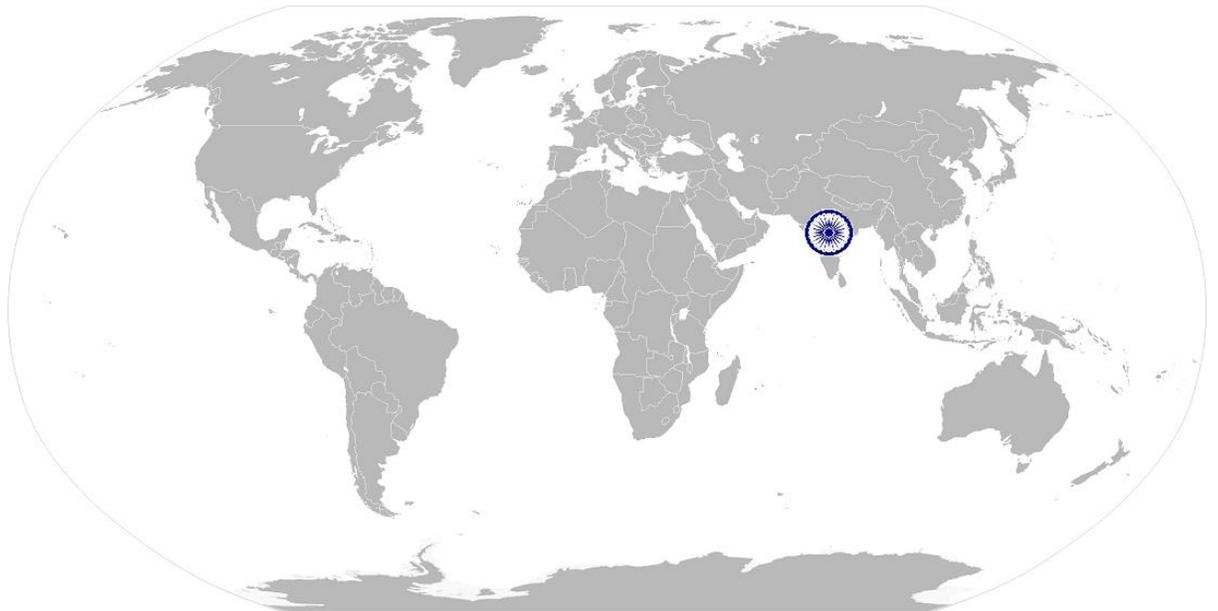
A. Core Skills/ Generic Skills	Reading and Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. Efficiently enter data into computer applications SA2. Prepare legible reports SA3. Read and understand manuals, SOPs, instructions, memos, reports, job cards etc.
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. Communicate effectively with the team members and supervisors
B. Professional Skills	Decision Making and Problem solving
	Detect problems in day to day tasks: SB1 To Apply basic logic to identify data errors SB2. To Pay attention to details
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB3. Plan assigned tasks within timeline and as per priority order specified
	Judgments and Critical Thinking
The user/individual on the job needs to know and understand how to: SB4. Identify process improvements	



RSC/N4504 (CPC/N0219) Basics of computer and data entry in MS OFFICE/office Open source suite Software

NOS Version Control

NOS Code	RSC/N4504 (CPC/N0219)		
Credits (NSQF)	1	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Injection moulding	Next review date	31/12/2021



Qualifications Pack For Machine operator Injection Moulding

CRITERIA FOR ASSESSMENT OF TRAINEES				
Job Role: Machine Operator Assistant – Injection Moulding				
Qualification Pack Code: RSC/Q 4501 (CPC/Q0203)				
Sector Skill Council: Rubber Skill Development Council				
Guidelines for Assessment:				
<p>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.</p> <p>2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.</p> <p>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)</p> <p>4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criteria.</p> <p>5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.</p> <p>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.</p>				
Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
RSC/N4501 (CPC/N0214) Understand basic concept, job requirements and basics knowhow related to the Injection moulding process	PC1. To interact with the operator in order to understand the production schedule	6	4	2
	PC2. To help in planning the day's production activities based on the operator's instructions	6	4	2
	PC3. To ensure availability of consumables and plastics materials for production in sufficient quantity as per production plan/operators instructions.	6	4	2
	PC4. Clearly understanding the does and don'ts of the manufacturing process as defined in SOPs/ Work Instructions or defined by operator.	4	3	1
	PC5. Check availability of the personal protective equipments (PPE) like Gloves, Goggles etc.	4	3	1
	PC6. Understand the molding procedure and process to be adopted for completing the work order from the operator by referring the Work Instruction document/ SOP manual.	4	3	1
	PC7. Ensure that the required material is procured from the store before starting the process	3.5	2.5	1

Qualifications Pack For Machine operator Injection Moulding

	PC8. Understand the Mould required for executing the required operation and ensure that the same is available for operation.	3.5	2.5	1
	PC9. Collect the mould from tool room If mould is not available.	3.5	2.5	1
	PC10. Install and bolt the mould in place and slide the safety door shut.	3.5	2.5	1
	PC11. Add the raw material in the machine using material loader or by manual feeding.	3.5	2.5	1
	PC12. Ensure moulds are clean if not clean with soft cotton cloth.	3.5	2.5	1
	PC13. Ensure cleaning of the other auxiliaries tools, (if any) before the initiation of the moulding and trimming process	3.5	2.5	1
	PC14. Ensure cleaning of the area around the apparatus for any oil, grease, combustible substances etc. so as to prevent any accident	3.5	2.5	1
	PC15. Ensure availability of the coolant and working of valves to circulate the coolant to cool and solidify plastic	3.5	2.5	1
	PC16. Understand the raw material like plastics granules, fillers, bonding additives etc. required for executing the activity	3.5	1.5	2
	PC17. Refer the queries to supervisor if they cannot be resolved by the operator	3.5	1.5	2
	PC18. Confirm self - understanding to the operator once the query is resolved so that all doubts & queries can be resolved before the actual process execution	3.5	1.5	2
	Sub total	72	48	24
RSC/N4502 (CPC/N0215) Assist in performing the Injection molding related operations, monitor process parameters and troubleshoot the	PC1. Check for operation of molding apparatus like hopper, heaters etc. as per the checklist provided	15	5	10
	PC2. Fix the desired Mould to the injection moulding machine in order to achieve the desired operation as per the Work Instructions/ SOPs	20	10	10
	PC3. 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 as guided by Operator.	30	10	20
	PC4. Perform preheating of plastic granules (In case of Engineering plastics)	20	10	10

Qualifications Pack For Machine operator Injection Moulding

process/product	PC5. Ensure that the plastic granules are mixed with additives (if any) before being fed into the hopper			
	PC6. Conduct a test process and produce a sample output as per the required	20	10	10
	PC7. Ensure that the dimensions of the output product are measured as per the process given in the Work Instructions/ SOP under guidance of operator.	30	15	15
	PC8. Start the production process as instructed by Operator.	25	15	10
	PC9. Feed the required operation code in the apparatus for heaters to melt the plastic granules at the predefined temperature	35	15	20
	PC10. Run the machine in Semi-Auto or Automatic mode of operation as guided by the operator.	20	5	15
	PC11. Check-list procedure to ensure quality of final product	15	5	10
	Sub total	230	100	130
RSC/N4503 (CPC/N0216) Conduct basic quality checks of the finished products with reference to the approved product	PC1. Compare texture, colour, surface properties, hardness and strength etc. with the given approved product.	8	2	6
	PC2. Rectify minor defects like dimension variation, thickness variation etc. by control process parameters etc and informing operator.	12	6	6
	PC3. Provide first and last output from each batch to the lab for quality check on its composition, properties etc.	8	2	6
	PC4. Obtain clearance for the entire batch from the lab and submit the operator.	8	2	6
	Sub total	36	12	24
RSC/N4101 (CPC/N 0411): Maintain basic health and safety practices at the workplace, 5S	PC1. Wear protective clothing/equipment for specific tasks and work conditions	2.5	0.5	2
	PC2. Carry out safe working practices while dealing with hazards to ensure the safety of self and others.	2.5	0.5	2
	PC3. Apply good housekeeping practices at all times	2.5	0.5	2
	PC4. Use the various appropriate fire extinguishers on different types of fires correctly	2.5	0.5	2
	PC5. Demonstrate rescue techniques applied during fire hazard, demonstrate good housekeeping in order to prevent fire hazards, demonstrate the correct use of a fire extinguisher.	2.5	0.5	2
	PC6. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise, and Identify areas in the plant which are	2.5	0.5	2

Qualifications Pack For Machine operator Injection Moulding

	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.	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	1.5	0.5	1
	PC12. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places	1.5	0.5	1
	PC13. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions	1.5	0.5	1
	PC14. Ensure that areas of material storage areas are not overflowing	1.5	0.5	1
	PC15. Properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required	1.5	0.5	1
	PC16. Return the extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area	1.5	0.5	1
	PC17. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards.	1.5	0.5	1
	PC18. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists	1.5	0.5	1
	PC19. Check that the items in the respective areas have been identified as broken or damaged	1.5	0.5	1
	PC20. Follow the given instructions and check for levelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same To avoid spillage, leakage, fire etc.	1.5	0.5	1

Qualifications Pack For Machine operator Injection Moulding

	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/N4504 (CPC/N0219)	To be competent, the user/individual on the job must be able to:			
Basics of computer and data entry in MS OFFICE/office	PC1. Fill and process mandated forms for receiving, processing, or tracking data enter data from source documents (such as trial report, process sheet etc.) into Computer application having MS OFFICE software.	3	2	1
Open source suite Software	PC2. Scan source documents in accordance with specific instructions.	3	2	1
	PC3. Verify data entered with source documents, checks for compliance and corrects all typographical errors and missing or repeated data.	3	2	1
	PC4. Maintain files of source documents or other information related to data entered.	3	2	1
	PC5. Investigate and confirm data that is unclear before entering, generate reports of data entry, store completed work in designated locations and perform backup operations.	3	2	1
	PC6. Update database information to reflect most current source information	2	1	1
	PC7. Assist in the filing and storage of security and back up data files	3	2	1
	PC8. Respond to requests for information and access relevant files	2	1	1
	Sub total	22	14	8
	Total	400	184	216