

Qualification Pack



Machine Operator Assistant Plastics Recycling

QP Code: RSC/Q4901

Version: 1.0

NSQF Level: 3

Rubber, Chemical & Petrochemical Skill development Council || 217, 2nd floor, Rectangle One, Saket District Centre
New Delhi - 110017 || email:ashrita.dubey@rcpsdc.in

Qualification Pack

Contents

RSC/Q4901: Machine Operator Assistant Plastics Recycling	3
<i>Brief Job Description</i>	3
Applicable National Occupational Standards (NOS)	3
<i>Compulsory NOS</i>	3
<i>Qualification Pack (QP) Parameters</i>	3
RSC/N4101: Maintain basic health and safety practices at the workplace, 5S	5
RSC/N4504: Basics of computer and data entry in MS OFFICE/office Open source suite Software	13
RSC/N4901: Understand basic concept, job requirements and basics knowhow related to the process	17
RSC/N4902: Assist in performing the Plastics Recycling related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of operator.	23
RSC/N4903: To conduct basic quality checks of the finished products with reference to the approved product.	28
Assessment Guidelines and Weightage	31
<i>Assessment Guidelines</i>	31
<i>Assessment Weightage</i>	32
Acronyms	33
Glossary	34

Qualification Pack

RSC/Q4901: Machine Operator Assistant Plastics Recycling

Brief Job Description

The individual shall assist the operator in setting up and operation of the Plastics Recycling machine to produce good quality Plastics granules from Plastics Waste 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.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [RSC/N4101: Maintain basic health and safety practices at the workplace, 5S](#)
2. [RSC/N4504: Basics of computer and data entry in MS OFFICE/office Open source suite Software](#)
3. [RSC/N4901: Understand basic concept, job requirements and basics knowhow related to the process](#)
4. [RSC/N4902: Assist in performing the Plastics Recycling related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of operator.](#)
5. [RSC/N4903: To conduct basic quality checks of the finished products with reference to the approved product.](#)

Qualification Pack (QP) Parameters

Sector	Rubber
Sub-Sector	Manufacturing / Plastics Processing
Occupation	Plastics Recycling
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NIL

Qualification Pack

Minimum Educational Qualification & Experience	8th Class
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	26/12/2016
Next Review Date	31/12/2024
NSQC Approval Date	21/07/2016
Version	1.0
Reference code on NQR	2019/CP/CIPET/02893
NQR Version	1.0

Remarks:

Rubber SSC QP-NOS and CIPET qualification codes mapping. QP: RSC/Q4901 (CPC/Q2903)NOS: RSC/N4901(CPC/N2911), RSC/N4902(CPC/N2912), RSC/N4903(CPC/N2913), RSC/N4101(CPC/N0411), RSC/N4504(CPC/N0219)

Qualification Pack

RSC/N4101: 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

Elements and Performance Criteria

Health and safety

To be competent, the user/individual on the job must be able to:

- PC1.** wear protective clothing/equipment for specific tasks and work conditions
- PC2.** carry out safe working practices while dealing with hazards to ensure the safety of self and others.
- PC3.** ensure good housekeeping practices at all times

Fire safety

To be competent, the user/individual on the job must 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 procedure

To be competent, the user/individual on the job must be able to:

- 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.

To be competent, the user/individual on the job must be able to:

Qualification Pack

- 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.
- 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.** ensure to check the items in the respective areas have been identified as broken or damaged
- PC21.** to 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 (KU)

The individual on the job needs to know and understand:

- KU1.** the relevant standards, procedures and policies related to health, safety and environment followed in the company
- KU2.** the emergency handling procedures & hierarchy for escalation
- KU3.** the basic knowledge of safety procedures (fire fighting, first aid) within the organization
- KU4.** the basic knowledge of various types of ppes and their usage
- KU5.** the basic knowledge of risks/hazards associated with each occupation in the organization
- KU6.** 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.
- KU7.** the meaning of hazards and risks
- KU8.** the health and safety hazards commonly present in the work environment and related precautions
- KU9.** the possible causes of risk, hazard or accident in the workplace and why risk and/or accidents are possible

Qualification Pack

- KU10.** the possible causes of risk and accident (due to oil leakage)
- KU11.** methods of accident prevention
- KU12.** safe working practices when working with tools and machines
- KU13.** safe working practices while working at various hazardous sites
- KU14.** to know the where to find all the general health and safety equipment in the workplace
- KU15.** various dangers associated with the use of electrical equipment
- KU16.** preventative and remedial actions to be taken in the case of exposure to toxic materials
- KU17.** the importance of using protective clothing/equipment while working
- KU18.** precautionary activities to prevent the fire accident
- KU19.** various causes of fire
- KU20.** to know the techniques of using the different fire extinguishers
- KU21.** to know the different methods of extinguishing fire
- KU22.** to know the different materials used for extinguishing fire
- KU23.** rescue techniques applied during a fire hazard
- KU24.** various types of safety signs and what they mean
- KU25.** 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
- KU26.** to know the content of written accident report
- KU27.** potential injuries and ill health associated with incorrect manual handling
- KU28.** safe lifting and carrying practices
- KU29.** personal safety, health and dignity issues relating to the movement of a person by others
- KU30.** potential impact to a person who is moved incorrectly
- KU31.** to have basic knowledge of 5s procedures
- KU32.** to know the various types 5s practices followed in various areas
- KU33.** understand to the 5s checklists provided in the department/ team
- KU34.** to have skills to identify useful & non useful items
- KU35.** to have knowledge of labels , signs & colours used as indicators
- KU36.** to have knowledge on how to sort and store various types of tools, equipment, material etc
- KU37.** to know , how to identify various types of waste products
- KU38.** understand to the impact of waste/ dirt/ dust/unwanted substances on the process/ environment/ machinery/ human body.
- KU39.** to have knowledge of best ways of cleaning & waste disposal

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** understand basic level notes and observations.
- GS2.** safety instructions put up across the plant premises
- GS3.** safety precautions mentioned in equipment manuals and panels and understand the potential risks associated

Qualification Pack

- GS4.** effectively communicate information to team members
- GS5.** inform employees in the plant and concerned functions about events, incidents & potential risks observed related to safety, health and environment.
- GS6.** question operator/ supervisor in order to understand the safety related issues
- GS7.** attentively listen with full attention and comprehend the information given by the speaker during safety drills and training programs
- GS8.** process the work order and jobs received from the internal customers.
- GS9.** design documents received from internal customers
- GS10.** understand & organize all process/ equipment manuals so that sorting out information is fast.
- GS11.** use common sense and make judgments during day to day basis
- GS12.** use intuition to detect any potential problems which could arise during operations
- GS13.** follow instructions and work on areas of improvement identified
- GS14.** complete the assigned tasks with minimum supervision
- GS15.** complete the job defined by the supervisor within the timelines and quality norms

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Health and safety</i>	1.5	6	-	-
PC1. wear protective clothing/equipment for specific tasks and work conditions	0.5	2	-	-
PC2. carry out safe working practices while dealing with hazards to ensure the safety of self and others.	0.5	2	-	-
PC3. ensure good housekeeping practices at all times	0.5	2	-	-
<i>Fire safety</i>	1	4	-	-
PC4. use the various appropriate fire extinguishers on different types of fires correctly	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.	0.5	2	-	-
<i>Emergencies, rescue and first aid procedure</i>	1.5	6	-	-
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.	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.	0.5	2	-	-
PC8. create awareness amongst others by sharing information on the identified risks.	0.5	2	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure sorting, stream lining, storage and documentation, cleaning, standardization and sustenance across the plant premises of the organization.</i>	6	14	-	-
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.	0.5	2	-	-
PC10. ensure segregation of waste in hazardous/ non hazardous waste as per the sorting work instructions	0.5	1	-	-
PC11. follow the technique of waste disposal and waste storage in the proper bins as per sop	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	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	0.5	1	-	-
PC14. ensure that areas of material storage are not overflowing	0.5	1	-	-
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	0.5	1	-	-
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	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	0.5	1	-	-
PC18. follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists	0.5	1	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC19. ensure to check the items in the respective areas have been identified as broken or damaged	0.5	1	-	-
PC20. ensure to check the items in the respective areas have been identified as broken or damaged	0.5	1	-	-
PC21. to make sure that all material and tools are stored in the designated places and in the manner indicated in the 5s instructions	-	1	-	-
NOS Total	10	30	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	RSC/N4101
NOS Name	Maintain basic health and safety practices at the workplace, 5S
Sector	Rubber
Sub-Sector	Manufacturing / Plastics Processing
Occupation	Blow Moulding
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	26/12/2016
Next Review Date	31/12/2024
NSQC Clearance Date	21/07/2016

Qualification Pack

RSC/N4504: 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

Elements and Performance Criteria

Enter, update and maintain data

To be competent, the user/individual on the job must be able to:

- 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.
- PC2.** scan source documents in accordance with specific instructions.
- PC3.** verify data entered with source documents, checks for compliance and corrects all typographical errors and missing or repeated data.
- PC4.** maintain files of source documents or other information related to data entered.
- 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.
- PC6.** update database information to reflect most current source information
- PC7.** assist in the filing and storage of security and back up data files
- PC8.** respond to requests for information and access relevant files

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** data management applications/tools used by the company
- KU2.** data entry protocol
- KU3.** data integrity and security policies of the company
- KU4.** approved methods for carrying document control and archiving
- KU5.** about basics of computers and its terminology
- KU6.** about working on different software needed for report writing including ms office.

Generic Skills (GS)

User/individual on the job needs to know how to:

Qualification Pack

- GS1.** efficiently enter data into computer applications
- GS2.** prepare legible reports
- GS3.** read and understand manuals, sops, instructions, memos, reports, job cards etc.
- GS4.** communicate effectively with the team members and supervisors
- GS5.** to apply basic logic to identify data errors
- GS6.** to pay attention to details
- GS7.** plan assigned tasks within timeline and as per priority order specified
- GS8.** identify process improvements

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Enter, update and maintain data</i>	25	15	-	-
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.	4	2	-	-
PC2. scan source documents in accordance with specific instructions.	3	2	-	-
PC3. verify data entered with source documents, checks for compliance and corrects all typographical errors and missing or repeated data.	3	2	-	-
PC4. maintain files of source documents or other information related to data entered.	3	2	-	-
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	-	-
PC6. update database information to reflect most current source information	3	2	-	-
PC7. assist in the filing and storage of security and back up data files	3	2	-	-
PC8. respond to requests for information and access relevant files	3	1	-	-
NOS Total	25	15	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	RSC/N4504
NOS Name	Basics of computer and data entry in MS OFFICE/office Open source suite Software
Sector	Rubber
Sub-Sector	Manufacturing / Plastics Processing
Occupation	Injection moulding
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	26/12/2016
Next Review Date	31/12/2024
NSQC Clearance Date	21/07/2016

Qualification Pack

RSC/N4901: Understand basic concept, job requirements and basics knowhow related to the process

Description

This OS unit is about understanding the job requirement, operating the Plastics Recycling machine under the guidance/ instruction of operator in order to produce good quality plastic Granules using given Plastics Waste Materials.

Scope

This unit/ task covers the following:

- Understanding the work order and the process requirement from the operator
- Arranging the required Plastics Waste Materials for the process
- Assist in cleaning the equipment and the Plastics waste for the process

Elements and 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 days production activities based on the operators instructions
- PC3.** ensure availability of consumables and plastics materials for production in sufficient quantity as per production plan/operators instructions
- PC4.** follow the does and donts 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 Plastics Waste material to be recycled required for the same

To be competent, the user/individual on the job must be able to:

- PC7.** ensure that the required plastics waste material is procured from the store before starting the process
- PC8.** identify the die & pelletizer etc. required for executing the required operation and ensure that the same is available for operation.
- PC9.** collect the die from tool room, if die is not available.
- PC10.** install and bolt the die and pelletizer etc. in place.
- PC11.** add the plastics waste material in the machine using material loader or by manual feeding.

Clean the apparatus and the components before executing the process

To be competent, the user/individual on the job must be able to:

- PC12.** ensure die and pelletizer etc. are clean if not clean with soft cotton cloth
- PC13.** ensure cleaning of the other auxiliaries tools, (if any) before the initiation of the recycling and pelletizing process

Qualification Pack

- PC14.** ensure 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 plastics filaments for pelletizing.

Check Plastics Waste and apparatus for Operations

To be competent, the user/individual on the job must be able to:

- PC16.** identify the plastics waste material like types dust, moisture and metal contaminants etc. required for executing the activity.

Escalations of queries on the given job

To be competent, the user/individual on the job must be able to:

- 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

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** companys code of conduct
- KU2.** different types of products manufactured by the company
- KU3.** functional processes like procurement, store management, inventory management, quality management, incentives, personnel management
- KU4.** the importance of individuals role in the work flow
- KU5.** the organization culture
- KU6.** companys reporting structure
- KU7.** companys documentation policy
- KU8.** the general principles of recycling procedure and process knowledge machine functioning parts concepts.
- KU9.** types of plastics like thermoplastics and the additives & grades to be used temperature, pressure etc. of the machine being operated.
- KU10.** different types of tools and machinery to process the plastic and pelletize the output
- KU11.** various types of cooling systems and their properties
- KU12.** how to perform recycling machine safety check
- KU13.** hazards and safety aspects involved in tape production and usage of relevant pps
- KU14.** safety procedures to be adopted to complete die removal process

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** read warnings, instructions and other text material on product labels, components etc
- GS2.** enter into the history card details of the fault identified in the plastic recycled materials manufactured read equipment manuals and process documents to understand the equipment and processes.

Qualification Pack

- GS3.** read instructions especially safety instructions especially symbols while using the equipment in the plant area logs.
- GS4.** discuss task lists, schedules, and work-loads with co-workers
- GS5.** question internal customers/ shop floor operator appropriately in order to understand the nature of the problem and make a diagnosis
- GS6.** avoid using jargon, slang or acronyms when communicating with an operator / fellow subordinates etc. unless it is required.
- GS7.** support operator in using specific problem solving techniques and detailing out the problems
- GS8.** discuss possible solution with the operator for problem solving.
- GS9.** plan and organize the work order and jobs received from the internal customers/ operator
- GS10.** organize all process/ equipment manuals so that sorting out
- GS11.** follow instructions and work on areas of improvement identified
- GS12.** complete the assigned tasks with minimum supervision
- GS13.** complete the job defined by the operator within the timelines and quality.
- GS14.** use common sense and make judgments during day to day basis
- GS15.** use basic reasoning skills to identify and resolve basic problems
- GS16.** use intuition to detect any potential problems which could arise during operations.

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Understand the work and the process requirements from Operator</i>	12	26	-	-
PC1. interact with the operator in order to understand the production schedule	2	5	-	-
PC2. help in planning the days production activities based on the operators instructions	2	4	-	-
PC3. ensure availability of consumables and plastics materials for production in sufficient quantity as per production plan/operators instructions	2	5	-	-
PC4. follow the does and donts of the manufacturing process as defined in sops/ work instructions or defined by operator.	2	3	-	-
PC5. check availability of the personal protective equipments (ppe) like gloves, goggles etc.	2	5	-	-
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.	2	4	-	-
<i>Help in arrange for the Plastics Waste material to be recycled required for the same</i>	6	23	-	-
PC7. ensure that the required plastics waste material is procured from the store before starting the process	2	5	-	-
PC8. identify the die & pelletizer etc. required for executing the required operation and ensure that the same is available for operation.	1	5	-	-
PC9. collect the die from tool room, if die is not available.	1	6	-	-
PC10. install and bolt the die and pelletizer etc. in place.	1	4	-	-
PC11. add the plastics waste material in the machine using material loader or by manual feeding.	1	3	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Clean the apparatus and the components before executing the process</i>	4	12	-	-
PC12. ensure die and pelletizer etc. are clean if not clean with soft cotton cloth	1	2	-	-
PC13. ensure cleaning of the other auxiliaries tools, (if any) before the initiation of the recycling and pelletizing process	1	2	-	-
PC14. ensure cleaning of the area around the apparatus for any oil, grease, combustible substances etc. so as to prevent any accident	1	4	-	-
PC15. ensure availability of the coolant and working of valves to circulate the coolant to cool and solidify plastics filaments for pelletizing.	1	4	-	-
<i>Check Plastics Waste and apparatus for Operations</i>	1	4	-	-
PC16. identify the plastics waste material like types dust, moisture and metal contaminants etc. required for executing the activity.	1	4	-	-
<i>Escalations of queries on the given job</i>	2	10	-	-
PC17. refer the queries to supervisor if they cannot be resolved by the operator	1	5	-	-
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	1	5	-	-
NOS Total	25	75	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	RSC/N4901
NOS Name	Understand basic concept, job requirements and basics knowhow related to the process
Sector	Rubber
Sub-Sector	Manufacturing / Plastics Processing
Occupation	Plastics Recycling
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	26/12/2016
Next Review Date	31/12/2024
NSQC Clearance Date	21/07/2016

Qualification Pack

RSC/N4902: Assist in performing the Plastics Recycling 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 Plastics Recycling Machine Operator Assistant will be responsible for

- Assist in checking the operations of the equipment
- Feeding the grinded Plastics waste as per requirement
- Assisting in setting up and operating the plastics recycling machine
- Perform visual Check of output products
- Report problems to operator if any

Elements and Performance Criteria

Check the operations of the equipment used in the recycling process

To be competent, the user/individual on the job must be able to:

- PC1.** check for operation of recycling apparatus like hopper, heaters etc. as per the checklist provided
- PC2.** fix the desired die to the recycling 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 grinded plastic waste in the hopper and inform operator for readiness of the machine for setting the parameters

To be competent, the user/individual on the job must be able to:

- PC4.** perform preheating of grinded plastic waste (in case of engineering plastics)
- PC5.** ensure that the grinded plastic waste 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 (pellets) 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

To be competent, the user/individual on the job must be able to:

- PC9.** feed the required operation code in the apparatus for heaters to melt the grinded plastic waste at the predefined temperature
- PC10.** run the machine in semi-auto or automatic mode of operation as guided by the operator.

Qualification Pack

PC11. follow the check-list procedure to ensure quality of final product

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** departments code of conduct
- KU2.** different types machines in the company, its specifications etc.
- KU3.** department documentation policy
- KU4.** the general principles of recycling machine operations, startup, shutdown etc.
- KU5.** basic process parameters setting, producing good quality material etc.

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** read instructions especially safety instructions especially symbols while using the equipment in the plant area
- GS2.** note measurements, equipment panel readings for various process parameters in the required reporting formats
- GS3.** visualize final product output and hence decide on the key steps to be followed
- GS4.** safety precautions to be taken for entire recycling process and post recycling activities
- GS5.** avoid defects in machine operation and final product manufacture.
- GS6.** to discuss task lists, schedules, and work-loads with co-workers/operator
- GS7.** to question internal customers/ moulding shop operator appropriately in order to understand the nature of the problem and make a diagnosis
- GS8.** to detect problems in day to day tasks
- GS9.** to support operator in using specific problem solving techniques and detailing out the problems
- GS10.** to discuss possible solution with the operator for problem solving
- GS11.** to make decisions in emergency conditions in case the operator is not available (as per the authority matrix defined by the organization)
- GS12.** user/individual on the job needs to know and understand how to:
- GS13.** organize all process/ equipment manuals so that sorting out information is fast
- GS14.** organize apparatus etc. in an orderly manner at proper designated areas
- GS15.** visualize final product output and hence decide on the key steps to be followed.
- GS16.** follow instructions and work on areas of improvement identified
- GS17.** complete the assigned tasks with minimum supervision
- GS18.** complete the job defined by the operator within the timelines and quality
- GS19.** visualize the final job product after understanding the given standard product.
- GS20.** finalize the optimum levels of physical parameters with operator guidance so that the job output meets the prescribed job standards

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Check the operations of the equipment used in the recycling process</i>	6	19	-	-
PC1. check for operation of recycling apparatus like hopper, heaters etc. as per the checklist provided	2	6	-	-
PC2. fix the desired die to the recycling machine in order to achieve the desired operation as per the work instructions/ sops	2	6	-	-
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.	2	7	-	-
<i>Feed the grinded plastic waste in the hopper and inform operator for readiness of the machine for setting the parameters</i>	13	35	-	-
PC4. perform preheating of grinded plastic waste (in case of engineering plastics)	3	7	-	-
PC5. ensure that the grinded plastic waste are mixed with additives (if any) before being fed into the hopper.	3	7	-	-
PC6. conduct a test process and produce a sample output as per the required	3	7	-	-
PC7. ensure that the dimensions of the output product (pellets) are measured as per the process given in the work instructions/ sop under guidance of operator.	2	7	-	-
PC8. start the production process as instructed by operator.	2	7	-	-
<i>Assist in Conducting the actual process with parameter setting as per operator guidance</i>	6	21	-	-
PC9. feed the required operation code in the apparatus for heaters to melt the grinded plastic waste at the predefined temperature	2	7	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. run the machine in semi-auto or automatic mode of operation as guided by the operator.	2	7	-	-
PC11. follow the check-list procedure to ensure quality of final product	2	7	-	-
NOS Total	25	75	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	RSC/N4902
NOS Name	Assist in performing the Plastics Recycling related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of operator.
Sector	Rubber
Sub-Sector	Manufacturing / Plastics Processing
Occupation	Plastics Recycling
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	26/12/2016
Next Review Date	31/12/2024
NSQC Clearance Date	21/07/2016

Qualification Pack

RSC/N4903: To 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 deformities and further grinded produced so that the defective/waste can be recycled and right quality components are supplied to 1. The customer/ end user 2. Internal manufacturing team

Scope

The Plastics Recycling operator assistant will be responsible for

Elements and Performance Criteria

Checking of finished materials for detect or any deviations from the approved material

To be competent, the user/individual on the job must be able to:

PC1. compare colour, surface properties, mfi, and melting point etc. with the given approved material.

Assisting in Corrective batch process with minor defects

To be competent, the user/individual on the job must be able to:

PC2. rectify minor defects like pellets size, colour variation etc. by control process parameters etc and informing operator.

Perform Batch Quality Procedure

To be competent, the user/individual on the job must be able to:

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 (KU)

The individual on the job needs to know and understand:

KU1. relevant standards specified for the manufacturing process

KU2. basic process followed for inspection of the lot.

KU3. quality management policy of the organization

KU4. processes and procedures followed for manufacturing the lot materials.

KU5. techniques of using measurement instruments like colour, specific gravity etc.

KU6. the methods to identify quality defects in the lot.

KU7. the impact of defects on the overall working of the plastics recycling machine.

KU8. the methods used for finishing which can repair lot (recycled materials) with minor defects.

Generic Skills (GS)

Qualification Pack

User/individual on the job needs to know how to:

- GS1.** note the number of lot with defects which can be repaired to number of lot which will be discarded.
- GS2.** read process and equipment manuals, material data sheets etc. to understand the working of the equipment & material properties.
- GS3.** inform operator of any quality related defects arising out of the manufacturing process.
- GS4.** question internal customers/ operator appropriately in order to understand the nature of the problem and make a diagnosis.
- GS5.** organize all process/ equipment manuals so that sorting/ accessing information is easy.
- GS6.** keep fixtures, tools, drawings, work instructions, sop manuals as per the part number, colour codes etc. as defined under the 5s systems.
- GS7.** use common sense and make judgments during day to day basis use reasoning skills to identify and resolve basic problems
- GS8.** carefully analyze each defect observed and try to find solution for the defect along with the operator.
- GS9.** identify defective parts in the manufacturing line by comparing manufactured with the work standard.
- GS10.** link the defect observed with the overall impact on the performance of the lot/production

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Checking of finished materials for detect or any deviations from the approved material</i>	3	10	-	-
PC1. compare colour, surface properties, mfi, and melting point etc. with the given approved material.	3	10	-	-
<i>Assisting in Corrective batch process with minor defects</i>	5	20	-	-
PC2. rectify minor defects like pellets size, colour variation etc. by control process parameters etc and informing operator.	5	20	-	-
<i>Perform Batch Quality Procedure</i>	7	30	-	-
PC3. provide first and last output from each batch to the lab for quality check on its composition, properties etc.	5	20	-	-
PC4. obtain clearance for the entire batch from the lab and submit the operator.	2	10	-	-
NOS Total	15	60	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	RSC/N4903
NOS Name	To conduct basic quality checks of the finished products with reference to the approved product.
Sector	Rubber
Sub-Sector	Manufacturing / Plastics Processing
Occupation	Plastics Recycling
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	26/12/2016
Next Review Date	31/12/2024
NSQC Clearance Date	21/07/2016

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each Element/ PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.

Qualification Pack

7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Minimum Aggregate Passing % at QP Level : 50

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
RSC/N4101.Maintain basic health and safety practices at the workplace, 5S	10	30	-	-	40	10
RSC/N4504.Basics of computer and data entry in MS OFFICE/office Open source suite Software	25	15	-	-	40	5
RSC/N4901.Understand basic concept, job requirements and basics knowhow related to the process	25	75	-	-	100	40
RSC/N4902.Assist in performing the Plastics Recycling related operations, monitor process parameters and troubleshoot the process/product if any under the guidance of operator.	25	75	-	-	100	25
RSC/N4903.To conduct basic quality checks of the finished products with reference to the approved product.	15	60	-	-	75	20
Total	100	255	-	-	355	100

Qualification Pack

Acronyms

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

Qualification Pack

Glossary

Sector	Sector is a conglomeration of different business operations having similar business 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.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
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.
Scope	Scope is a 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 quality of performance required.

Qualification Pack

Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment 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.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.