

Model Curriculum

Plastics Processing - Helper

SECTOR: RUBBER
SUB-SECTOR: PLASTICS PROCESSING
OCCUPATION: PLASTICS PROCESSING
REF ID: RSC/Q4808 (CPC/Q0101), V 1.0
NSQF LEVEL: 1



**CURRICULUM COMPLIANCE TO
QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS**

is hereby issued by the

RUBBER SKILL DEVELOPMENT COUNCIL

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/ Qualification Pack: '**Plastics Processing - Helper**'
QP No. '**RSC/Q4.808 (CPC/Q0101), V1.0, NSQF Level 1**'

Date of Issuance: **December 26th, 2016**

Valid up to: **December 25th, 2021**

* Valid up to the next review date of the Qualification Pack



Authorised Signatory
(Rubber Skill Development Council)

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Plastics Processing - Helper

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Plastics Processing - Helper”, in the “Rubber Skill Development Council” Sector/Industry and aims at building the following key competencies amongst the learners.

Program Name	Plastics Processing – Helper		
Qualification Pack Name and Reference ID	RSC/Q4808 (CPC/Q0101), V 1.0		
Version No.	1.0	Version Update Date	29/05/2019
Pre-requisites to Training	Ability to read and write		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Carry out the cleaning of machineries, accessories, and housekeeping • Identify the basic tools, equipment, materials, and their usage • Demonstrate proper handling, storing of tools, materials and safe disposal • Demonstrate effective working with others • Apply basic health and safety practices at the workplace. 		

This course encompasses 4 out of 4 National Occupational Standards (NOS) of “Plastics Processing - Helper” Qualification Pack issued by “Rubber Skill Development Council”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1.	Introduction to the job role Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code Bridge Module	<ul style="list-style-type: none"> List the major milestones in the developmental history of plastic State the basic industrial scenario of plastics and its prospects Identify types of plastic List major industrial associations linked to plastics processing Identify equipment used by plastics processor- helper Describe the roles and responsibilities of a ‘Plastics Processing – Helper’. 	Classroom equipment: charts, black / white board and duster.
2.	Cleaning of machineries, accessories and housekeeping Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 30:00 Corresponding NOS Code RSC/N4826 (CPC/N0101)	<ul style="list-style-type: none"> Describe the process of cleaning machineries and its accessories Explain the significance of cleaning the work area before and after production List the benefits of good housekeeping practices Describe work place housekeeping Clean the machineries and its accessories, before and after production Clean the ancillary equipment related to the process Clean the work area thoroughly before starting of production Check if the work area is free from any obstacles Remove the tools and accessories after completion of job Remove grease, oil , dust, water etc. from work area Remove scrap materials from work area Practice good housekeeping Assemble all the tools and tackles systematically 	Measuring equipment: Steel ruler, micrometer, Vernier caliper, radius gauge, feeler gauge, height gauge, thread gauge, steel measuring tape, weighing balance (1 no.) Hand tools: Hammer, screw driver set with multiple heads, hack saw, allen key hexagonal, twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, drills and knives Personal protective equipment: Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid kit with medicines Cleaning equipment: Different cleaning materials such as air blower, vacuum cleaner, soaps, cotton waste cloth, brooms, etc.

			Other equipment: Samples of raw materials, auxiliary equipment and machinery related to the main machines, other machines or devices related to the process.
3.	Identify the basic tools, equipment, materials and their use Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 30:00 Corresponding NOS Code RSC/N4827 (CPC/N0102)	<ul style="list-style-type: none"> List the basic tools, equipment and materials Describe the usage of the different tools and equipment Describe the process of handling the tools and machines of plastic processing Identify the different tools like soft hammer, spanners, allen keys, hack saw, etc. Choose the proper tools for the required job Demonstrate how to use the tools for particular applications Describe the different plastic conversion processes Demonstrate how to handle the different plastic processing machines Demonstrate how to handle the ancillary equipment like hopper dryer, hopper loader, mould temp. controller, chiller, cooling tower, mould/dye lifting devices Identify the materials used in the process Demonstrate how to manufacture components in the company 	Hand tools: Hammer, screw driver set with multiple heads, hack saw, allen key hexagonal, twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, drills and knives Model mould: Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx, cnc machine, mould polishing and assembly kit, computer hardware and auto-cad software Other equipment: Samples of raw materials, auxiliary equipment and machinery related to the main machines, other machines or devices related to the process Measuring equipment: Steel ruler, micrometer, Vernier caliper, radius gauge, feeler gauge, height gauge, thread gauge, steel measuring tape, weighing balance (1 no.)
4.	Handling, storing and safe disposal of tools and materials	<ul style="list-style-type: none"> List the tools to be issued in consultation with superior List the precautions for handling tools and consumables in transit period 	Personal Protective equipment: Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet,

	<p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 30:00</p> <p>Corresponding NOS Code RSC/N4828 (CPC/N0103)</p>	<ul style="list-style-type: none"> Describe the process of handling hydraulic oils, coolants etc. Coordinate with store to get the required tools Demonstrate how to issue the plastic raw materials from store Practice completing the task in given time Arrange the material handling accessories like trolley etc. Comply with the precautions for handling the tools, consumables in transit period from store to shop floor/ work area Demonstrate how to handle hydraulic oils, coolants etc. Keep the tools safe at work place Demonstrate how to transport raw material from store to work area safely Demonstrate how to store raw material safely at the designated area in shop floor Make arrangement for shifting of waste material Segregate the production waste Identify place for storing of waste Demonstrate how to handle waste safely 	<p>first aid kit with medicines</p> <p>Measuring equipment: Steel ruler, micrometer, Vernier caliper, radius gauge, feeler gauge, height gauge, thread gauge, steel measuring tape, weighing balance (1 no.)</p> <p>Other equipment: Samples of raw materials, auxiliary equipment and machinery related to the main machines, other machines or devices related to the process</p> <p>Hand tools: Hammer, screw driver set with multiple heads, hack saw, allen key hexagonal, twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, drills and knives</p> <p>Cleaning equipment: Different cleaning materials such as air blower, vacuum cleaner, soaps, cotton waste cloth, brooms, etc.</p>
5.	<p>Work effectively with others</p> <p>Theory Duration (hh.mm) 05:00</p> <p>Practical Duration (hh.mm) 20:00</p> <p>Corresponding NOS Code RSC/N4828 (CPC/N0103)</p>	<ul style="list-style-type: none"> Maintain good interpersonal relation with supervisor and fellow helpers Practice disciplined behavior at work place Maintain good interdepartmental relations 	<p>Classroom equipment: Projector/screen, computer, charts, black / white board and duster.</p>

<p>6.</p>	<p>Maintain basic health and safety practices at the workplace</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 30:00</p> <p>Corresponding NOS Code RSC/N4101 (CPC/N0411)</p>	<ul style="list-style-type: none"> • Describe workplace housekeeping • List the benefits of good housekeeping practices • State the environmental and safety policies of the organisation • Explain the significance of safe working practices • Comply with environmental and safety policies of organisation • Identify personal safety, job safety and machine safety procedures • Coordinate with other resources at the workplace to achieve the healthy, safe and secure environment • Identify any hazards like accidents, fires or any other natural calamity and take appropriate action. • Demonstrate safe working practices while dealing with hazards • Practise good housekeeping standards at all times • Demonstrate the correct use of a fire extinguisher • Demonstrate rescue techniques applied during fire hazard • Identify potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise • Conduct regular checks with support of the maintenance team on machine health • Create awareness amongst others by sharing information on the identified risks. • Demonstrate the sorting process for equipment • Check that the tools, fixtures and jigs that are lying on workstations are the ones in use and unnecessary items are not cluttering the workbenches • Categorize the types of wastes and their disposal • Segregate the items which are labelled as red tag items for the process area and keep them in the correct places • Categorize the tools/ equipment/ 	<p>Classroom equipment: charts, black / white board and duster.</p> <p>Measuring equipment: Steel ruler, micrometer, Vernier caliper, radius gauge, feeler gauge, height gauge, thread gauge, steel measuring tape, weighing balance (1 no.)</p> <p>Hand tools: Hammer, screw driver set with multiple heads, hack saw, allen key hexagonal, twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, drills and knives</p> <p>Personal protective equipment: Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid kit with medicines</p>
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		<p>fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers</p> <ul style="list-style-type: none"> • Practise proper stacking of various types of boxes and containers as per the size/ utility • Identify the floor markings/ area markings used for demarcating the various sections in the plant • Comply with the given instructions for labelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc. • Organize all material and tools in the designated places as indicated in the 5S instructions 	
	<p>Total Duration</p> <p>Theory Duration 50:00</p> <p>Practical Duration 150:00</p>	<p>Unique Equipment Required:</p> <ol style="list-style-type: none"> 1. Classroom equipment: Charts, black / white board and duster. 2. Measuring equipment: Steel ruler, micrometer, Vernier caliper, radius gauge, feeler gauge, height gauge, thread gauge, steel measuring tape, weighing balance (1 no.) 3. Hand Tools: Hammer, screw driver set with multiple heads, hack saw, allen key hexagonal, twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, drills and knives 4. Personal Protective equipment: Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid kit with medicines 5. Cleaning equipment: Different cleaning materials such as air blower, vacuum cleaner, soaps, cotton waste cloth, brooms, etc. 6. Other equipment: Samples of raw materials, auxiliary equipment and machinery related to the main machines, other machines or devices related to the process. 7. Model Mould: Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx, cnc machine, mould polishing and assembly kit, computer hardware and auto-cad software 	

Grand Total Course Duration: 200 Hours 0 Minutes

(This syllabus/ curriculum has been approved by [Rubber Skill Development Council](#))

Trainer Prerequisites for Job role: “Plastics Processing - Helper” mapped to Qualification Pack: “RSC/Q4808 (CPC/Q0101)” Version 1.0

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “ <u>RSC/Q4808 (CPC/Q0101), V 1.0</u> ”.
2	Personal Attributes	A Trainer should be free from socio-economic preferences and prejudice. He/ she should be safety conscious and proficient in handling and use security/ safety equipment. Besides being knowledgeable, he/ she should be energetic, motivating, innovative and good at communication. The trainer should be able to establish rapport with the trainees and employ innovative methods to impart instructions.
3	Minimum Educational Qualification	Material handling and housekeeping skills 5S and safety
4a	Domain Certification	Certified for Job Role “ <u>Plastics Processing - Helper</u> ” mapped to the Qualification Pack “ <u>RSC/Q4808 (CPC/Q0101), V 1.0</u> ” issued by RSDC. Minimum accepted score as per SSC guidelines is 80%.
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “ <u>Trainer</u> ”, mapped to the Qualification Pack: “ <u>MEP/Q2601</u> ” with scoring of minimum 80%.
5	Experience	As per the standards set by relevant SSC to practice in different industry sectors.

Annexure: Assessment Criteria

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Plastics Processing - Helper

Qualification Pack Code: RSC/Q4808 (CPC/Q0101), V 1.0

Sector Skill Council: Rubber Skill Development Council

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also laydown proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on these criteria.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

Assessable Outcome		Assessment criteria for the outcome		
NOS	Assessable Outcome Description	Total	Theory	Practical
RSC/N4826 (CPC/N0101): Cleaning of machineries, accessories and housekeepin g	PC1. clean the machineries and its accessories before and after production	1.5	0.5	1
	PC2. clean the ancillary equipment related to the process	1.5	0.5	1
	PC3. clean the tools and tackles after completion of jobs	1.5	0.5	1
	PC4. ensure that work area is free from any obstacles	1.5	0.5	1
	PC5. clean the work area thoroughly before starting of production	1.5	0.5	1
	PC6. remove the tools and accessories after completion of job	1.5	0.5	1
	PC7. remove grease, oil , dust, water etc. from work area	1.5	0.5	1
	PC8. remove scrap materials from work area	1.5	0.5	1
	PC9. demonstrate good housekeeping	1.5	0.5	1
	PC10. keep all the tools and tackles systematically	1.5	0.5	1
	Sub total		15	5
RSC/N4827 (CPC/N0102): Identification and use of basic tools, equipment and materials	PC1. identify tools like soft hammer, spanners, allen keys, hack saw etc.	2.5	0.5	2
	PC2. select the proper tools	2.5	0.5	2
	PC3. use the tools for particular applications	2.5	0.5	2
	PC4. study the different plastic conversion processes	2.5	0.5	2
	PC5. handle the different plastic processing machines	2.5	0.5	2
	PC6. handle the ancillary equipment like hopper dryer, hopper loader, mould temp. controller, chiller, cooling tower, mould /dye lifting devices	2.5	0.5	2
	PC7. identify physically materials used in process	2.5	0.5	2
	PC8. manufacture components in company	2.5	0.5	2
	PC9. maintain good interpersonal relation with supervisor and fellow helpers	2.5	0.5	2
	PC10. follow disciplined behavior in work place	1.25	0.25	1
	PC11. maintain good inter-departmental relations	1.25	0.25	1
Sub total		25	5	20

RSC/N4828 (CPC/N0103): Issue of Tools and Material - handling , storing and safe disposal	PC1. prepare the list of tools to be issued in consultation with superior	1.25	0.25	1
	PC2. coordinate with store to get required tools	1.25	0.25	1
	PC3. issue the plastic raw materials from store as and when ordered by supervisor	1.25	0.25	1
	PC4. complete the task in given time	1.25	0.25	1
	PC5. arrange the material handling accessories like trolley, etc.	1.25	0.25	1
	PC6. take precautions for handling the tools, consumables in transit period from store to shop floor/ work area	1.25	0.25	1
	PC7. handle hydraulic oils , coolants, etc.	1.25	0.25	1
	PC8. keep the tools safe at work place	1.25	0.25	1
	PC9. transport raw material from store to work area safely	1.25	0.25	1
	PC10. store raw material safely at designated area in shop floor	1.25	0.25	1
	PC11. make arrangement for shifting of waste material	1	0.5	0.5
	PC12. segregate the production waste	1	0.5	0.5
	PC13. identify place for storing of waste	1	0.5	0.5
	PC14. handle waste safely	0.75	0.25	0.5
	PC15. maintain good interpersonal relation with supervisor and fellow helpers	1.25	0.25	1
	PC16. follow disciplined behavior at work place	1.25	0.25	1
	PC17. maintain good interdepartmental relations	1.25	0.25	1
Sub total	20	5	15	
RSC/N4101 (CPC/N0411) Maintain basic health and safety practices at the workplace, 5S.	PC1. wear protective clothing/equipment for specific tasks and work conditions	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. ensure good housekeeping practices at all times	2.5	0.5	2
	PC4. use 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,	2.5	0.5	2

	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	2.5	0.5	2
	PC8. create awareness amongst others by sharing information on the identified risks	2.5	0.5	2
	PC9. follow the sorting process and check that the tools, fixtures and jigs that are lying on workstations are the ones in use and unnecessary 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. 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	1.5	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	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	1.5	0.5	1

	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	1.5	0.5	1
	PC20. follow the given instructions and check for labelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire, etc.	1.5	0.5	1
	PC21. to 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
	Total	100	25	75