QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR RUBBER INDUSTRY

Contents

What are Occupational Standards(OS)?

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

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Introduction

Qualifications Pack- Junior Rubber Technician / Technical Assistant

SECTOR: RUBBER INDUSTRY

SUB-SECTOR: Rubber Manufacturing

OCCUPATION: Production

REFERENCE ID: RSC/ Q 0831

ALIGNED TO: NCO-2004/NIL

Brief Job Description: He is required to co-ordinate with team members and assist the operators / supervisors to carry out activities as per the production processes of the company. He/she should understand the importance of the activity / task undertaken by him/her in the manufacturing processes and support the operators / supervisors to ensure set standards are achieved within the work area.

Personal Attributes: This job requires the individual to work independently and be comfortable in performing laborious work. He should be result oriented and positive in attitude. The individual must be willing to work in the factory environment and able to work in factory environment

Job Details

Qualifications Pack Code	**RSC/ Q 0831**		
Job Role	**Junior Rubber Technician / Technical Assistant**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Sector	**Rubber Industry**	**Drafted on**	**18/03/2014**
Sub-sector	**Rubber Manufacturing**	**Last reviewed on**	**29/12/2015**
Occupation	**Production**	**Next review date**	**29/12/2017**
NSQC Clearnace on	**18/06/2015**		

Job Role	**Junior Rubber Technician / Technical Assistant**
Role Description	He is required to co-ordinate with team members and assist the operators / supervisors to carry out activities as per the production processes of the company. He/she should understand the importance of the activity / task undertaken by him/her in the manufacturing processes and support the operators / supervisors to ensure set standards are achieved within the work area.
NSQF level	3
Minimum Educational Qualifications*	Class VII
Maximum Educational Qualifications*	Class XII
Training (Suggested but not mandatory)	Training on the shopfloor of production department
Minimum Job Entry Age	18 years
Experience	
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. RSC/N 3101 (Assisting the operator in material handeling in weing) 2. RSC/N 3102 (Assisting the operator in production process and equipment handeling) 3. RSC/N 3103 (Assisting the operator in post production process) **Optional:** NA
Performance Criteria	As described in the relevant OS units

Definitions

Keywords /Terms	Description
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.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
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.
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 they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification 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.
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.
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.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills or 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.

National Occupational Standard

Overview:

This unit is about familiarize with different terminology, their importance and application in rubber industry with reference to rubber materials to assist different operators/Technicians engaged in rubber processing & rubber product manufacturing operation.

National Occupational Standard

Unit Code	**RSDC / N3101**
Unit Title (Task)	**Assisting the operator in material handeling in weing**
Description	This unit is about familiarize with different terminology, their importance and application in rubber industry with reference to rubber materials.
Scope	This unit/task cover the following : • To assist Lab Technician for Testing of incoming raw materials. • To assist raw material weighing operators • To assist Rubber mixing operators (2 Roll mill, Intermix/ banbury) in mixing of compounds • To assist Lab Technician to release mixed compound • To assist Operator for Identification & Traceability. • To assist Mixing Operators for Housekeeping and Safety
Performance Criteria (PC) w.r.t. the Scope	
Material Handeling	PC1. Assist raw material handling Operators to identify various raw materials used in the rubber industry (polymer, filler, processing aids, curatives, special additives etc.) PC2. Assist raw material handling operators in the raw material storage area with respect identification, traceability including housekeeping & safety as per SOP. PC3. Assist Lab Technician for sampling of raw material from the storage area as per SOP. PC4. Assist raw material weighing operators for preparation of mix as per SOP. PC5. Assist Mixing Operators for mixing of compounds – master batch, final as per SOP PC6. Assist Lab Technician for collection of compounds with proper identification as per SOP. PC7. Assist mixing operators for identifying different compounds in the mixing area PC8. Assist Material Handling Operators for storage of compounds with proper identification in the storage area as per SOP. PC9. Assist Mixing Operator for maintaining records for traceability.
Health and Safety	Awareness on different safety devices (safety bar, safety guard etc) attached with different Rubber Processing Machineries. Awareness on Material Safety Data Sheet (MSDS)
Material disposal	PC10. Assist to carry out disposal of waste and left over tested material safely as per SOP
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the	The user/individual on the job needs to know and understand: KA1. Types and grades of natural & synthetic rubbers, rubber materials, components

company / organization and its processes)	and their applications in the rubber industry & Testing KA2. Organisational Coding system of raw material/compounds and components. KA3. Chemicals used in the rubber industry and their function KA4. Awareness on different quality management systems (ISO-9000, TS-16949, ISO-14001, OHSAS-18001) KA5. Principles of good working practices applicable in the workplace KA6. Material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure KA7. Importance of identifying non-conforming products and storage of the same KA8. Risk and impact of not following defined procedures/work instructions KA9. Escalation matrix for reporting identified issues KA10. Types of documentation in organization and importance of the same KA11. Records to be maintained and implications of non-maintenance of the same KA12. Company manual and from where to attain it KA13. Importance of housekeeping & good shop floor practices (e.g.3S/5S) KA14. Health, Safety and Environment guidelines, legislation and regulations as applicable KA15. Personal protection (Which protective equipment to be used and how) KA16. Impact of poor practices on health, safety and environment KA17. Potential hazards and actions to minimize the same KA18. Escalation matrix and escalation procedure for reporting hazards. KA19. The usage of different fire extinguisher KA20. Impact of various practices on cost, quality, productivity, delivery and safety KA21. Basic knowledge on TPM, CLIT Operation (Clean, Lubrication, Inspection and Tightening)
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Knowledge of basic chemistry, organic chemistry, environmental chemistry, Intrinsic & extrinsic properties and simple chemical calculation KB2. Knowledge on basic polymer science – Monomers, polymers, classification of Polymers (rubber, plastics, fibres and resins), its characteristic features, functionality, degree of polymerization, molecular weight & molecular weight distribution, melting temperature, glass transition temperature, crystallinity, cis-trans configuration, tacticity, thermoplastic and thermosets etc. KB3. Knowledge on different rubber production grades : Natural Rubber – Method of tapping NR latex, Production of Natural Rubber and types of different NR grades and their applications. Synthetic Rubber – Grades and application in rubber industry. Reclaimed Rubber : Production, types and applications. KB4. Knowledge on different Rubber compounding ingredients (Fillers, Processing Aids, Vulcanising System and protective agents and special additives etc.) and

	reinforcing material (Cotton, Rayon, Nylon, Polyester, Aramid, Steel, Hybrid and their application in rubber industry
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Record and communicate details of work done to appropriate people using written/typed report or computer based record/electronic mail SA2. Assist to maintain proper records as per given format (SOP)
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA3. Communication with upstream and downstream teams SA4. Communicate with job owners like sample originating section, supplier etc. SA5. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA6. Disclose information only to those who have the right and need to know it. SA7. Communicate confidential and sensitive information discretely to authorized person
B.Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: Different Material Handling equipment operator Rubber compound Handling Operator Lab Chemist Computer operations/PLC The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. seek clarification on problems from others SB3. apply problem-solving approaches in different situations SB4. refer anomalies to the line manager
	Customer Centricity
	Application of basic sciences (chemistry), mathematics Application of statistics Use of computer/ application software
	Problem Solving

	The user/individual on the job needs to know and understand how to: SB 5. Interpret quality for sheet SB 6. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB7. Proper collection of waste material SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience Diagnose common problems in the machine based on visual inspection, sound , temperature etc Suggest improvements(if any) in process based on experience Apply appropriate technique/method for various types of products to meet desired purpose
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB9. Handle equipment/rubber sheet SB6. seek clarification on problems from others SB10. apply problem-solving approaches in different situations SB11. refer anomalies to the line manager

NOS Version Control

NOS Code	**RSDC / N 3101**		
Credits(NSQF)	**TBD**	**Version number**	**0.5**
Industry	**Rubber Manufacturing**	**Drafted on**	**18/03/14**
Industry Sub-sector	**Tyre and Non - Tyre**	**Last reviewed on**	**29/12/2015**
Occupation	**Production**	**Next review date**	**29/12/2017**

National Occupational Standard

Overview:

This unit is about familiarize with different terminology, their importance and application in rubber industry with reference to Rubber Processing Equipment and machinery to assist different operators/Technicians engaged in different rubber processing/operations (mixing/dipping/extrusion/ calendaring/component preparation/building/curing and finishing

RSC / N 3102 Assisting the operator in production process and equipment handeling

National Occupational Standard

Unit Code	**RSDC / N3102**
Unit Title (Task)	**Assisting the operator in production process and equipment handeling**
Description	This unit is about familiarize with different terminology, their importance and application in rubber industry with reference to rubber processing equipment and machinery.
Scope	This unit/task cover the following to assist: • Rubber mixing operators in pre, during and post mixing operation • Extruder Operator for Pre, during and post extrusion process • Dipping Operator for Pre, during and post dipping process of organic tyre cords. • Calender Operator for pre, during and post calendaring operations. • Different rubber component preparation operators. • Green rubber product building (tyre and non tyre products) • Curing and moulding operators for pre, during and post moulding operatioin. • Finishing Operators • Maintenance and upkeep of machinery • Housekeeping and safety in the shop floor • Identification and traceability
Performance Criteria (PC) w.r.t. the Scope	
Equipment and machinery handling	PC1. Assist in identifying different material/compound and component required for different rubber processing (mixing, dipping, extrusion, calendaring, component preparation, building, moulding/curing). PC2. Assist in raw material handling operators in the raw material storage area with respect to identification, traceability including housekeeping & safety as SOP. PC3. Assist Lab Technician for sampling of raw material from the storage area, collection of compounds and components as per SOP. PC4. Assist raw material weighing operators for preparation of mix as per SOP. PC5. Assist Mixing Operators for mixing of compounds – master batch, final as per SOP. PC6. Assist extrusion operator for extrusion process (pre, during and post) PC7. Assist fabric dipping operation PC8. Assist calendering operation PC9. Assist component preparation PC10. Asst. Building operation PC11. Assist Curing/moulding operation PC12. Assist Finishing operation PC13. Assist Material Handling Operators for storage of compounds with proper identification in the storage area as per SOP. PC14. Assist Operators of Mixing, Extrusion, Calendering, dipping, stock preparation, building & curing/moulding area for maintaining records.

RSC / N 3102 Assisting the operator in production process and equipment handeling

Health and Safety	Awareness on different safety devices (safety bar, safety guard etc) attached with different Rubber Processing Machineries.
Material disposal	PC15. Carry out disposal of waste and left over tested material safely as per SOP
Knowledge and Understanding (K)	
B. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. Organisational Coding system of compounds and different components KA2. Modern methods of quality management systems (ISO-9000, TS-16949, ISO-14001, OHSAS-18001) KA3. Compound and component disposal procedure, importance of appropriate disposal and implications of not following disposal procedure KA4. Importance of identifying non-conforming compounds & components and storage of the same KA5. Risk and impact of not following defined procedures/work instructions KA6. Escalation matrix for reporting identified issues KA7. Types of documentation in organization and importance of the same KA8. Records to be maintained and implications of non-maintenance of the same KA9. Company manual and from where to attain it KA10. Importance of housekeeping & good shop floor practices (e.g.3S/5S) KA11. Health, Safety and Environment guidelines, legislation and regulations as applicable KA12. Personal protection (Which protective equipment to be used and how) KA13. Impact of poor practices on health, safety and environment KA14. Potential hazards and actions to minimize the same KA15. Escalation matrix and escalation procedure for reporting hazards. KA16. The usage of different fire extinguisher KA17. Impact of various practices on cost, quality, productivity, delivery and safety KA18. Basic knowledge on TPM, CLIT Operation (Clean Lubrication, Inspection and Tightening) KA19. Awareness on different safety devices (safety bar, safety guards) attached with different rubber processing machineries.
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Knowledge of different engineering terminology, their importance and application in rubber industries. KB2. Knowledge on Units of measurement (SI system) KB3. Knowledge on calculation of batch weight, specific gravity and cost of compounds. KB4. Knowledge of different rubber processing machineries (mixing mill, kneader, intermix, banbury, duplex/triplex/quadruplex extruders, hot/cold feed /pin barrel extruders, 2 Roll/3Roll/4 Roll calenders, Dip Unit, Stock preparation and curing/moulding – hydraulic press, single day light/multi day light press, toggle lever press, C Frame press, boot and shoe press, conveyor and V belt press, tyre/tube/flap curing press, autoclave, continuous curing, rotocure etc.). KB5. Knowledge on equipment used in latex goods manufacturing (ball mill, colloid mill, pearl mill, attrition mill, planetary mixer, forming machine, dip

RSC / N 3102 Assisting the operator in production process and equipment handeling

	unit) KB6. Knowledge on different rubber processing operation (Pre,during and Post) KB7. Knowledge on different moulding operations (compression, transfer, injection and blow moulding), continuous curing . KB8. Knowledge on the operation of different measuring equipment (weighing scale, thermometer, pyrometer, measuring tape, vernier scale, screw gauge, tachometer, pressure gauge, timer, measurement of volume)
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Record and communicate details of work done to appropriate people using written/typed report or computer based record/electronic mail SA2. Maintain proper records as per given format (SOP)
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA3. Communication with upstream and downstream teams SA4. Communicate with job owners like sample originating section, supplier etc. SA5. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA6. Disclose information only to those who have the right and need to know it. SA7. Communicate confidential and sensitive information discretely to authorized person
B.Professional Skills	**Decision Making**
	SB1. The user/individual on the job needs to know and understand how to: Different Material Handling equipment operator Rubber compound Handling Operator Lab Chemist Computer operations/PLC The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. seek clarification on problems from others SB3. apply problem-solving approaches in different situations SB4. refer anomalies to the line manager
	Customer Centricity
	Application of basic sciences (chemistry), mathematics Application of statistics Use of computer/ application software

RSC / N 3102 Assisting the operator in production process and equipment handeling

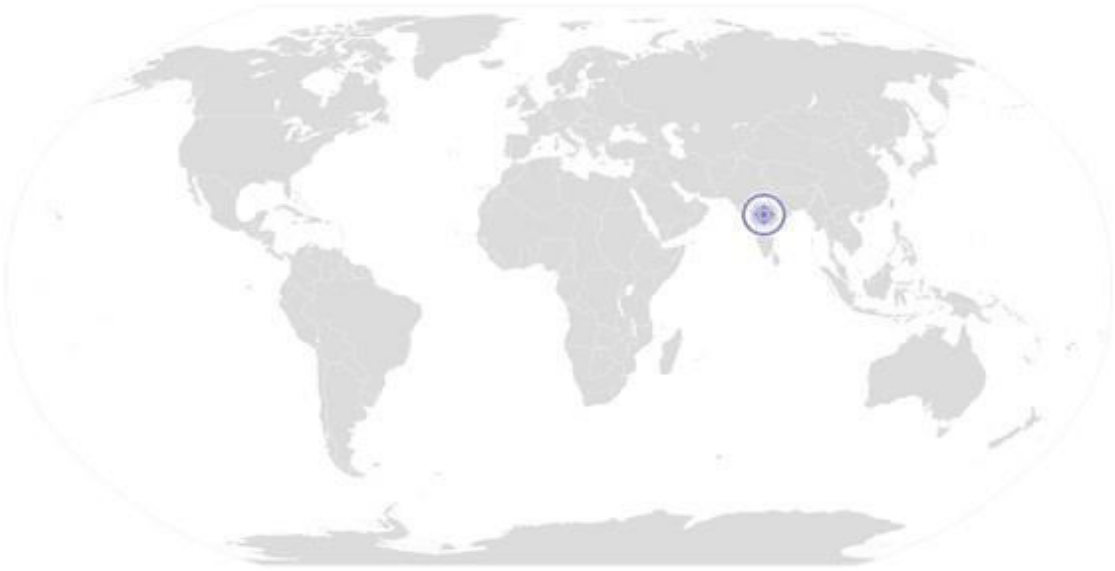
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB 5. Interpret quality for sheet SB 6. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB7. Proper collection of waste material SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience Diagnose common problems in the machine based on visual inspection, sound , temperature etc Suggest improvements(if any) in process based on experience Apply appropriate technique/method for various types of products to meet desired purpose
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB9. Handle equipment/rubber sheet SB6. seek clarification on problems from others SB10. apply problem-solving approaches in different situations SB11. refer anomalies to the line manager

NOS Version Control

NOS Code	**RSDC / N 3102**		
Credits(NSQF)	**TBD**	**Version number**	**0.5**
Industry	**Rubber Manufacturing**	**Drafted on**	**18/03/14**
Industry Sub-sector	**Tyre and Non - Tyre**	**Last reviewed on**	**29/12/2015**
Occupation	**Production**	**Next review date**	**29/12/2017**

Back to QP

National Occupational Standard



Overview:

This unit is about familiarization with different terminologies used in rubber products manufacturing, Testing and to assist different operators/Technicians engaged in rubber products (latex and dry rubber) manufacturing & testing.

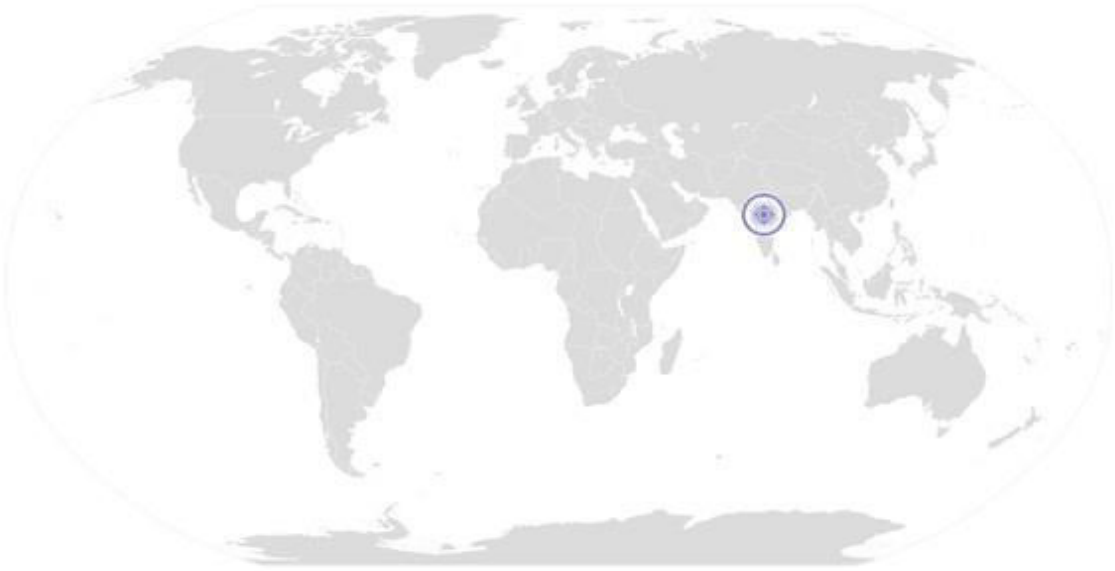
National Occupational Standard

Unit Code	RSDC / N3103
Unit Title (Task)	**Assisting the operator in post production process**
Description	This unit is about Rubber Products (latex and dry rubber) manufacturing & testing
Scope	This unit/task cover the following to assist different operators : • Tyre and tube building operation • Retreading of tyres • Non-tyre products • Latex products • Testing of raw materials, In process materials and cured products
Performance Criteria (PC) w.r.t. the Scope	
Testing & Quality check	PC1. Collection of components and check for building PC2. Prepare the machineries PC3. Building the products, PC4. Green Product inspection PC5. Curing/Moulding PC6. Finishing & finished product inspection. PC7. Sampling and Testing
Health and Safety	Awareness on different safety devices (safety bar, safety guard etc) attached with different Rubber Processing Machineries.
Material disposal	PC8. Carry out disposal of waste and left over tested material safely as per SOP
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. Tyre and tube building operation KA2. Retreading of tyres KA3. Non-tyre products KA4. Latex products KA5. Testing of raw materials, In process materials and cured products KA6. Organisational Coding system KA7. Modern methods of quality management systems (ISO-9000, TS-16949, ISO-14001, OHSAS-18001) KA8. Principles of good laboratory practices applicable in the workplace KA9. Material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure KA10. Importance of identifying non-conforming products and storage of the same KA11. Risk and impact of not following defined procedures/work instructions KA12. Escalation matrix for reporting identified issues KA13. Types of documentation in organization and importance of the same KA14. Records to be maintained and implications of non-maintenance of the same KA15. Company manual and from where to attain it

	KA16. Importance of housekeeping & good shop floor practices (e.g.3S/5S) KA17. Health, Safety and Environment guidelines, legislation and regulations as applicable KA18. Personal protection (Which protective equipment to be used and how) KA19. Impact of poor practices on health, safety and environment KA20. Potential hazards and actions to minimize the same KA21. Escalation matrix and escalation procedure for reporting hazards. KA22. The usage of different fire extinguisher KA23. Impact of various practices on cost, quality, productivity, delivery and safety KA24. Basic knowledge on TPM, CLIT Operation (Clean Lubrication, Inspection and Tightening)
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Cycle/rickshaw tyres, 2/3 wheeler tyres, auto tyres, tubes and flaps KB2. Bias and Radial tyres, tube type and tubeless tyres, Different tyre components, Tyre Building, Tyre curing, finishing and Final inspection. KB3. Hot and cold retreading KB4. Components and functions of components of Conveyor and V Belt, hoses, cables, rubber rollers, coated fabric, calendered sheets, cellular products, rubber to metal bonded products, seals/diaphragm/gaskets, moulded & extruded goods, sports goods, footwear, adhesives, aero space and bio medical application, rubber products for railways and defence. KB5. Latex products (NR and synthetic rubber latex, compounding, stabilization and different latex products) KB6. Sampling, sample preparation, specimen preparation, Testing and significance of testing
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Record and communicate details of work done to appropriate people using written/typed report or computer based record/electronic mail SA2. Maintain proper records as per given format (SOP)
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA3. Communication with upstream and downstream teams SA4. Communicate with job owners like sample originating section, supplier etc. SA5. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA6. Disclose information only to those who have the right and need to know it. SA7. Communicate confidential and sensitive information discretely to authorized person

B.Professional Skills	**Decision Making**
	SB1. The user/individual on the job needs to know and understand how to: Different Material Handling equipment operator Rubber compound Handling Operator Lab Chemist Computer operations/PLC The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. seek clarification on problems from others SB3. apply problem-solving approaches in different situations SB4. refer anomalies to the line manager
	Customer Centricity
	Application of basic sciences (chemistry), mathematics Application of statistics Use of computer/ application software
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB 5. Interpret quality for sheet SB 6. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB7. Proper collection of waste material SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience Diagnose common problems in the machine based on visual inspection, sound , temperature etc Suggest improvements(if any) in process based on experience Apply appropriate technique/method for various types of products to meet desired purpose
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB9. Handle equipment/rubber sheet SB6. seek clarification on problems from others

	SB10. apply problem-solving approaches in different situations SB11. refer anomalies to the line manager



NOS Version Control

NOS Code	**RSDC / N 3103**		
Credits(NSQF) *[OPTIONAL]*		**Version number**	**0.5**
Industry	**Rubber Manufacturing**	**Drafted on**	**18/03/14**
Industry Sub-sector	**Tyre and Non - Tyre**	**Last reviewed on**	**29/12/2015**
		Next review date	**29/12/2017**

Back to QP

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Junior Rubber Technician /Technical Assistant
Qualification Pack Code: RSC/ Q 0831
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 lay down 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 center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Assessment Strategy			Marks Allocation		
NOS	**Elements**	**Performance Criteria**	**Total**	**Theory**	**Practical**
1. RSC / N 3101 Assisting the operator in material handeling in weing	Material Handeling	PC1. Assist raw material handling Operators to identify various raw materials used in the rubber industry (polymer, filler, processing aids, curatives, special additives etc.)	7	5	2
		PC2. Assist raw material handling operators in the raw material storage area with respect identification, traceability including housekeeping & safety as per SOP.	7	5	2
		PC3. Assist Lab Technician for sampling of raw material from the storage area as per SOP.	8	5	3
		PC4. Assist raw material weighing operators for preparation of mix as per SOP.	8	5	3
		PC5. Assist Mixing Operators for mixing of compounds – master batch, final as per SOP	10	5	5
		PC6. Assist Lab Technician for collection of compounds with proper identification as per SOP.	10	5	5
		PC7. Assist mixing operators for identifying different compounds in the mixing area	10	5	5
		PC8. Assist Material Handling Operators for storage of compounds with proper identification in the storage	10	5	5

		area as per SOP.			
		PC9. Assist Mixing Operator for maintaining records for traceability.	10	5	5
	Health and Safety	Awareness on different safety devices (safety bar, safety guard etc) attached with different Rubber Processing Machineries. Awareness on Material Safety Data Sheet (MSDS)	10	5	5
	Material disposal	PC10. Assist to carry out disposal of waste and left over tested material safely as per SOP	10	5	5
			100	55	45
2. RSC / N 3102 Assisting the operator in production process and equipment handeling	Equipment and machinery handling	PC1.Assist in identifying different material/compound and component required for different rubber processing (mixing, dipping, extrusion, calendaring, component preparation, building, moulding/curing).	5	5	0
		PC2.Assist in raw material handling operators in the raw material storage area with respect to identification, traceability including housekeeping & safety as SOP.	5	5	0
		PC3.Assist Lab Technician for sampling of raw material from the storage area, collection of compounds and components as per SOP.	5	5	0
		PC4. Assist raw material weighing operators for preparation of mix as per SOP.	5	5	0
		PC5. Assist Mixing Operators for mixing of compounds – master batch, final as per SOP.	10	5	5
		PC6. Assist extrusion operator for extrusion process (pre, during and post)	10	5	5
		PC7.Assist fabric dipping operation	5	5	0
		PC8.Assist calendering operation	5	5	0
		PC9.Assist component preparation	5	5	0
		PC10.Asst. Building operation	10	5	5
		PC11.Assist Curing/moulding operation	10	5	5
		PC12.Assist Finishing operation	5	5	0
		PC13.Assist Material Handling Operators for storage of compounds with proper identification in the storage area as per SOP.	5	5	0
		PC14.Assist Operators of Mixing, Extrusion, Calendering, dipping, stock preparation, building & curing/moulding area for maintaining records.	5	5	0

		10			
	Health and Safety	Awareness on different safety devices (safety bar, safety guard etc) attached with different Rubber Processing Machineries.	5	5	0
	Material disposal	PC15. Carry out disposal of waste and left over tested material safely as per SOP	5	5	0
			100	80	20
3. RSC/N 3103 Assisting the operator in post production process	Testing & Quality check	PC1. Collection of components and check for building	10	5	5
		PC2. Prepare the machineries	0	5	5
		PC3. Building the products,	0	5	5
		PC4. Green Product inspection	0	5	5
		PC5. Curing/Moulding	0	5	10
		PC6. Finishing & finished product inspection.	0	5	5
		PC7. Sampling and Testing	0	5	10
	Health and Safety	Awareness on different safety devices (safety bar, safety guard etc) attached with different Rubber Processing Machineries.	10	5	5
	Material disposal	PC8. Carry out disposal of waste and left over tested material safely as per SOP	0	5	5
			100	45	55