

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR RUBBER INDUSTRY

What are Occupational Standards(OS)?

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

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Contents

1. Introduction and Contacts.....	1
2. Qualifications Pack.....	2
3. OS Units.....	2

Introduction

Qualifications Pack- Kneader Operator

SECTOR: RUBBER INDUSTRY

SUB-SECTOR: 1. Tyre 2.Non- Tyre

OCCUPATION: Mixing

REFERENCE ID: RSC/ Q 0103

ALIGNED TO: NCO-2004/NIL

Brief Job Description: The Kneader is responsible for mixing raw materials in the Kneader and feed the Rubber into the machine to prepare the rubber compound.

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.

Job Details	Qualifications Pack Code	RSC/ Q 0103		
	Job Role	Kneader Operator		
	Credits(NSQF)	TBD	Version number	1.0
	Sector	Rubber Manufacturing	Drafted on	20/03/13
	Sub-sector	Tyre and Non- tyre	Last reviewed on	29/12/15
	Occupation	Mixing	Next review date	29/12/17
	NSQC Cleanace on	20/07/2015		

Job Role	Kneader Operator
Role Description	The Kneader is responsible for mixing raw materials in the Kneader and feed the Rubber into the machine to prepare the rubber compound.
NVEQF/NVQF level	4
Minimum Educational Qualifications*	Class X
Maximum Educational Qualifications*	ITI/Graduate in Science
Training (Suggested but not mandatory)	Training on operation of machinery
Minimum Job Entry Age	18 years
Experience	In lieu of minimum qualification the employee has worked as a semi-skilled helper for minimum 6 months in the same role.
Applicable National Occupational Standards (NOS)	Compulsory: <ol style="list-style-type: none"> RSC/ N0301 (Prepare kneader and accessories) RSC/ N0302 (Mix raw material in kneader to prepare rubber compound) RSC/ N0303 (Undertake post kneader mixing activities) RSC/ N5001 (To carry out housekeeping) RSC/ N5002 (To carry out reporting and documentation) RSC/ N5003 (To carry out quality checks) RSC/ N5004 (To carry out problem identification and escalation) Optional: <ol style="list-style-type: none"> NA
Performance Criteria	As described in the relevant OS units

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 preparing kneader and other accessories for mixing raw material to make rubber compound

Unit Code	RSC / N 0301
Unit Title (Task)	Prepare kneader and accessories
Description	This unit is about preparing kneader and other accessories for the mixing operation
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Ensuring housekeeping and safety in the mixing area Preparing any other accessories required (like cooling water, hydraulic system, temperature control unit (TCU), lubrication system) Setting the parameters on the kneader and accessories to carry out operations
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Equipment readiness	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Ensure that the kneader is clean</p> <p>PC2. Ensure functioning of safety features of Kneader and other accessories</p> <p>PC3. Keep upstream and downstream equipment ready</p> <p>PC4. Adjust ram pressure as specified</p> <p>PC5. Set parameters for the equipment (mixing cycle time, temperature and ram pressure), as per company's SOP</p> <p>PC6. Keep all accessories (like cooling water, hydraulic/pneumatic system, temperature/energy control unit (TCU), lubrication system) ready</p>
Raw material appropriateness	<p>PC7. Ensure availability of pre-weighed, approved rubber and other ingredients to be fed as per batch requirement</p> <p>PC8. Ensure that raw material to be fed is approved by laboratory</p> <p>PC9. Match the batch code of each raw material with the batch code on the job schedule given by the planning department</p> <p>PC10. Ensure that all raw materials have been assembled/organized (in correct sequence, if applicable) to be fed into kneader</p> <p>PC11. Ensure all ingredients are homogeneously mixed.</p>
Health & Safety	<p>PC12. Ensure Housekeeping and Safety in mixing area</p> <p>PC13. Ensure that electrical devices that may be exposed to carbon black dust are sealed.</p> <p>PC14. Periodically blow the electrical devices with clean/dry compressed air.</p> <p>PC15. Ensure that the exhaust systems are used to maintain the concentration levels of various particulate matters within limits.</p> <p>PC16. Adhere to all safety norms (like wearing protective gloves, shoes, Safety Glasses etc)</p>

	PC17. Comply with health, safety, environment guidelines, regulations etc in accordance with international/national standards or organizational standards
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Manufacturing process, including master mix and final mix process</p> <p>KA2. Implications of poorly prepared equipment, power failure etc</p> <p>KA3. Importance of identifying non-conforming material and storage of the same</p> <p>KA4. Risk and impact of not following defined procedures/work instructions</p> <p>KA5. Escalation matrix for reporting identified problems</p> <p>KA6. Types of documentation in organization and importance of the same</p> <p>KA7. Records to be maintained and implications of non-maintenance of the same</p> <p>KA8. Importance of housekeeping & good shop floor practices (eg 3S/5S)</p> <p>KA9. Health, Safety and Environment guidelines, legislation and regulations as applicable</p> <p>KA10. Personal protection(Which protective equipment to be used and how)</p> <p>KA11. Impact of poor practices on health, safety and environment</p> <p>KA12. Potential hazards and actions to minimize the same</p> <p>KA13. Escalation matrix and escalation procedure for reporting hazards</p> <p>KA14. Importance of FIFO</p> <p>KA15. The usage of fire extinguisher</p> <p>KA16. Impact of various practices on cost, quality, productivity, delivery and safety</p> <p>KA17. Handover/ Takeover the equipment/ work area as per company's SOP</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Knowledge of kneader and operation (Equipment working, possible setting levels, typical process followed for different batches)</p> <p>KB2. Possible causes of common mixing problems & their remedies</p> <p>KB3. Tolerance levels for various parameters (temperature, pressure and weight)</p> <p>KB4. Health hazards of process and compounding ingredients</p> <p>KB5. Implications of delays in preparation process</p> <p>KB6. Types of defects leading to rejections, indicators, reasons and possible solutions.</p> <p>KB7. Cleanliness and safety requirements for commencing a mixing batch operation</p> <p>KB8. Units of measurement</p> <p>KB9. Responding to emergencies e.g. Power failures ,fire and system failures and manual intervention to avoid disaster</p> <p>KB10. Appropriate batch size with respect to appropriate machinery</p>
Skills (S)	
A. Core Skills/	Writing Skills

Generic Skills	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Construct simple sentences and express ideas clearly through written communication</p> <p>SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company</p> <p>SA3. Write simple letters, mails, etc</p> <p>SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes</p>
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc</p> <p>SA6. Read images, graphs, diagrams</p> <p>SA7. Understand the various coding systems as per company norms</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. Express statements, opinions or information clearly so that others can hear and understand</p> <p>SA9. Respond appropriately to any queries</p> <p>SA10. Communicate with supervisor</p> <p>SA11. Communicate with upstream and downstream teams</p> <p>SA12. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme)</p> <p>Integrity</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA13. Practice honesty with respect to company property and time</p> <p>SA14. Communicate with people in a form and manner and using language that is open and respectful</p> <p>SA15. Resolve any difficulties in relationships with colleagues, or get help from an appropriate person, in a way that preserves goodwill and trust</p> <p>Motivation</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA16. Take responsibility for completing one's own work assignment</p> <p>SA17. Take initiative to enhance/learn skills in one's area of work</p> <p>SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning.</p> <p>SA19. Is open to new ways of doing things</p> <p>SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them.</p> <p>Reliability</p> <p>The user/individual on the job needs to know and understand how to:</p>

	<p>SA21. Avoid absenteeism</p> <p>SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations</p> <p>SA23. Work in disciplined factory environment</p> <p>SA24. Be punctual</p>
B. Professional Skills	Decision Making
	<p>The user/individual on the job needs to know and understand how to:</p> <p>Handle kneader, accessories</p> <p>Handle rubber compound</p> <p>Handle chemicals</p> <p>Handling of various types of material handling equipment like forklifts, trolleys</p> <p>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.</p>
	Plan and Organize
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. seek clarification on problems from others</p> <p>SB3. apply problem-solving approaches in different situations</p> <p>SB4. refer anomalies to the line manager</p>
	Customer Centricity
	NA
	Problem Solving
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB 5. Interpret quality for sheet</p> <p>SB 6. Suggest improvements(if any) in process/product/materials based on results and experience</p>
	Analytical Thinking
<p>The user/individual on the job needs to know and understand how to:</p> <p>SB7. Proper collection of waste material</p> <p>SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience</p> <p>Diagnose common problems in the machine based on visual inspection, sound , temperature etc</p> <p>Suggest improvements(if any) in process based on experience</p>	
Critical Thinking	

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none">SB9. Handle equipment/rubber sheetSB6. seek clarification on problems from othersSB10. apply problem-solving approaches in different situationsSB11. refer anomalies to the line manager
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NOS Version Control

NOS Code	RSC / N 0301		
Credits(NSQF)	TBD	Version number	1.0
Industry	Rubber Manufacturing	Drafted on	20/03/13
Industry Sub-sector	Tyre and Non- tyre	Last reviewed on	29/12/15
Occupation	Mixing	Next review date	29/12/17



National Occupational Standard



Overview

This unit is about mixing raw material in kneader to prepare rubber compound

Mix Raw Material In Kneader To Prepare Rubber Compound

National Occupational Standard

Unit Code	RSC / N 0302
Unit Title (Task)	Mix raw material in kneader to prepare rubber compound
Description	This unit is about mixing raw material in kneader to prepare rubber compound
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Ensuring housekeeping and safety in the mixing area Mixing raw materials in kneader
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Raw material appropriateness	<p>To be competent, the user/individual on the job must be able to :</p> <p>PC1. Ensure identified raw material for particular batch is available and is of desired quality (free of contamination) wherever required</p> <p>PC2. Ensure that batch size of rubber mix is as per specified quantity</p> <p>PC3. Ensure that identified & approved materials are used.</p>
Operations	<p>PC4. Ensure batch sequence in shift based on raw material availability/rejection to maximize output</p> <p>PC5. Add rubber and other ingredients in the Kneader in the specified quantity and sequence as per company's SOP</p> <p>PC6. Check and adjust cooling water flow rate (mixing temperature control)</p> <p>PC7. As per cycle, raise Ram/open kneader and brush powder inside kneader from machine side as per SOP</p> <p>PC8. Control mixing process and completion as per SOP (temperature or time or energy as programmed / specified)</p> <p>PC9. Release the batch after completion of mixing cycle as per SOP</p> <p>PC10. Inform the batch off mill man about the release of batch as per SOP.</p> <p>PC11. Prepare the Kneader for next batch as per Planning</p>
Health & Safety	<p>PC12. Ensure Housekeeping and Safety in mixing area</p> <p>PC13. Ensure that the electrical devices that may be exposed to carbon black dust are sealed.</p> <p>PC14. Periodically blow the electrical devices with clean/dry compressed air.</p> <p>PC15. Ensure that the exhaust systems are used to maintain the concentration levels of various particulate matters remain within limits.</p> <p>PC16. Adhere to all safety norms (like wearing protective gloves, mask, shoes etc)</p> <p>PC17. Comply with health, safety, environment guidelines, regulations etc in accordance with international/national standards or organizational SOP</p>
Knowledge and Understanding (K)	

Mix Raw Material In Kneader To Prepare Rubber Compound

<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> KA1. Manufacturing process, including master batch and final batch process KA2. Different types of batches that are run in plant KA3. The specific materials, including quantities, to be used KA4. Properties of compounds KA5. Material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure KA6. Quality and damage checks to be done and importance of the same KA7. Implications of poorly prepared material, power failure etc KA8. Importance of identifying non-conforming products and storage of the same KA9. Risk and impact of not following defined procedures/work instructions KA10. Escalation matrix for reporting identified issues KA11. Types of documentation in organization and importance of the same KA12. Records to be maintained and implications of non-maintenance of the same 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 when 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. Importance of FIFO KA20. The usage of different fire extinguisher KA21. Impact of various practices on cost, quality, productivity, delivery and safety KA22. Handover/ Takeover the equipment/ work area as per company's SOP
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> KB1. Kneading machine & its operation, including operation of console in case of PLC control KB2. Possible causes of common mixing problems (loose fillers, scrubby discharge, scattered batch, gel formation in the mixing operation)& their remedies KB3. Tolerance levels for various parameters(time, temperature, ram pressure, Fill factor, Rotor rpm and batch weight) and their effect on mixed batch KB4. Troubleshooting- Knowledge of abnormalities and what response to make in case of abnormalities in equipment performance KB5. Cleanliness and safety requirements for operating a kneading machine KB6. Handling of different types of materials KB7. Implications of overheating during mixing and adopting measures like increasing water flow, adjusting nip gap, increasing number of cuts. KB8. Awareness of different material forms to avoid dusting (E.g. Usage of polymer bound or treated rubber chemicals, refined Aromatic process oil) KB9. Usage of tools like mixing knife and their maintenance procedures

Mix Raw Material In Kneader To Prepare Rubber Compound

	<p>KB10. Proper compound mixing & ingredient dispersion</p> <p>KB11. Effect of improper processing on properties of rubber compound & product</p> <p>KB12. The process and importance of quality check ,including visual inspection</p> <p>KB13. Implications of poorly prepared material, power failure etc</p> <p>KB14. Types of defects leading to rejections, indicators, reasons and possible solutions.</p> <p>KB15. Implications of delays in production process owing to issues in synchronization with upstream/ downstream equipments</p> <p>KB16. Units of measurement</p> <p>KB17. Response to emergencies e.g. Power failures, fire and system failures and manual intervention to avoid disaster</p> <p>KB18. Increase of process temperature on stability of compounding ingredients</p> <p>KB19. Appropriate batch size with respect to appropriate machinery</p> <p>KB20. When and where to use cleaner batches and their disposal</p> <p>KB21. Simple mathematics for specific gravity and batch weight calculation</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Construct simple sentences and express ideas clearly through written communication</p> <p>SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company</p> <p>SA3. Write simple letters, mails, etc</p> <p>SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes</p>
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc</p> <p>SA6. Read images, graphs, diagrams</p> <p>SA7. Understand the various coding systems as per company norms</p>
	Oral Communication (Listening and Speaking skills)
<p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. Express statements, opinions or information clearly so that others can hear and understand</p> <p>SA9. Respond appropriately to any queries</p> <p>SA10. Communicate with supervisor</p> <p>SA11. Communicate with upstream and downstream teams</p> <p>SA12. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme)</p>	

Mix Raw Material In Kneader To Prepare Rubber Compound

	<p>Integrity The user/individual on the job needs to know and understand how to: SA13. Practice honesty with respect to company property and time SA14. Communicate with people in a form and manner and using language that is open and respectful SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust</p> <p>Motivation The user/individual on the job needs to know and understand how to: SA16. Take responsibility for completing one’s own work assignment SA17. Take initiative to enhance/learn skills in ones’s area of work SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one’s learning. SA19. Is open to new ways of doing things SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them.</p> <p>Reliability The user/individual on the job needs to know and understand how to: SA21. Avoid absenteeism SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA23. Work in disciplined factory environment SA24. Be punctual</p>
<p>B. Professional Skills</p>	<p>Decision Making</p>
	<p>The user/individual on the job needs to know and understand how to: Handle kneader, accessories Handle rubber compound Handle chemicals Handling of various types of material handling equipment like forklifts, trolleys 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.</p>
	<p>Plan and Organize</p>
	<p>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</p>
	<p>Customer Centricity</p>

Mix Raw Material In Kneader To Prepare Rubber Compound

	NA
	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
	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	RSC / N 0302		
Credits(NSQF)	TBD	Version number	1.0
Industry	Rubber Manufacturing	Drafted on	20/03/13
Industry Sub-sector	Tyre and Non- tyre	Last reviewed on	29/12/15
Occupation	Mixing	Next review date	29/12/17



National Occupational Standard



Overview

This unit is about undertaking activities post mixing of raw materials in kneader

Unit Code	RSC / N 0303
Unit Title (Task)	Undertake post kneader mixing activities
Description	This unit is about undertaking activities after performing mixing operation in kneader
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Ensuring housekeeping and safety in the mixing area Unload rubber compound Form appropriate batches of the compound Mark the batch for proper identification in further processing Send sample to lab for testing and transfer remaining material to designated area
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Operation	<p>To be competent, the user/individual on the job must be able to</p> <p>PC1. Tilt the machine on completion of cycle PC2. Unload master batch/compound in a tray PC3. Ensure that no compound has been left inside (before charging for next batch)</p>
Material disposal	PC4. Dispose waste material in safe manner as per company's SOP
Batch Marking	PC5. Ensure identification and traceability by batch marking/ coding for the right product as per instructions laid down by the company (in terms of batch number, colour, date stamp etc)
Sampling	<p>PC6. Send sample of specified compound/ batch in specified form to lab for testing PC7. Send the remaining material to the designated storage area</p>
Health & Safety	<p>PC8. Ensure housekeeping and safety in mixing area PC9. Ensure that the electrical devices that may be exposed to carbon black dust are sealed. PC10. Periodically blow the electrical devices with clean/dry compressed air. PC11. Ensure that the exhaust systems are used to maintain the concentration levels of various particulate matters remain within limits. PC12. Adhere to all safety norms (like wearing protective gloves, shoes etc) PC13. Comply with health, safety, environment guidelines, regulations etc in accordance with international/national standards or organizational standards</p>
Knowledge and Understanding (K)	
A. Organizational Context	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Implications of poorly prepared material, power failure etc</p>

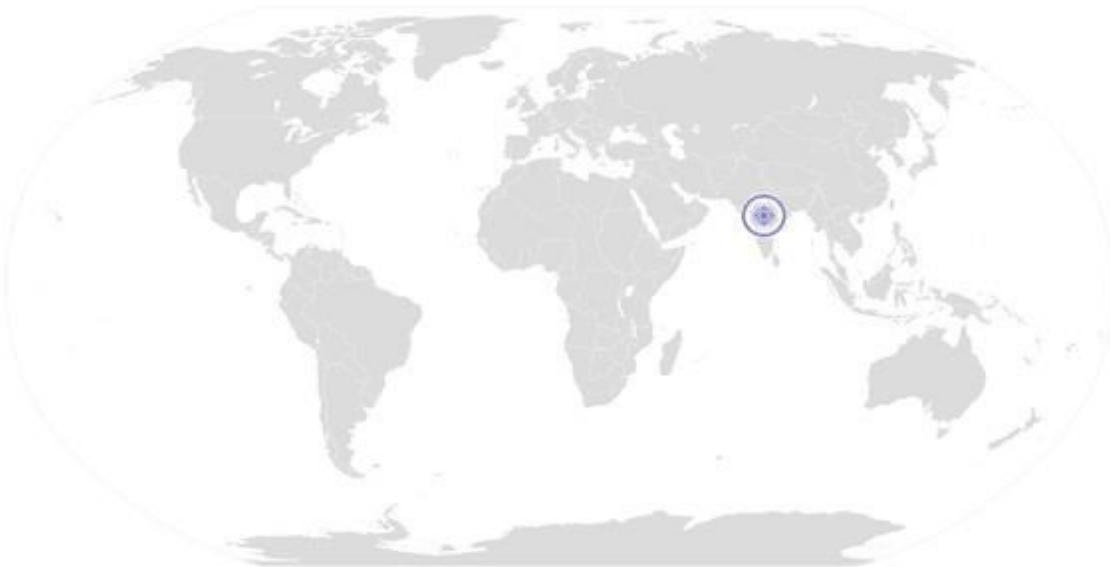
<p>(Knowledge of the company / organization and its processes)</p>	<p>KA2. Material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure</p> <p>KA3. Significance of batch marking</p> <p>KA4. Importance of identifying non-conforming product and storage of the same</p> <p>KA5. Risk and impact of not following defined procedures/work instructions</p> <p>KA6. Escalation matrix and procedure for reporting identified problems</p> <p>KA7. Types of documentation in organization and importance of the same</p> <p>KA8. Records to be maintained and implications of non-maintenance of the same</p> <p>KA9. Importance of housekeeping & good shop floor practices (eg 3S/5S)</p> <p>KA10. Health, Safety and Environment guidelines, legislation and regulations as applicable</p> <p>KA11. Personal protection(Which protective equipment to be used and how)</p> <p>KA12. Potential hazards and actions to minimize the same</p> <p>KA13. Impact of poor practices on health, safety and environment</p> <p>KA14. Escalation matrix and procedure for reporting hazards</p> <p>KA15. Importance of FIFO</p> <p>KA16. The usage of different fire extinguisher</p> <p>KA17. Impact of various practices on cost, quality, productivity, delivery and safety</p> <p>KA18. Handover/ Takeover the equipment/ work area as per company's SOP</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Batch marking techniques</p> <p>KB2. Implications of incorrect batch marking</p> <p>KB3. Implications of inappropriate waste disposal</p> <p>KB4. Types of defects leading to rejections, indicators, reasons and possible solutions.</p> <p>KB5. Units of measurement</p> <p>KB6. Coding systems for identification and traceability</p> <p>KB7. Response to emergencies e.g. Power failures, fire and system failures and manual intervention to avoid disaster</p> <p>KB8. Knowledge of weighing scales</p> <p>KB9. Knowledge of storage life of the compound, Knowledge of ambient temperature and effect on compound</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Construct simple sentences and express ideas clearly through written communication</p> <p>SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company</p> <p>SA3. Write simple letters, mails, etc</p> <p>SA4. Perform functional mathematical operations, including apply basic</p>

	<p>mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes</p>
	<p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc</p> <p>SA6. Read images, graphs, diagrams</p> <p>SA7. Understand the various coding systems as per company norms</p>
	<p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. Express statements, opinions or information clearly so that others can hear and understand</p> <p>SA9. Respond appropriately to any queries</p> <p>SA10. Communicate with supervisor</p> <p>SA11. Communicate with upstream and downstream teams</p> <p>SA12. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme)</p> <p>Integrity</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA13. Practice honesty with respect to company property and time</p> <p>SA14. Communicate with people in a form and manner and using language that is open and respectful</p> <p>SA15. Resolve any difficulties in relationships with colleagues, or get help from an appropriate person, in a way that preserves goodwill and trust</p> <p>Motivation</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA16. Take responsibility for completing one's own work assignment</p> <p>SA17. Take initiative to enhance/learn skills in one's area of work</p> <p>SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning.</p> <p>SA19. Is open to new ways of doing things</p> <p>SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them.</p> <p>Reliability</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA21. Avoid absenteeism</p> <p>SA22. Act objectively, rather than impulsively or emotionally when faced with difficult/stressful or emotional situations</p> <p>SA23. Work in disciplined factory environment</p> <p>SA24. Be punctual</p>

B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: Handle kneader, accessories Handle rubber compound Handle chemicals Handling of various types of material handling equipment like forklifts, trolleys 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
	NA
	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
	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	RSC / N 0303		
Credits(NSQF)	TBD	Version number	1.0
Industry	Rubber Manufacturing	Drafted on	20/03/13
Industry Sub-sector	Tyre and Non- tyre	Last reviewed on	29/12/15
Occupation	Mixing	Next review date	29/12/17



National Occupational Standard



Overview

This unit is about carrying out housekeeping

Unit Code	RSC / N 5001
Unit Title (Task)	To carry out housekeeping
Description	This unit is about carrying out housekeeping activities
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Preparing for housekeeping activities • Carry out housekeeping activities • Post housekeeping activities
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Pre housekeeping activities	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Inspect the area while taking into account various surfaces</p> <p>PC2. Identify the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain</p> <p>PC3. Ensure that the cleaning equipment is in proper working condition</p> <p>PC4. Select the suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person</p> <p>PC5. Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces</p> <p>PC6. Inform the affected people about the cleaning activity</p> <p>PC7. Display the appropriate signage for the work being conducted</p> <p>PC8. Ensure that there is adequate ventilation for the work being carried out</p> <p>PC9. Wear the personal protective equipment required for the cleaning method and materials being used</p>
Operations	<p>PC10. Use the correct cleaning method for the work area, type of soiling and surface</p> <p>PC11. Carry out cleaning activity without disturbing others</p> <p>PC12. Deal with accidental damage, if any, caused while carrying out the work</p> <p>PC13. Report to the appropriate person any difficulties in carrying out your work</p> <p>PC14. Identify and report to the appropriate person any additional cleaning required that is outside one's responsibility or skill</p>
Post housekeeping activities	<p>PC15. Ensure that there is no oily substance on the floor to avoid slippage</p> <p>PC16. Ensure that no scrap material is lying around</p> <p>PC17. Maintain and store housekeeping equipment and supplies</p> <p>PC18. Follow workplace procedures to deal with any accidental damage caused</p>

	<p>during the cleaning process</p> <p>PC19. Ensure that, on completion of the work, the area is left clean and dry and meets requirements</p> <p>PC20. Return the equipment, materials and personal protective equipment that were used to the right places making sure they are clean, safe and securely stored</p> <p>PC21. Dispose the waste garnered from the activity in an appropriate manner</p> <p>PC22. Dispose of used and un-used solutions according to manufacturer's instructions, and clean the equipment thoroughly</p>
General	<p>PC23. Maintain schedules and records for housekeeping duty</p> <p>PC24. Replenish any necessary supplies or consumables</p>
Knowledge and Understanding (K)	
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. The levels of hygiene required by workplace and why it is important to maintain them during your work</p> <p>KB2. How to inspect a work area to decide what cleaning it needs</p> <p>KB3. Methods and materials that used for cleaning variety of surfaces</p> <p>KB4. The types of cleansing agents that are not to be mixed together</p> <p>KB5. The correct method for cleaning equipment and/or machinery used during your work</p> <p>KB6. The importance of personal protective equipment</p> <p>KB7. Appropriate personal protective equipment for the work area, cleaning equipment, tools, materials and chemicals used</p> <p>KB8. The correct sequence for cleaning the work area</p> <p>KB9. The time taken by the treatment to work</p> <p>KB10. The importance of following manufacturer's instructions on cleaning agents</p> <p>KB11. The most appropriate place to carry out test cleans and why this should be done before applying treatments</p> <p>KB12. The importance of applying treatments evenly and the effect of not doing this</p> <p>KB13. Process of cleaning the surfaces without causing injury or damage</p> <p>KB14. The method to check the treated surface and equipment on completion of cleaning</p> <p>KB15. Procedures for reporting any unidentified soiling</p> <p>KB16. Procedures for disposing off waste</p> <p>KB17. Procedures for disposing off or storing personal protective equipment</p> <p>KB18. Escalation procedures for soils or stains that could not be removed</p>
Skills (S)	
A. Core Skills/	Writing Skills

Generic Skills	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Construct simple sentences and express ideas clearly through written communication</p> <p>SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company</p> <p>SA3. Write simple letters, mails, etc</p> <p>SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes</p>
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc</p> <p>SA6. Read images, graphs, diagrams</p> <p>SA7. Understand the various coding systems as per company norms</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. Express statements, opinions or information clearly so that others can hear and understand</p> <p>SA9. Respond appropriately to any queries</p> <p>SA10. Communicate with supervisor</p> <p>SA11. Communicate with upstream and downstream teams</p> <p>SA12. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme)</p> <p>Integrity</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA13. Practice honesty with respect to company property and time</p> <p>SA14. Communicate with people in a form and manner and using language that is open and respectful</p> <p>SA15. Resolve any difficulties in relationships with colleagues, or get help from an appropriate person, in a way that preserves goodwill and trust</p> <p>Motivation</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA16. Take responsibility for completing one's own work assignment</p> <p>SA17. Take initiative to enhance/learn skills in one's area of work</p> <p>SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning.</p> <p>SA19. Is open to new ways of doing things</p> <p>SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them.</p> <p>Reliability</p>

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA21. Avoid absenteeism</p> <p>SA22. Act objectively, rather than impulsively or emotionally when faced with difficult/stressful or emotional situations</p> <p>SA23. Work in disciplined factory environment</p> <p>SA24. Be punctual</p>
<p>B. Professional Skills</p>	<p>Decision Making</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>Handle kneader, accessories</p> <p>Handle rubber compound</p> <p>Handle chemicals</p> <p>Handling of various types of material handling equipment like forklifts, trolleys</p> <p>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.</p>
	<p>Plan and Organize</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. seek clarification on problems from others</p> <p>SB3. apply problem-solving approaches in different situations</p> <p>SB4. refer anomalies to the line manager</p>
	<p>Customer Centricity</p>
	<p>NA</p>
	<p>Problem Solving</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB 5. Interpret quality for sheet</p> <p>SB 6. Suggest improvements(if any) in process/product/materials based on results and experience</p>
<p>Analytical Thinking</p>	
<p>The user/individual on the job needs to know and understand how to:</p> <p>SB7. Proper collection of waste material</p> <p>SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience</p> <p>Diagnose common problems in the machine based on visual inspection, sound, temperature etc</p> <p>Suggest improvements(if any) in process based on experience</p>	

	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	RSC / N 5001		
Credits(NSQF)	TBD	Version number	1.0
Industry	Rubber Manufacturing	Drafted on	20/03/13
Industry Sub-sector	Tyre and Non- tyre	Last reviewed on	29/12/15
Occupation	Mixing	Next review date	29/12/17



National Occupational Standard



Overview

This unit is about reporting and documentation

Unit Code	RSC / N 5002
Unit Title (Task)	To carry out reporting and documentation
Description	This unit is about carrying out reporting and documentation
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Reporting of data/problem/incidents etc • Documentation • Information Security
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Reporting	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Report data/problems/incidents as applicable in a timely manner PC2. Report to the appropriate authority as laid down by the company PC3. Follow reporting procedures as prescribed by the company</p>
Recording and Documentation	<p>PC4. Identify documentation to be completed relating to one's role PC5. Record details accurately in an appropriate format PC6. Complete all documentation within stipulated time according to company procedure PC7. Ensure that the final document meets with the requirements of the persons who requested it or make any amendments accordingly PC8. Make sure documents are available to all appropriate authorities to inspect</p>
Information Security	<p>PC9. Respond to requests for information in an appropriate manner whilst following organizational procedures PC10. Inform the appropriate authority of requests for information received</p>
Knowledge and Understanding (K)	
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Different methods of recording information KB2. Various documents that need to be maintained KB3. Company procedure for filling/maintaining up the documents KB4. Procedures for reporting to the appropriate authority KB5. Procedures for recording damage, breakages etc KB6. Reporting incidents where standard operating procedures are not followed KB7. The importance of complete and accurate documentation KB8. How to maintain complete documentation accurately and within agreed</p>

	<p>timescales</p> <p>KB9. The importance of ensuring that the documents are correct</p> <p>KB10. The actions to be taken if the documents are not correct</p> <p>KB11. The importance of maintaining the security and confidentiality of recorded information</p> <p>KB12. Procedures to maintain confidentiality of information</p> <p>KB13. The appropriate method for responding to requests for information</p> <p>KB14. The reporting procedures to followed before disclosing information to any outside party</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Construct simple sentences and express ideas clearly through written communication</p> <p>SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company</p> <p>SA3. Write simple letters, mails, etc</p> <p>SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes</p>
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc</p> <p>SA6. Read images, graphs, diagrams</p> <p>SA7. Understand the various coding systems as per company norms</p>
	Oral Communication (Listening and Speaking skills)
<p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. Express statements, opinions or information clearly so that others can hear and understand</p> <p>SA9. Respond appropriately to any queries</p> <p>SA10. Communicate with supervisor</p> <p>SA11. Communicate with upstream and downstream teams</p> <p>SA12. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme)</p> <p>Integrity</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA13. Practice honesty with respect to company property and time</p> <p>SA14. Communicate with people in a form and manner and using language that is open and respectful</p> <p>SA15. Resolve any difficulties in relationships with colleagues , or get help from an</p>	

To Carry Out Reporting And Documentation

	<p>appropriate person, in a way that preserves goodwill and trust</p> <p>Motivation The user/individual on the job needs to know and understand how to: SA16. Take responsibility for completing one’s own work assignment SA17. Take initiative to enhance/learn skills in ones’s area of work SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one’s learning. SA19. Is open to new ways of doing things SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them.</p> <p>Reliability The user/individual on the job needs to know and understand how to: SA21. Avoid absenteeism SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA23. Work in disciplined factory environment SA24. Be punctual</p>
<p>B. Professional Skills</p>	<p>Decision Making</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>Handle kneader, accessories Handle rubber compound Handle chemicals Handling of various types of material handling equipment like forklifts, trolleys 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.</p>
	<p>Plan and Organize</p>
	<p>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</p>
	<p>Customer Centricity</p>
<p>NA</p>	
<p>Problem Solving</p>	

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



NOS Version Control

NOS Code	RSC / N 5002		
Credits(NSQF)	TBD	Version number	1.0
Industry	Rubber Manufacturing	Drafted on	20/03/13
Industry Sub-sector	Tyre and Non- tyre	Last reviewed on	29/12/15
Occupation	Mixing	Next review date	29/12/17



National Occupational Standard



Overview

This unit is about carrying out quality checks

Unit Code	RSC / N 5003
Unit Title (Task)	To carry out quality checks
Description	This unit is about carrying out quality control activities
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Carrying out quality checks to identify problems • Take corrective actions • Reporting the results
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Inspection	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Ensure that total range of checks are regularly and consistently performed</p> <p>PC2. Use appropriate measuring instruments, equipment, tools, accessories etc ,as required</p>
Analysis	<p>PC3. Identify non-conformities to quality assurance standards</p> <p>PC4. Identify potential causes of non-conformities to quality assurance standards</p> <p>PC5. Identify impact on final product due to non-conformance to company standards</p> <p>PC6. Evaluating the need for action to ensure that problems do not recur</p> <p>PC7. Suggest corrective action to address problem</p> <p>PC8. Review effectiveness of corrective action</p>
Reporting	<p>PC9. Interpret the results of the quality check correctly</p> <p>PC10. Take up results of the findings with QC in charge/appropriate authority.</p> <p>PC11. Take up the results of the findings within stipulated time</p> <p>PC12. Record of results of action taken</p> <p>PC13. Record adjustments not covered by established procedures for future reference</p> <p>PC14. Review effectiveness of action taken</p> <p>PC15. Follow reporting procedures where the cause of defect cannot be identified</p>

Knowledge and Understanding (K)	
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> KB1. The importance of quality control procedures KB2. Relevance and importance of activities and how they contribute to the achievement of the quality objectives, KB3. Proper procedure for selecting the material/product and performing quality checks without affecting the material KB4. Availability of work instructions, as necessary, KB5. Characteristics of the product/material KB6. Use of suitable equipment KB7. Availability and use of monitoring and measuring devices, KB8. Requirements of records KB9. Importance of maintaining accurate up-to-date records KB10. The need to report within the stipulated time KB11. Implications of inaccurate measuring and testing instruments and equipment KB12. The cost of non-conformance to quality standards KB13. Implications (impact on internal/external customers) of defective products, materials or components
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company SA3. Write simple letters, mails, etc SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc SA6. Read images, graphs, diagrams SA7. Understand the various coding systems as per company norms
Oral Communication (Listening and Speaking skills)	

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. Express statements, opinions or information clearly so that others can hear and understand</p> <p>SA9. Respond appropriately to any queries</p> <p>SA10. Communicate with supervisor</p> <p>SA11. Communicate with upstream and downstream teams</p> <p>SA12. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme)</p> <p>Integrity</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA13. Practice honesty with respect to company property and time</p> <p>SA14. Communicate with people in a form and manner and using language that is open and respectful</p> <p>SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust</p> <p>Motivation</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA16. Take responsibility for completing one’s own work assignment</p> <p>SA17. Take initiative to enhance/learn skills in ones’s area of work</p> <p>SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one’s learning.</p> <p>SA19. Is open to new ways of doing things</p> <p>SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them.</p> <p>Reliability</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA21. Avoid absenteeism</p> <p>SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations</p> <p>SA23. Work in disciplined factory environment</p> <p>SA24. Be punctual</p>
B. Professional Skills	<p>Decision Making</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>Handle kneader, accessories</p> <p>Handle rubber compound</p> <p>Handle chemicals</p> <p>Handling of various types of material handling equipment like forklifts,</p>

	<p>trolleys</p> <p>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.</p>
	<p>Plan and Organize</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. seek clarification on problems from others</p> <p>SB3. apply problem-solving approaches in different situations</p> <p>SB4. refer anomalies to the line manager</p>
	<p>Customer Centricity</p>
	<p>NA</p>
	<p>Problem Solving</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB 5. Interpret quality for sheet</p> <p>SB 6. Suggest improvements(if any) in process/product/materials based on results and experience</p>
	<p>Analytical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB7. Proper collection of waste material</p> <p>SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience</p> <p>Diagnose common problems in the machine based on visual inspection, sound , temperature etc</p> <p>Suggest improvements(if any) in process based on experience</p>
	<p>Critical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB9. Handle equipment/rubber sheet</p> <p>SB6. seek clarification on problems from others</p> <p>SB10. apply problem-solving approaches in different situations</p> <p>SB11. refer anomalies to the line manager</p>

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Industry	Rubber Manufacturing	Drafted on	20/03/13
Industry Sub-sector	Tyre and Non- tyre	Last reviewed on	29/12/15
Occupation	Mixing	Next review date	29/12/17



National Occupational Standard



Overview

This unit is about problem identification and escalation

To Carry Out Problem Identification And Escalation

National Occupational Standard

Unit Code	RSC / N 5004
Unit Title (Task)	To carry out problem identification and escalation
Description	This unit is about problem identification and escalation
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Identify problems across: <ul style="list-style-type: none"> - Raw materials - Compounds - Product - Equipment - Others • Identify solutions to problems • Take corrective action • Escalation of unresolved identified problems
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Problem Identification	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Identify defects/indicators of problems PC2. Identify any wrong practices that may lead to problems PC3. Identify practices that may impact the final product quality PC4. Identify if the problem has occurred before PC5. Identify other operations that might be impacted by the problem PC6. Ensure that no delays are caused as a result of failure to escalate problems</p>
Necessary Action	<p>PC7. Take appropriate materials and sample, conduct tests and evaluate results to establish reasons to confirm suspected reasons for non-conformance (where required) PC8. Consider possible reasons for identification of problems PC9. Consider applicable corrections and formulate corrective action PC10. Formulate action in a timely manner PC11. Communicate problem/remedial action to appropriate parties PC12. Take corrective action in a timely manner PC13. Take corrective action for problems identified according to the company procedures PC14. Report/document problem and corrective action in an appropriate manner PC15. Monitor corrective action</p>

To Carry Out Problem Identification And Escalation

	<p>PC16. Evaluate implementation of corrective action taken to determine if the problem has been resolved</p> <p>PC17. Ensure that corrective action selected is viable and practical</p> <p>PC18. Ensure that correct solution is identified to an identified problem</p> <p>PC19. Take corrective action for problems identified according to the company procedures</p> <p>PC20. Ensure that no delays are caused as a result of failure to take necessary action</p>
<p>Problem Escalation</p>	<p>PC21. Escalate problem as per laid down escalation matrix</p> <p>PC22. Escalate the problem within stipulated time</p> <p>PC23. Escalate the problem in an appropriate manner</p> <p>PC24. Ensure that no delays are caused as a result of failure to escalate problems</p>
<p>Knowledge and Understanding (K)</p>	
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Indicators of problems</p> <p>KB2. The working of the equipment and accessories(if applicable)</p> <p>KB3. The impact of operations on the user and equipment(if applicable)</p> <p>KB4. The impact of operations on the final product (if applicable)</p> <p>KB5. The effect of not rectifying the problems identified</p> <p>KB6. The reason for the occurrence of previous problems</p> <p>KB7. Measures and steps that have been taken to address the previous problems</p> <p>KB8. Possible solutions for various problems</p> <p>KB9. The correct method for carrying out corrective actions outlined for each problem</p> <p>KB10. The impact of not carrying out the corrective actions</p> <p>KB11. The documentation procedure for recording such problems, as per company norms</p> <p>KB12. The escalation matrix for reporting problems</p> <p>KB13. Escalation matrix for reporting unresolved problems</p> <p>KB14. The time frame within which in which each problem needs to be escalated</p> <p>KB15. Manner in which each problem needs to be escalated</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Construct simple sentences and express ideas clearly through written communication</p> <p>SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company</p> <p>SA3. Write simple letters, mails, etc</p> <p>SA4. Perform functional mathematical operations, including apply basic</p>

To Carry Out Problem Identification And Escalation

	<p>mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes</p>
	<p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc</p> <p>SA6. Read images, graphs, diagrams</p> <p>SA7. Understand the various coding systems as per company norms</p>
	<p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA8. Express statements, opinions or information clearly so that others can hear and understand</p> <p>SA9. Respond appropriately to any queries</p> <p>SA10. Communicate with supervisor</p> <p>SA11. Communicate with upstream and downstream teams</p> <p>SA12. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme)</p>
	<p>Integrity</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA13. Practice honesty with respect to company property and time</p> <p>SA14. Communicate with people in a form and manner and using language that is open and respectful</p> <p>SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust</p>
	<p>Motivation</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA16. Take responsibility for completing one’s own work assignment</p> <p>SA17. Take initiative to enhance/learn skills in ones’s area of work</p> <p>SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one’s learning.</p> <p>SA19. Is open to new ways of doing things</p> <p>SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them.</p>
	<p>Reliability</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA21. Avoid absenteeism</p> <p>SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations</p> <p>SA23. Work in disciplined factory environment</p> <p>SA24. Be punctual</p>

B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: Handle kneader, accessories Handle rubber compound Handle chemicals Handling of various types of material handling equipment like forklifts, trolleys 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
	NA
	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
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	RSC / N 5004		
Credits(NSQF)	TBD	Version number	1.0
Industry	Rubber Manufacturing	Drafted on	20/03/13
Industry Sub-sector	Tyre and Non- tyre	Last reviewed on	29/12/15
Occupation	Mixing	Next review date	29/12/17



CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Kneader Operator

Qualification Pack Code: RSC/ Q 0103

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 0301 Prepare Kneader And Accessories	Equipment readiness	PC1. Ensure that the kneader is clean	3	3	0
		PC2. Ensure functioning of safety features of Kneader and other accessories	9	4	5
		PC3. Keep upstream and downstream equipment ready	9	4	5
		PC4. Adjust ram pressure as specified	9	4	5
		PC5. Set parameters for the equipment (mixing cycle time, temperature and ram pressure), as per company's SOP	9	4	5
		PC6. Keep all accessories (like cooling water, hydraulic/pneumatic system, temperature/energy control unit (TCU), lubrication system) ready	9	4	5
	Raw material appropriateness	PC7. Ensure availability of pre-weighed, approved rubber and other ingredients to be fed as per batch requirement	5	3	2
		PC8. Ensure that raw material to be fed is approved by laboratory	5	3	2
		PC9. Match the batch code of each raw material with the batch code on the job schedule given by the planning department	6	3	3
		PC10. Ensure that all raw materials have been assembled/organized (in correct sequence, if applicable) to be fed into kneader	5	3	2
		PC11. Ensure all ingredients are homogeneously mixed.	6	3	3

		PC12. Ensure Housekeeping and Safety in mixing area	5	2	3
		PC13. Ensure that electrical devices that may be exposed to carbon black dust are sealed.	4	2	2
		PC14. Periodically blow the electrical devices with clean/dry compressed air.	4	2	2
		PC15. Ensure that the exhaust systems are used to maintain the concentration levels of various particulate matters within limits.	4	2	2
		PC16. Adhere to all safety norms (like wearing protective gloves, shoes, Safety Glasses etc)	4	2	2
		PC17. Comply with health, safety, environment guidelines, regulations etc in accordance with international/national standards or organizational standards	4	2	2
			100	50	50
2. RSC / N 0302 Mix Raw Material In Kneader To Prepare Rubber Compound	Raw material appropriateness	PC1. Ensure identified raw material for particular batch is available and is of desired quality (free of contamination) wherever required	3	3	0
		PC2. Ensure that batch size of rubber mix is as per specified quantity	3	3	0
		PC3. Ensure that identified & approved materials are used.	2	2	0
	Operations	PC4. Ensure batch sequence in shift based on raw material availability/rejection to maximize output	10	5	5
		PC5. Add rubber and other ingredients in the Kneader in the specified quantity and sequence as per company's SOP	10	5	5
		PC6. Check and adjust cooling water flow rate (mixing temperature control)	10	5	5
		PC7. As per cycle, raise Ram/open kneader and brush powder inside kneader from machine side as per SOP	10	5	5
		PC8. Control mixing process and completion as per SOP (temperature or time or energy as programmed / specified)	10	5	5
		PC9. Release the batch after completion of mixing cycle as per SOP	10	5	5
		PC10. Inform the batch off mill man about the release of batch as per SOP.	5	5	0
		PC11. Prepare the Kneader for next batch as per Planning	5	5	0
	Health & Safety	PC12. Ensure Housekeeping and Safety in mixing area	4	2	2
		PC13. Ensure that the electrical devices that may be exposed to carbon black dust are sealed.	4	2	2
		PC14. Periodically blow the electrical devices with clean/dry compressed air.	4	2	2
PC15. Ensure that the exhaust systems are used to maintain the concentration levels of various particulate matters remain within limits.		4	2	2	
PC16. Adhere to all safety norms (like wearing protective gloves, mask, shoes etc)		3	2	1	
PC17. Comply with health, safety, environment guidelines,		3	2	1	

		regulations etc in accordance with international/national standards or organizational SOP			
			100	60	40
3. RSC / N 0303 Undertake Post Mixing Activities	Operation	PC1. Tilt the machine on completion of cycle	14	6	8
		PC2. Unload master batch/compound in a tray	14	6	8
		PC3. Ensure that no compound has been left inside (before charging for next batch)	13	6	7
	Material disposal	PC4. Dispose waste material in safe manner as per company's SOP	9	2	7
	Batch Marking	PC5. Ensure identification and traceability by batch marking/coding for the right product as per instructions laid down by the company (in terms of batch number, colour, date stamp etc)	4	4	0
	Sampling	PC6. Send sample of specified compound/ batch in specified form to lab for testing	4	4	0
		PC7. Send the remaining material to the designated storage area	4	4	0
	Health & Safety	PC8. Ensure housekeeping and safety in mixing area	7	3	4
		PC9. Ensure that the electrical devices that may be exposed to carbon black dust are sealed.	7	3	4
		PC10. Periodically blow the electrical devices with clean/dry compressed air.	7	3	4
		PC11. Ensure that the exhaust systems are used to maintain the concentration levels of various particulate matters remain within limits.	7	3	4
		PC12. Adhere to all safety norms (like wearing protective gloves, shoes etc)	7	3	4
		PC13. Comply with health, safety, environment guidelines, regulations etc in accordance with international/national standards or organizational standards	3	3	0
			100	50	50
4. RSC / N 5001 To Carry Out Housekeeping	Pre housekeeping activities	PC1. Inspect the area while taking into account various surfaces	3	3	0
		PC2. Identify the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain	3	3	0
		PC3. Ensure that the cleaning equipment is in proper working condition	3	3	0
		PC4. Select the suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person	3	3	0
		PC5. Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces	3	3	0
		PC6. Inform the affected people about the cleaning activity	2	2	0
		PC7. Display the appropriate signage for the work being conducted	3	3	0

		PC8. Ensure that there is adequate ventilation for the work being carried out	3	3	0
		PC9. Wear the personal protective equipment required for the cleaning method and materials being used	3	3	0
	Operations	PC10. Use the correct cleaning method for the work area, type of soiling and surface	3	3	0
		PC11. Carry out cleaning activity without disturbing others	3	3	0
		PC12. Deal with accidental damage, if any, caused while carrying out the work	3	3	0
		PC13. Report to the appropriate person any difficulties in carrying out your work	3	3	0
		PC14. Identify and report to the appropriate person any additional cleaning required that is outside one's responsibility or skill	3	3	0
	Post housekeeping activities	PC15. Ensure that there is no oily substance on the floor to avoid slippage	9	3	6
		PC16. Ensure that no scrap material is lying around	9	3	6
		PC17. Maintain and store housekeeping equipment and supplies	3	3	0
		PC18. Follow workplace procedures to deal with any accidental damage caused during the cleaning process	3	3	0
		PC19. Ensure that, on completion of the work, the area is left clean and dry and meets requirements	8	2	6
		PC20. Return the equipment, materials and personal protective equipment that were used to the right places making sure they are clean, safe and securely stored	3	3	0
		PC21. Dispose the waste garnered from the activity in an appropriate manner	9	3	6
		PC22. Dispose of used and un-used solutions according to manufacturer's instructions, and clean the equipment thoroughly	9	3	6
	General	PC23. Maintain schedules and records for housekeeping duty	3	3	0
		PC24. Replenish any necessary supplies or consumables	3	3	0
			100	70	30
5. RSC / N 5002 To Carry Out Reporting And Documentation	Reporting	PC1. Report data/problems/incidents as applicable in a timely manner	12	8	4
		PC2. Report to the appropriate authority as laid down by the company	12	8	4
		PC3. Follow reporting procedures as prescribed by the company	12	8	4
	Recording and Documentation	PC4. Identify documentation to be completed relating to one's role	10	6	4
		PC5. Record details accurately an appropriate format	16	6	10
		PC6. Complete all documentation within stipulated time according to company procedure	14	4	10
		PC7. Ensure that the final document meets with the requirements of the persons who requested it or make any amendments accordingly	6	4	2

		PC8. Make sure documents are available to all appropriate authorities to inspect	6	4	2
	Information Security	PC9. Respond to requests for information in an appropriate manner whilst following organizational procedures	6	6	0
		PC10. Inform the appropriate authority of requests for information received	6	6	0
			100	60	40
6. RSC / N 5003 To Carry Out Quality Checks	Inspection	PC1. Ensure that total range of checks are regularly and consistently performed	24	10	14
		PC2. Use appropriate measuring instruments, equipment, tools, accessories etc ,as required	24	10	14
	Analyses	PC3. Identify non-conformities to quality assurance standards	6	4	2
		PC4. Identify potential causes of non-conformities to quality assurance standards	5	3	2
		PC5. Identify impact on final product due to non-conformance to company standards	5	3	2
		PC6. Evaluating the need for action to ensure that problems do not recur	6	4	2
		PC7. Suggest corrective action to address problem	5	3	2
		PC8. Review effectiveness of corrective action	5	3	2
	Reporting	PC9. Interpret the results of the quality check correctly	4	4	0
		PC10. Take up results of the findings with QC in charge/appropriate authority.	3	3	0
		PC11. Take up the results of the findings within stipulated time	3	3	0
		PC12. Record of results of action taken	3	3	0
		PC13. Record adjustments not covered by established procedures for future reference	3	3	0
		PC14. Review effectiveness of action taken	2	2	0
		PC15. Follow reporting procedures where the cause of defect cannot be identified	2	2	0
			100	60	40
7. RSC / N 5004 To Carry Out Problem Identification And Escalation	Problem Identification	PC1. Identify defects/indicators of problems	7	4	3
		PC2. Identify any wrong practices that may lead to problems	6	3	3
		PC3. Identify practices that may impact the final product quality	6	3	3
		PC4. Identify if the problem has occurred before	5	3	2
		PC5. Identify other operations that might be impacted by the problem	6	4	2
		PC6. Ensure that no delays are caused as a result of failure to escalate problems	5	3	2
	Necessary Action	PC7. Take appropriate materials and sample, conduct tests and evaluate results to establish reasons to confirm suspected reasons for non-conformance (where required)	8	5	3
		PC8. Consider possible reasons for identification of problems	8	5	3

on		PC9. Consider applicable corrections and formulate corrective action	3	3	0	
		PC10. Formulate action in a timely manner	3	3	0	
		PC11. Communicate problem/remedial action to appropriate parties	7	5	2	
		PC12. Take corrective action in a timely manner	2	2	0	
		PC13. Take corrective action for problems identified according to the company procedures	2	2	0	
		PC14. Report/document problem and corrective action in an appropriate manner	8	5	3	
		PC15. Monitor corrective action	2	2	0	
		PC16. Evaluate implementation of corrective action taken to determine if the problem has been resolved	2	2	0	
		PC17. Ensure that corrective action selected is viable and practical	2	2	0	
		PC18. Ensure that correct solution is identified to an identified problem	2	2	0	
		PC19. Take corrective action for problems identified according to the company procedures	1	1	0	
		PC20. Ensure that no delays are caused as a result of failure to take necessary action	1	1	0	
	Problem Escalation		PC21. Escalate problem as per laid down escalation matrix	4	3	1
			PC22. Escalate the problem within stipulated time	4	3	1
			PC23. Escalate the problem in an appropriate manner	3	2	1
			PC24. Ensure that no delays are caused as a result of failure to escalate problems	3	2	1
				100	70	30