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- Rubber Pre-Mixing Operator

(Option: *Carbon Oil and Automated Charging*)

SECTOR: RUBBER INDUSTRY

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

OCCUPATION: Mixing

REFERENCE ID: RSC/Q0113

ALIGNED TO: NCO-2004/NIL

Brief Job Description: A rubber pre-mixing operator is responsible to carry out all the important activities prior to commence the mixing operations. Such activities include cutting rubber bales into pieces of given specification using appropriate cutting tools (knife) or hydraulic bale cutters, weighing accurately all the required ingredients and ensuring the availability of quality certified/lab released process oils and other ingredients such as carbon black /silica for the mixing of compounds.

Options:

Mixing Operator-Preparatory: Mixing Operator-Preparatory is responsible for charging/filling process oil to overhead tanks and carbon black/silica in bins/hoppers for feeding mixers for mixing compounds

Personal Attributes: This job requires the individual to be focused, attentive and act spontaneously. He should be smart enough to identify problem and understand quality issues. He should be keen to address issues originating at his end. He should be very active in performing physical activities and comfortable in performing laborious tasks.

Job Details

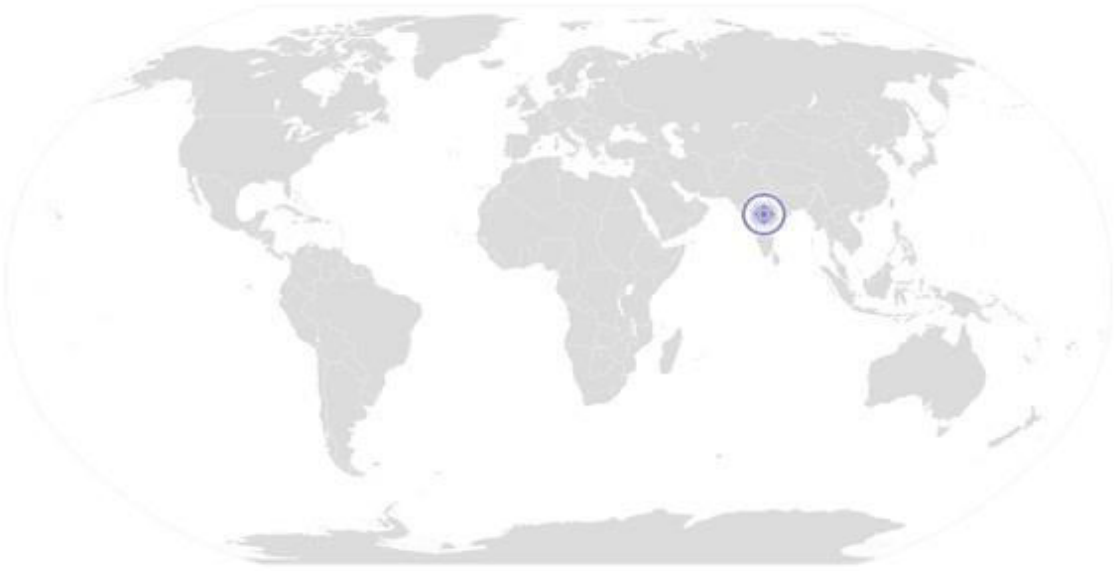
Qualifications Pack Code	**RSC/Q0113**		
Job Role	**Rubber Pre-Mixing Operator**		
Credits(NSQF)	**TBD**	**Version number**	**2.0**
Sector	**Rubber Manufacturing**	**Drafted on**	**02/12/2014**
Sub-sector	**Tyre**	**Last reviewed on**	**23/08/2017**
Occupation	**Mixing**	**Next review date**	**23/08/2021**
NSQC Clearance on			

Job Role	**Pre-Mixing Operator**
Role Description	Rubber Pre-Mixing Operator is responsible to carry out all the activities prior to mixing operations, Such activities include cutting rubber bales, weighing all the required ingredients & ensuring the availability of quality certified process oils and other ingredients
NSQF level	4
Minimum Educational Qualifications*	Class VIIIth Pass
Maximum Educational Qualifications*	
Prerequisite License or Training	NA
Minimum Job Entry Age	18 years
Experience	Worked as a semi-skilled helper for minimum 12 months in the same or similar process
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. RSC/N0136 - Prepare materials, tools and machines for pre-mixing 2. RSC/N0137 - Perform cutting /weighing and storing weighed ingredients 3. RSC/N0138 - Perform post cutting/weighing activities 4. RSC/N5001 - Carry out housekeeping in rubber product manufacturing 5. RSC/N5002 - Carry out reporting and documentation 6. RSC/N5003 - Carry out quality checks 7. RSC/N5004 - Carry out problem identification and escalation 8. RSC/N5007 - Carry out health and safety **Options (not mandatory):** **Option 1.** (Carbon Oil Charging) 1.1 RSC/N0110 - Carry out carbon oil charging operation **Option 2.** (Automated Charging) 1.2 RSC/N0111 - Carry out automated charging of ingredients
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.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding 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.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
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.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
Unit Code	Unit Code is a unique identifier for an Occupational Standard, which is denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
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 arranging and checking the material to be cut, weighed and filled; preparing tools and machines to undertake pre mixing activities, and ensure the feeding lines are operational and free of leakage.

National Occupational Standard

Unit Code	RSC/N0136
Unit Title (Task)	Prepare materials, tools and machines for pre-mixing
Description	This unit is about arranging and checking the material to be cut, weighed and filled; preparing tools and machines to undertake pre mixing activities, and ensure the feeding lines are operational and free of leakage.
Scope	This unit/task covers the following: • Prepare tools, equipments and machine to carry out pre-mixing activities • Check the availability of rubber/process oils /carbon black/silica in raw material stores and move the required material to their respective locations for carrying out cutting and weighing operations • Ensure cleanliness, housekeeping and safety in work area.

Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Equipment readiness	To be competent, the user/individual on the job must be able to PC1. Ensure the availability of all required tools and equipments. PC2. Ensure that the cleanliness of tools (knife, hydraulic cutter, machine), weighing scales, bins and tanks. PC3. Set parameters for the machine as per the organizational SOP. PC4. Place the tools on a safe location. PC5. Check the sharpness of the knife for the cutting purpose. PC6. Check the calibration stickers with dates of calibration done and its due date PC7. Check zero before every weighing and ensure correctness using standard weights, rectify in case of any error PC8. Check the scale is of right size and capacity for correctly weighing each material PC9. Check scales with standard dead weights PC10. Keep record book ready before weighing the components PC11. Ensure no leakages in the oil feeding lines or conveyors for black/silica and the proper maintenance of supply ducts/chutes pipes PC12. Ensure smooth flow of oil from feed over head tanks and silica/black through screw conveyors PC13. Ensure that the system for oil heating is available-Such as steam supply line for heating the feed storage tank and supply line from feeding tank to mixers are with proper insulators. PC14. Carry out saddle heating, in case of small proportion of some oils being used.
Raw material appropriateness	PC15. Ensure that all the ingredients required are approved and released by laboratory. PC16. Check the availability of material, compound mix, semi finished and finished products and inform store/relevant department for low or no stock PC17. Ensure proper handling (loading) of the material from the place of storage to the place of weighing PC18. Move the required pallet/gondola containing the approved Rubber bales to location where bales are to be cut PC19. Ensure visual inspection of the ingredients to be weighed

	PC20. Remove bales from the wooden pallet/gondola and ensure it is clean of any wooden pieces, poly wrapping / metal straps PC21. Collect all wrapping materials, wooden pallet and keep them in their designated places for pick up by scrap /waste handler PC22. Ensure proper amount of Lab released required grade /code of carbon black/silica is stored in the designated bins/tanks /super sacks for continuous availability. PC23. Ensure the quality of oil and carbon black (visual and quality checking) and correctness of the codes in use PC24. Ensure heat tracing to warm up the process oil PC25. Maintain housekeeping by ensuring no raw material is on the floor
Housekeeping & Safety	PC26. Ensure the use of certified/tested tools and machine (for lifting/moving/ weighing/cutting) and check their functioning. PC27. Ensure that the safety rope is active and is operational PC28. Avoid skin contact of oil and carbon black PC29. Use of shower or eye washes in case of oil/black/silica spillage. PC30. Adhere to all safety norms (such as wearing protective gloves and shoes). PC31. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.
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. Implications of poorly prepared tools, equipments, machines, storage devices and supply channels. KA2. Importance of identifying non-conforming materials and their storage. KA3. Risk and impact of not following defined procedures/work instructions. KA4. Escalation matrix for reporting identified problems KA5. Types of documentation in organization and importance of the same KA6. Records to be maintained and the implications of their non-maintenance. KA7. Importance of housekeeping activities. KA8. Health, safety and environment guidelines, legislation and regulations as applicable. KA9. Personal protection (which protective equipment to be used and how). KA10. Impact of poor practices on health, safety and environment. KA11. Potential hazards and actions to minimize them. KA12. The escalation matrix and procedures for reporting hazards. KA13. Importance of FIFO and good shop floor practices (for example, 5S). KA14. Impact of various practices on cost, quality, productivity, delivery and safety. KA15. Handover/Takeover of the equipment/work area as per the organizational SOP.
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Selection of a cutting tool based on the rubber size and its importance. KB2. Sharpening of knives KB3. Use of bale cutter and butcher knife KB4. Setting the parameters of cutting machine and loading of bales KB5. Optimal utilization of material while undertaking cutting for different sizes KB6. Proper dusting of bales with French chalk/talc KB7. Implications of delays in the pre-mixing activities. KB8. Types of defects leading to rejections and their, reasons and possible solutions.

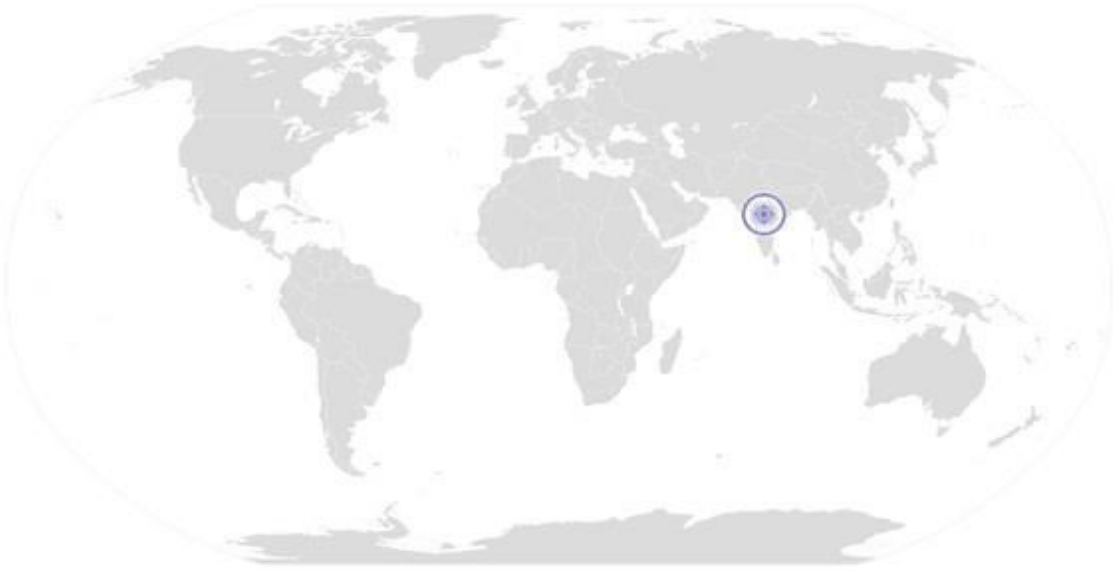
	KB9. Cleanliness and safety requirements for commencing pre-mixing operation. KB10. Units of measurement. KB11. Response to injuries while handling knives and cutter KB12. Knowledge of appropriate batch sizes with respect to requirement. KB13. Knowledge of first aid treatment to address any cut/injury KB14. Knowledge of various weighing parameters. KB15. Usage and functioning of different types of weighing machines. KB16. Importance of proper handling of chemicals and ingredients KB17. Various abnormalities and suitable response for abnormalities in equipment performance. KB18. Implications of improper weighing of material on the product preparation. KB19. Response to emergencies, for example, power failures, fire, system failures, spillages and manual intervention to avoid disasters. KB20. Shelf life of chemicals and the effect of overage chemicals. KB21. Different grades of oils and carbon black/silica required for mixing compound KB22. Identify quality certified oils and carbon black KB23. Knowledge of supply channels from bin/hopper and tank to mixers KB24. Storage capacity of bin and tanks KB25. Effect of inaccurate quantity of oil and carbon black supply on properties of mixing compound KB26. Knowledge of repair work related to pipes, tank and bin/hopper KB27. Knowledge of checking the carbon black and oil scale error and corrective actions KB28. Knowledge of Carbon black ASTM / Colour code of the carbon KB29. How to adjust pressure and its importance. KB30. The usage of different types of fire extinguishers
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how to: 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 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 SA1. Express statements, opinions or information clearly so that others can hear and understand SA2. Respond appropriately to any queries SA3. Communicate with supervisor

	SA4. Communicate with upstream and downstream teams
	Life Skills
	Integrity SA5. Practice honesty with respect to company property and time SA6. Communicate with people in a form and manner and using language that is open and respectful SA7. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA8. Take responsibility for completing one's own work assignment SA9. Take initiative to enhance/learn skills in ones's area of work SA10. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA11. Is open to new ways of doing things SA12. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA13. Avoid absenteeism SA14. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA15. Work in disciplined factory environment SA16. Be punctual
B. Professional Skills	**Decision Making**
	The individual needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes(documented previous history)on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material/chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity

	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Interpret quality for sheet SB24. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB25. Identify the problems pertaining to the sharpening of tools based on visual inspection and work efficiency SB26. Diagnose common problems in the machine based on visual inspection, sound, etc SB27. Minimal wastage using bales to cut rubber pieces of different sizes SB28. Diagnose common problems in the storage bins, tanks and supply channels SB29. Work on possible areas of leakage SB30. Work on easy smooth flow of oil/black/silica from bins to mixer SB31. Suggest improvements(if any) in process based on experience
	Critical Thinking
	SB32. Seek clarification on problems from others SB33. Apply problem-solving approaches in different situations SB34. Refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC/N0136**		
Credits(NSQF)	**TBD**	**Version number**	**2.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**02/12/2014**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**23/08/2017**
Occupation	**Mixing**	**Next review date**	**23/08/2021**



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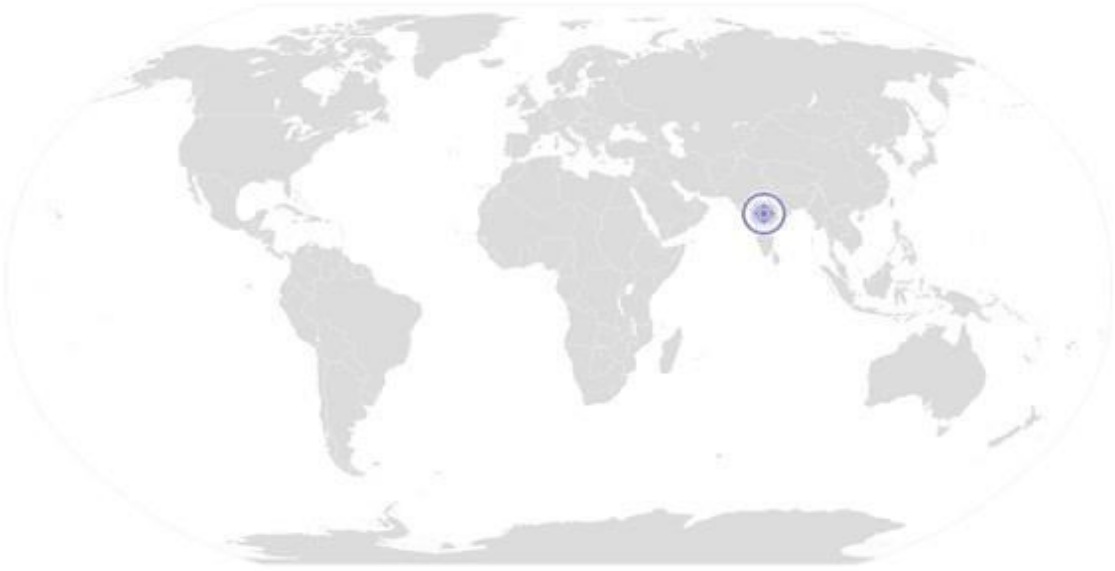
National Occupational Standard



Overview

This unit is about performing cutting and weighing operation using appropriate tools and machine and charging /filling process oil to overhead tanks and carbon black/silica in bins/hoppers for feeding mixers for mixing compounds.

National Occupational Standard

Unit Code	RSC/N0137
Unit Title (Task)	Perform cutting /weighing and storing weighed ingredients
Description	This unit is about performing cutting and weighing operation using appropriate tools and machine and charging /filling process oil to overhead tanks and carbon black/silica in bins/hoppers for feeding mixers for mixing compounds.
Scope	This unit/task covers the following: • Check appropriateness of material • Operate the cutting and weighing machine • Ensure health and safety in mixing are
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Raw material appropriateness	To be competent, the user/individual on the job must be able to : PC1. Ensure, through visual inspections, that materials are of the desired quality (uncontaminated –wet or with foreign matter) PC2. Ensure that the material is of correct code through colour codes or markings on the bags /tanks/drums /super sacks. PC3. Ensure that the weight of each ingredient is of the right quantity as specified in the mixing instructions/ organizations SOP.
Operation	PC4. Cut rubber pieces as per the required specification (weight /size) PC5. Use Hydraulic cutter for larger pieces; for smaller pieces, to make up the required weight specification, use Butcher knife PC6. Load/Feed rubber bales appropriately in the machine to cut it as per the required specification PC7. Monitor the machine properly during the cutting operation. PC8. Check scale for zero error and set zero before commencing weighing PC9. Weigh each ingredient/material correctly PC10. Weigh according to the schedule PC11. Avoid pyramid weighing by tarring to zero after every ingredient weighed, In case of clubbing of weighments in some scales PC12. Recording the weight of materials PC13. Counter check the weighed ingredients using a check weight scale PC14. Filling /topping up processed oil and carbon black in the tanks /bins/hoppers as per specifications PC15. Start heating on using the steam supply system provided. PC16. Follow SOP for oil heating -namely which oils need to be heated and upto what temperature PC17. Load Super sacks of carbon black /silica for direct feeding in designated locations for direct feeding to mixers PC18. Keep the weighed oil/black in containers as per sop, In case of no direct feeding of black or oil ,weighing oil and black as any other ingredient PC19. Log the details date and shift wise the material code, batch/lot number, supplier , date of release number material withdrawn from raw material stores
Health & Safety	PC20. Ensure hands or any part of the body of self or any helper is NOT under the Hydraulic cutter blade while under operation.

	PC21. Ensure the use of certified weighing scales PC22. Handle the material coming out of supply channels/pipes using hand gloves and other safety equipment. PC23. Avoid skin contact of oil ,chemicals and carbon black PC24. Ensure uses of shower or eye wash in case of oil/black/silica/chemicals spillage. PC25. Adhere to all safety norms (such as wearing protective gloves and shoes, safety goggles etc) PC26. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.
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. Cutting, weighing and Carbon/oil/silica charging operation and its importance. KA2. Implications of poorly prepared tools. KA3. The importance of accurate weight in product preparation KA4. Implications of improper weighment of material. KA5. Implications of supplying wrong grade material on compound mix. KA6. The material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure. KA7. How to conduct quality and damage checks and their importance. KA8. Importance of identifying non-conforming products and their storage. KA9. Risk and impact of not following defined procedures/work instructions. KA10. The escalation matrix for reporting identified issues. KA11. Types of documentation in the organization and their importance. KA12. Records to be maintained and the implications of their non-maintenance. KA13. Importance of housekeeping & good shop floor practices (eg. 3S ,5S and /or organization standards) KA14. Health, safety and environment guidelines, legislations 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 them. KA18. The escalation matrix and procedures for reporting hazards. KA19. Importance of FIFO KA20. Impact of various practices on cost, quality, productivity, delivery and safety. KA21. Handover/Takeover of the equipment/work area as per organizational SOP.
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Cutting and weighing operation using tools and machine. KB2. Operation of cutting machine (equipment working, possible setting levels and typical processes followed for different batches). KB3. Functioning of knives, their appropriate sharpness and cutting techniques KB4. Effects of improper size cutting on the inefficiency of mixing operation on internal mixer/open mills. KB5. Types of defects leading to rejections and their indicators, reasons and possible solutions.(e.g wrong polymer cut) KB6. When and where to use French chalk/talc for cleaning of knife. KB7. Usage of different weighing scales

	KB8. Effect of inaccurate weighing on the product preparation. KB9. Effect of wrong ingredient/material weighing. KB10. Effect of improper loading and unloading of material. KB11. Effects of improper scale usage for weighing of different ingredients/materials KB12. The process and importance of quality checks. KB13. Potential problems in the weighing operations KB14. Units of measurement. KB15. Response to emergencies, for example, fire, system failures and manual intervention to avoid disasters. KB16. Different grades of oils and carbon black/silica required for mixing compound KB17. Knowledge of supply channels from bins/super sacks/tanks. KB18. Effect of inaccurate quality of oil and carbon black supply on properties of mixing compound KB19. Knowledge of repair work related to pipes, tank and bin/hopper KB20. Knowledge of checking the carbon black and oil scale error and corrective actions KB21. Knowledge of Carbon black ASTM / Colour code /plant identification system for the identification of different grades of carbon KB22. How to adjust pressure/control valves and its importance. KB23. Various abnormalities and suitable response for abnormalities in equipment performance. KB24. Implications of delays in the preparation process. KB25. Knowledge of appropriate batch sizes with respect to appropriate material. KB26. Knowledge of managing inventory of material and replenishing them with zero or minimum wastage
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how to: 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
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	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any

	divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
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	Critical Thinking
	SB32. Seek clarification on problems from others SB33. Apply problem-solving approaches in different situations SB34. Refer anomalies to the line manager

NOS Version Control

NOS Code	RSC/N0137		
Credits(NSQF)	TBD	Version number	2.0
Industry	Rubber Manufacturing	Drafted on	02/12/2014
Industry Sub-sector	Tyre	Last reviewed on	23/08/2017
Occupation	Mixing	Next review date	23/08/2021

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National Occupational Standard

Overview

This unit is about performing activities after bale cutting, weighing ingredients and charging carbon/silica /oil for mixing compounds.

National Occupational Standard

Unit Code	RSC/N0138
Unit Title (Task)	Perform post weighing/cutting activities
Description	This unit is about performing activities after bale cutting, weighing ingredients and charging carbon/silica /oil for mixing compounds.
Scope	This unit/task covers the following: • Carry out mixing operation • Protection/disposal of the left over ingredients/material • Form appropriate batches of the cut pieces and weighed material and mark the batch for proper identification for further processing • Collect samples • Ensure health and safety in mixing area
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Operation	To be competent, the user/individual on the job must be able to PC1. Clean tools and keep the tools at designated place after the completion of pre-mixing operation. PC2. Organize to keep the cut rubber pieces appropriately. PC3. Ensure proper marking of rubber pieces– batch number, specified size and quantity, date , shift and the operators name PC4. Record on the schedule sheet the total units/kgs of rubber bales cut and mention excess / shortfalls for scheduler to adjust the schedule for next shift. Also mention the reason why. PC5. Remove remaining portions of the rubber from the cutting area. PC6. Ensure that the weighed quantity of material is properly recorded PC7. Ensure that all weighed materials are identified batch wise, place the ID on each bag having code, date shift and date of weighing PC8. Place an ID tag on the trolley/pallet on which the weighed ingredients/material bags are stored PC9. Report any shortage/excess vis-à-vis the requirement PC10. Send the various components weighed according to the formulation at the designated place PC11. Ensure the left over bags of ingredients/material are sealed to protect from being contaminated or from moisture and sent back to the storage area PC12. Ensure the proper no spillages/leakages of oil and carbon/silica from stored containers or material conveying pipelines to mixers. PC13. Prepare record of the stock and sent material PC14. Inform the mixer operator about the readiness of the available batches
Material disposal	PC15. Dispose of waste material safely, as per organizational SOP.
Batch Marking	PC16. Ensure identification and traceability by batch marking/coding for the right product as per the instructions laid down by the company (in terms of batch number, weight, color and date stamp). PC17. Ensure identification and traceability by ensuring the recording the details of material used for filling up the tanks/bins /hoppers in a logbook/computers. Details should include material code, batch/lot number, source of material.

	Date of lab release, lab release ref number, date and shift when the filling was done.
Sampling	PC18. Send sample of the rubber pieces and weighed material in the specified sample size and method as directed by the company PC19. Send the remaining material to designated storage areas.
Health & Safety	PC20. Handle the material using hand gloves and other safety equipment. PC21. Avoid skin contact of oil and carbon black PC22. Uses of shower or eye wash in case of oil /black /silica /chemical spillage. PC23. Adhere to all safety norms (such as wearing protective gloves, shoes, safety goggles etc). PC24. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.
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. Implications of inappropriately cut pieces. KA2. Implications of inaccurate weighing of material. KA3. Significance of batch marking. KA4. Implications of grade selection of material. KA5. Significance of code marking, released for usage and held up material for non usage KA6. Importance of identifying nonconforming products and their storage. KA7. Risk and impact of not following defined procedures/work instructions. KA8. The escalation matrix and procedures for reporting identified problems. KA9. Types of documentation in the organization and their importance. KA10. Records to be maintained and the implications of their non-maintenance. KA11. Importance of housekeeping & good shop floor practices (eg. 3S & 5S) KA12. Health, safety, and environment guidelines, legislations and regulations as applicable. KA13. Personal protection (which protective equipment to be used and how). KA14. Potential hazards and actions to minimize them. KA15. Impact of poor practices on health, safety and environment. KA16. The escalation matrix and procedures for reporting hazards. KA17. Handover/Takeover of the equipment/work area as per organizational SOP.
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Appropriate method for keeping the cut rubber pieces. KB2. Methods for removing remaining portions uncut bales from the cutting area. KB3. Process and importance of dimensional and quality checks. KB4. Identification techniques KB5. Implications of incorrect identification KB6. Knowledge of compatible/non compatible polymers and the necessity to keep them separated KB7. Implications of inappropriate waste disposal. KB8. Types of defects leading to rejections and their indicators, reasons and possible solutions. KB9. Units of measurement. KB10. Coding systems for identification and traceability.

	KB11. Knowledge of weighing scales. KB12. Knowledge of the storage life of product KB13. Knowledge of FIFO KB14. The identification technique for cautioning associate from using wrong/defective tools KB15. Appropriate method for supplying material. KB16. Methods for opening and shutting down the supply channels. KB17. Importance of correct grade of processed oils and carbon black/silica for compound mix. KB18. Knowledge of weighing scales. KB19. Knowledge of record maintenance. KB20. Importance of following paper documents for weighing as per the formulations KB21. Knowledge of the storage life of processed oils and other ingredients. KB22. Avoiding leakages and contamination.
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: 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
	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
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams
	Life Skills
	Integrity SA12. Practice honesty with respect to company property and time SA13. Communicate with people in a form and manner and using language that is open and respectful SA14. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and

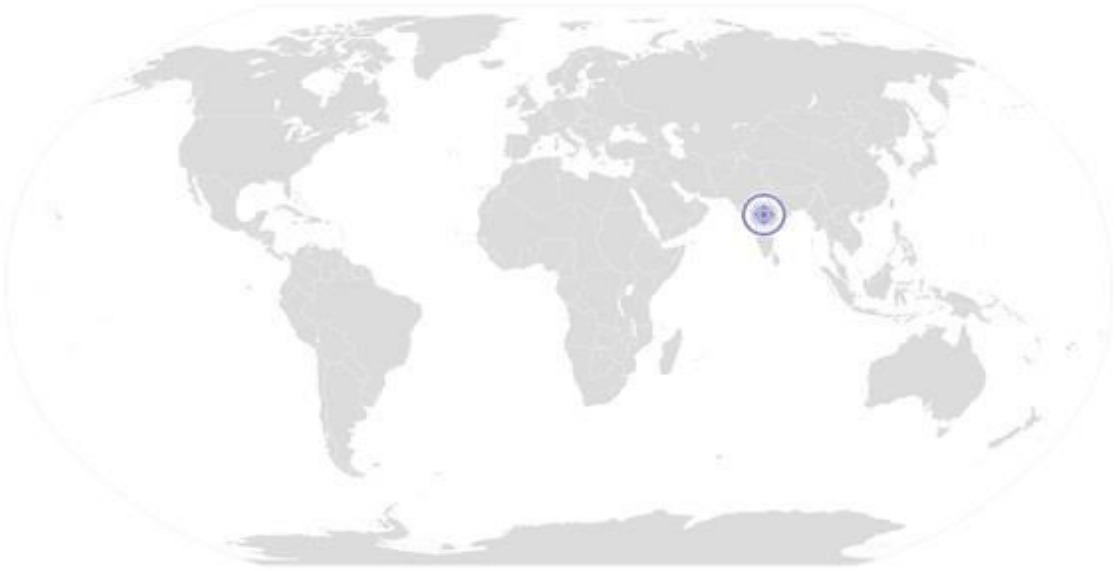
	the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them.
	Reliability
	SA20. Avoid absenteeism SA21. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**
	The individual needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes(documented previous history)on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material/chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity
	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer.

	SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Interpret quality for sheet SB24. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB25. Identify the problems pertaining to the sharpening of tools based on visual inspection and work efficiency SB26. Diagnose common problems in the machine based on visual inspection, sound, etc SB27. Minimal wastage using bales to cut rubber pieces of different sizes SB28. Diagnose common problems in the storage bins, tanks and supply channels SB29. Work on possible areas of leakage SB30. Work on easy smooth flow of oil/black/silica from bins to mixer SB31. Suggest improvements(if any) in process based on experience
	Critical Thinking
	SB32. Seek clarification on problems from others SB33. Apply problem-solving approaches in different situations SB34. Refer anomalies to the line manager

NOS Version Control

NOS Code	RSC/N0138		
Credits(NSQF)	TBD	Version number	2.0
Industry	Rubber Manufacturing	Drafted on	02/12/2014
Industry Sub-sector	Tyre	Last reviewed on	23/08/2017
Occupation	Mixing	Next review date	23/08/2021

National Occupational Standard



Overview

This unit is about carrying out housekeeping

National Occupational Standard

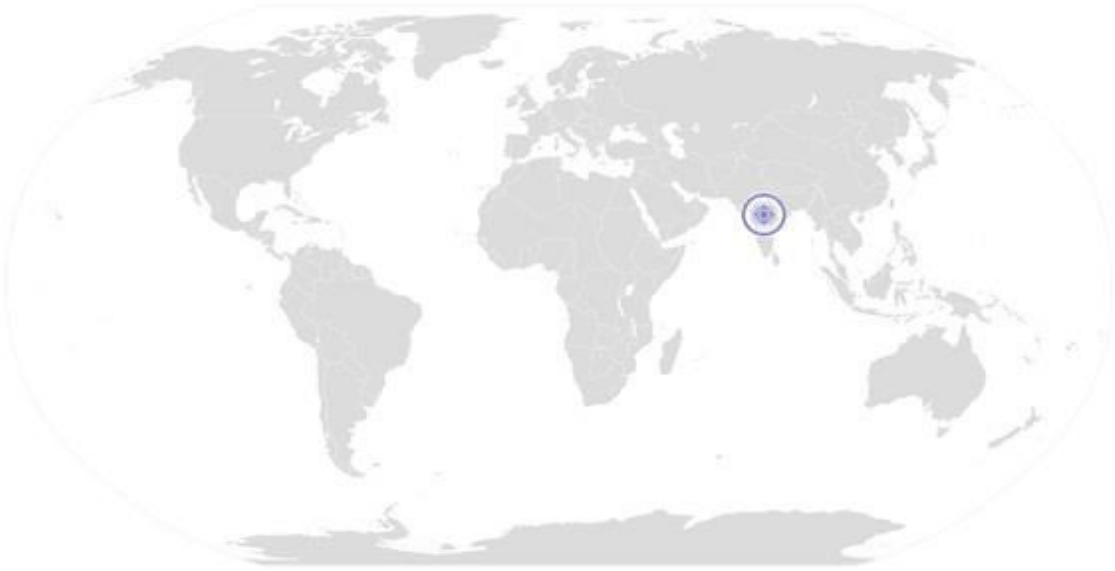
Unit Code	RSC/N5001
Unit Title (Task)	**Carry out housekeeping in rubber product manufacturing**
Description	This unit is about carrying out housekeeping activities
Scope	This unit/task covers the following: • Preparing for housekeeping activities • Carry out housekeeping operation • Post housekeeping activities • General
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Pre housekeeping activities	To be competent, the user/individual on the job must be able to: PC1. Inspect the area while taking into account various surfaces PC2. Identify the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain PC3. Ensure that the cleaning equipment is in proper working condition PC4. Select the suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person PC5. Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces PC6. Inform the affected people about the cleaning activity PC7. Display the appropriate signage for the work being conducted PC8. Ensure that there is adequate ventilation for the work being carried out PC9. Wear the personal protective equipment required for the cleaning method and materials being used
Operations	PC10. Use the correct cleaning method for the work area, type of soiling and surface PC11. Carry out cleaning activity without disturbing others PC12. Deal with accidental damage, if any, caused while carrying out the work PC13. Report to the appropriate person any difficulties in carrying out your work PC14. Identify and report to the appropriate person any additional cleaning required that is outside one's responsibility or skill
Post housekeeping activities	PC15. Ensure that there is no oily substance on the floor to avoid slippage PC16. Ensure that no scrap material is lying around PC17. Maintain and store housekeeping equipment and supplies PC18. Follow workplace procedures to deal with any accidental damage caused during the cleaning process PC19. Ensure that, on completion of the work, the area is left clean and dry and meets requirements 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 PC21. Dispose the waste garnered from the activity in an appropriate manner PC22. Dispose of used and un-used solutions according to manufacturer's instructions, and clean the equipment thoroughly
General	PC23. Maintain schedules and records for housekeeping duty PC24. Replenish any necessary supplies or consumables
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. Importance of learning proper procedures and techniques KA2. Implications of not following the organizational requirement for approval for undertaking the specific task KA3. Importance of completing the activities as per the schedule KA4. Implications of not following the defined procedures/work instructions KA5. Importance of team work KA6. Health, Safety and Environment guidelines, legislation and regulations as applicable KA7. Actions to be taken in case of non-conformity to behavioral standards of the organization KA8. Impact of poor practices on the individual's and organization's performance KA9. Importance of optimal utilization of resources KA10. Importance of providing feedback for improvement KA11. Importance of indigenous knowledge for evolving/adopting operation specific practices KA12. Rectification/solution of problems/conflicts for the smooth functioning of the organization KA13. Importance of documentation/reporting as per guidelines and procedures KA14. Knowledge of do's and don'ts (company's HR instructions) KA15. Importance of attending trouble shooting KA16. Importance of subject learning/ training KA17. Importance of Product and its application
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. The levels of hygiene required by workplace and why it is important to maintain them during your work KB2. How to inspect a work area to decide what cleaning it needs KB3. Methods and materials that used for cleaning variety of surfaces KB4. The types of cleansing agents that are not to be mixed together KB5. The correct method for cleaning equipment and/or machinery used during your work KB6. The importance of personal protective equipment KB7. Appropriate personal protective equipment for the work area, cleaning

	equipment, tools, materials and chemicals used KB8. The correct sequence for cleaning the work area KB9. The time taken by the treatment to work KB10. The importance of following manufacturer's instructions on cleaning agents KB11. The most appropriate place to carry out test cleans and why this should be done before applying treatments KB12. The importance of applying treatments evenly and the effect of not doing this KB13. Process of cleaning the surfaces without causing injury or damage KB14. The method to check the treated surface and equipment on completion of cleaning KB15. Procedures for reporting any unidentified soiling KB16. Procedures for disposing off waste KB17. Procedures for disposing off or storing personal protective equipment KB18. Escalation procedures for soils or stains that could not be removed
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how to: 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 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 SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams
B. Professional Skills	**Decision Making** The individual needs to know and understand how to:

	SB1. Take a decision for any change/issue based on earlier successes(documented previous history)on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material/chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity
	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Interpret quality for sheet SB24. Suggest improvements(if any) in process/product/materials based on results and experience

	Analytical Thinking
	SB25. Proper collection of waste material SB26. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	SB27. Seek clarification on problems from others SB28. Apply problem-solving approaches in different situations SB29. Refer anomalies to the line manager



NOS Version Control

NOS Code	RSC/N5001		
Credits(NSQF)	TBD	Version number	
Industry	Rubber Manufacturing	Drafted on	02/12/2014
Industry Sub-sector	Tyre	Last reviewed on	23/08/2017
Occupation	Mixing	Next review date	23/08/2021

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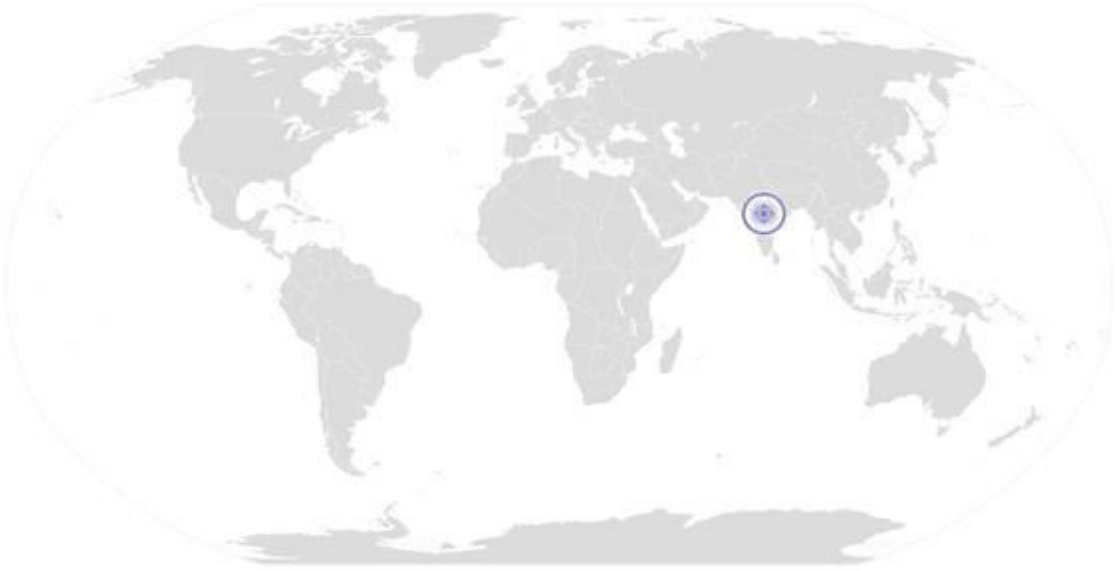
National Occupational Standard



Overview

This unit is about reporting and documentation

National Occupational Standard

Unit Code	RSC/N5002
Unit Title (Task)	Carry out reporting and documentation
Description	This unit is about carrying out reporting and documentation
Scope	This unit/task covers the following: • Reporting • Documentation • Information Security

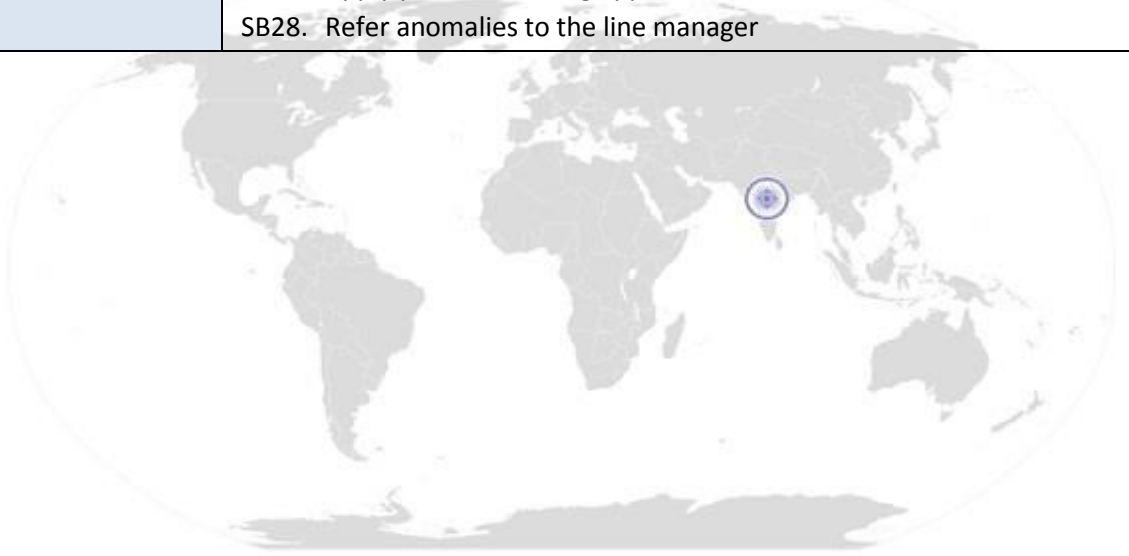
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Reporting	To be competent, the user/individual on the job must be able to: PC1. Report data/problems/incidents as applicable in a timely manner PC2. Report to the appropriate authority as laid down by the company PC3. Follow reporting procedures as prescribed by the company
Recording and Documentation	PC4. Identify documentation to be completed relating to one's role PC5. Record details accurately 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. Ensure documents are available to all appropriate authorities to inspect
Information Security	PC9. Respond to requests for information in an appropriate manner whilst following organizational procedures PC10. Inform the appropriate authority of requests for information received

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. Importance of learning proper procedures and techniques KA2. Implications of not following the organizational requirement for approval for undertaking the specific task KA3. Importance of completing the activities as per the schedule KA4. Implications of not following the defined procedures/work instructions KA5. Importance of team work KA6. Health, Safety and Environment guidelines, legislation and regulations as applicable KA7. Actions to be taken in case of non-conformity to behavioral standards of the organization KA8. Impact of poor practices on the individual's and organization's performance KA9. Importance of optimal utilization of resources KA10. Importance of providing feedback for improvement KA11. Importance of indigenous knowledge for evolving/adopting operation specific practices

	KA12. Rectification/solution of problems/conflicts for the smooth functioning of the organization KA13. Importance of documentation/reporting as per guidelines and procedures KA14. Knowledge of do's and don'ts (company's HR instructions) KA15. Importance of attending trouble shooting KA16. Importance of subject learning/ training KA17. Importance of Product and its application
B. Technical Knowledge	The user/individual on the job needs to know and understand: 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 timescales KB9. The importance of ensuring that the documents are correct KB10. The actions to be taken if the documents are not correct KB11. The importance of maintaining the security and confidentiality of recorded information KB12. Procedures to maintain confidentiality of information KB13. The appropriate method for responding to requests for information KB14. The reporting procedures to followed before disclosing information to any outside party
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: 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
	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

	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams
B. Professional Skills	**Decision Making**
	The individual needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes(documented previous history)on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material/chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Seek clarification on problems from others SB11. Apply problem-solving approaches in different situations SB12. Refer anomalies to the line manager
	Customer Centricity
	SB13. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB14. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB15. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB16. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB17. Work towards fulfilling the customers requirement as per their demand. SB18. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB19. Communicate effectively to the superior/customer for any delay in resolving

	the problem faced by the customer. SB20. Maintain good/cordial relation with customers. SB21. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB22. Interpret quality for sheet SB23. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB24. Proper collection of waste material SB25. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	SB26. Seek clarification on problems from others SB27. Apply problem-solving approaches in different situations SB28. Refer anomalies to the line manager



NOS Version Control

NOS Code	RSC/N5002		
Credits(NSQF)	TBD	Version number	
Industry	Rubber Manufacturing	Drafted on	02/12/2014
Industry Sub-sector	Tyre	Last reviewed on	23/08/2017
Occupation	Mixing	Next review date	23/08/2021

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National Occupational Standard

Overview

This unit is about carrying out quality checks

National Occupational Standard

Unit Code	RSC/N5003
Unit Title (Task)	Carry out quality checks
Description	This unit is about carrying out quality control activities
Scope	This unit/task covers the following: • Inspection • Analysis • Reporting

Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Inspection	To be competent, the user/individual on the job must be able to: PC1. Ensure that total range of checks are regularly and consistently performed PC2. Use appropriate measuring instruments, equipment, tools, accessories etc ,as required
Analysis	PC3. Identify non-conformities to quality assurance standards PC4. Identify potential causes of non-conformities to quality assurance standards PC5. Identify impact on final product due to non-conformance to company standards PC6. Evaluating the need for action to ensure that problems do not recur PC7. Suggest corrective action to address problem PC8. Review effectiveness of corrective action
Reporting	PC9. Interpret the results of the quality check correctly PC10. Take up results of the findings with QC in charge/appropriate authority. PC11. Take up the results of the findings within stipulated time PC12. Record of results of action taken PC13. Record adjustments not covered by established procedures for future reference PC14. Review effectiveness of action taken PC15. Follow reporting procedures where the cause of defect cannot be identified

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. Importance of learning proper procedures and techniques KA2. Implications of not following the organizational requirement for approval for undertaking the specific task KA3. Importance of completing the activities as per the schedule KA4. Implications of not following the defined procedures/work instructions KA5. Importance of team work KA6. Health, Safety and Environment guidelines, legislation and regulations as applicable KA7. Actions to be taken in case of non-conformity to behavioral standards of the organization

	KA8. Impact of poor practices on the individual's and organization's performance KA9. Importance of optimal utilization of resources KA10. Importance of providing feedback for improvement KA11. Importance of indigenous knowledge for evolving/adopting operation specific practices KA12. Rectification/solution of problems/conflicts for the smooth functioning of the organization KA13. Importance of documentation/reporting as per guidelines and procedures KA14. Knowledge of do's and don'ts (company's HR instructions) KA15. Importance of attending trouble shooting KA16. Importance of subject learning/ training KA17. Importance of Product and its application
B. Technical Knowledge	The user/individual on the job needs to know and understand: 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**
	The user/ individual on the job needs to know and understand how to: 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

	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
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams
Professional Skills	**Decision Making**
	The individual needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes(documented previous history)on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material/chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity
	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer.

	SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Interpret quality for sheet SB24. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB25. Proper collection of waste material SB26. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	SB27. Seek clarification on problems from others SB28. Apply problem-solving approaches in different situations SB29. Refer anomalies to the line manager

NOS Version Control

NOS Code	RSC/N5003		
Credits(NSQF)	TBD	Version number	
Industry	Rubber Manufacturing	Drafted on	02/12/2014
Industry Sub-sector	Tyre	Last reviewed on	23/08/2017
Occupation	Mixing	Next review date	23/08/2021

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National Occupational Standard

Overview

This unit is about problem identification and escalation

National Occupational Standard

Unit Code	RSC/N5004
Unit Title (Task)	Carry out problem identification and escalation
Description	This unit is about problem identification and escalation
Scope	This unit/task covers the following: • Problem Identification • Necessary Action • Problem Escalation

Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Problem Identification	To be competent, the user/individual on the job must be able to: 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
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) 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 PC16. Evaluate implementation of corrective action taken to determine if the problem has been resolved PC17. Ensure that corrective action selected is viable and practical PC18. Ensure that correct solution is identified to an identified problem PC19. Take corrective action for problems identified according to the company procedures PC20. Ensure that no delays are caused as a result of failure to take necessary action
Problem Escalation	PC21. Escalate problem as per laid down escalation matrix PC22. Escalate the problem within stipulated time PC23. Escalate the problem in an appropriate manner PC24. Ensure that no delays are caused as a result of failure to escalate problems

Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and	The user/individual on the job needs to know and understand: KA1. Importance of learning proper procedures and techniques KA2. Implications of not following the organizational requirement for approval for undertaking the specific task KA3. Importance of completing the activities as per the schedule

its processes)	KA4. Implications of not following the defined procedures/work instructions KA5. Importance of team work KA6. Health, Safety and Environment guidelines, legislation and regulations as applicable KA7. Actions to be taken in case of non-conformity to behavioral standards of the organization KA8. Impact of poor practices on the individual's and organization's performance KA9. Importance of optimal utilization of resources KA10. Importance of providing feedback for improvement KA11. Importance of indigenous knowledge for evolving/adopting operation specific practices KA12. Rectification/solution of problems/conflicts for the smooth functioning of the organization KA13. Importance of documentation/reporting as per guidelines and procedures KA14. Knowledge of do's and don'ts (company's HR instructions) KA15. Importance of attending trouble shooting KA16. Importance of subject learning/ training KA17. Importance of Product and its application
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Indicators of problems KB2. The working of the equipment and accessories(if applicable) KB3. The impact of operations on the user and equipment(if applicable) KB4. The impact of operations on the final product (if applicable) KB5. The effect of not rectifying the problems identified KB6. The reason for the occurrence of previous problems KB7. Measures and steps that have been taken to address the previous problems KB8. Possible solutions for various problems KB9. The correct method for carrying out corrective actions outlined for each problem KB10. The impact of not carrying out the corrective actions KB11. The documentation procedure for recording such problems, as per company norms KB12. The escalation matrix for reporting problems KB13. Escalation matrix for reporting unresolved problems KB14. The time frame within which in which each problem needs to be escalated KB15. Manner in which each problem needs to be escalated
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how to: 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
	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
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams
B. Professional Skills	**Decision Making**
	The individual needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes(documented previous history)on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material/chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity
	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer.

	SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Interpret quality for sheet SB24. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB25. Proper collection of waste material SB26. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	SB27. Seek clarification on problems from others SB28. Apply problem-solving approaches in different situations SB29. Refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC/N5004**		
Credits(NSQF)	**TBD**	**Version number**	
Industry	**Rubber Manufacturing**	**Drafted on**	**02/12/2014**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**23/08/2017**
Occupation	**Mixing**	**Next review date**	**23/08/2021**

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National Occupational Standard

Overview

This unit is about health & safety

National Occupational Standard

Unit Code	RSC/N5007
Unit Title (Task)	Carry Out Health & Safety
Description	This unit is about maintaining health and safety of self and others at workplace.
Scope	This unit/task covers the following: • Maintain a clean and efficient workplace • Render appropriate emergency procedures • Maintain standard safety procedures at the workplace • Participate in safety awareness campaigns • Understand potential sources of accidents • Use safety gears to avoid accidents
Performance Criteria (PC)	
Maintain a clean and efficient workplace	To be competent, the individual on the job must be able to: PC1. Undertake basic safety checks before operation of all machinery and equipment and report hazards to the appropriate supervisor PC2. Identify the work for which protective clothing or equipment is required and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy. PC3. Read and understand the hazards of use and contamination mentioned on the labels of chemicals, utilities etc PC4. Assess the risk prior to performing manual handling jobs and work is carried out according to currently recommended safe practices. PC5. Use equipment and materials safely and correctly and return the same to designated storage when not in use PC6. Dispose off waste safely and correctly in a designated area PC7. Recognize the risk to bystanders and take action to reduce risk associated with jobs in the workplace PC8. Perform work in a manner which minimizes environmental damage PC9. Monitor closely all procedures and work instructions for controlling risk PC10. Report any accidents, incidents or problems without delay to an appropriate person and take immediate necessary action to reduce further danger.
Render appropriate emergency procedures	PC11. Follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency. PC12. Follow emergency procedures as per company standards and workplace requirements. PC13. Use Emergency equipment in accordance with manufacturers' specifications and workplace requirements. PC14. Provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques. PC15. Recover (if practical), clean, inspect/test, refurbish, replace and store the first

	aid equipment as appropriate PC16. Dispose off medical waste in accordance with workplace requirements PC17. Report details of first aid administered in accordance with work place procedures.
Maintain standard safety procedures at the workplace	PC18. Comply with general safety procedures PC19. Follow standard safety procedures while handling equipment, hazardous material or tool PC20. Check parts of the workplace and take preventive actions like spraying and other steps to protect from leakages, water logging, pests, fire, pollution, etc. PC21. Ensure no accidents and damages at the workplace, reporting of any breach of company safety procedure PC22. Keep the workplace organized, swept, clean and hazard free
Participate in safety awareness campaigns	PC23. Attend fire drills and other safety related workshops organized at the workplace PC24. Awareness about first aid, evacuation and emergency procedures PC25. Ensuring all safety procedures are followed without neglecting any event
Understand potential sources of accidents	PC26. Avoid accidents while using hazardous chemicals, machines, sharp tools and equipment
Use safety gears to avoid accidents	PC27. Use safety materials such as protective gear, goggles, caps, shoes, etc. (as applicable with workplace) PC28. Handle heavy and hazardous materials with care and using appropriate tools and handling equipment such as trolleys, ladders
Knowledge and Understanding (K)	
A. Organizational context	The individual on the job needs to know and understand: KA1. Policies on incentives, delivery standards, and personnel management. KA2. Occupational safety and health policy followed KA3. Emergency evacuation procedure KA4. Medical Policy KA5. Company laws and acts
B. Technical knowledge	The individual on the job needs to know and understand: KB1. The risks to health and safety and the measures to be taken to control those risks in the area of work KB2. Workplace procedures and requirements for the handling of workplace injuries/illnesses. KB3. Basic emergency first aid procedure KB4. Local emergency services KB5. Reporting on accidents, incidents and problems to appropriate authorities. KB6. How to use machines as per standard operating procedure KB7. How to maintain work area safe and secure

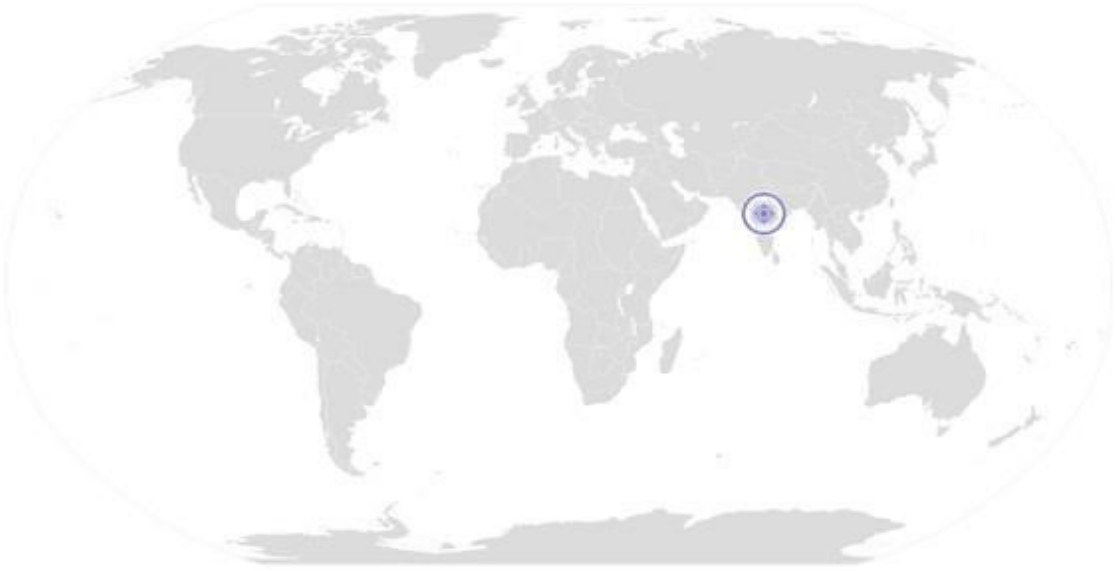
	KB8. Use of hazardous materials, tools and equipments KB9. Emergency evacuation and first aid procedures to be followed KB10. Personal hygiene and fitness requirements KB11. General duties under the relevant health and safety legislation KB12. What personal protective equipment and clothing should be worn and how it is cared for KB13. The correct and safe way to use materials and equipment required for work KB14. The importance of good housekeeping in the workplace KB15. Safe disposal methods for waste KB16. Methods for minimizing environmental damage during work
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The individual on the job needs to know and understand how to: SA1. Record data which are required for record keeping purpose SA2. Report problems to the appropriate person in a timely manner SA3. Write descriptions and details about incidents in reports
	Reading Skills
	SA4. Read instruction manuals for hand tools and equipment SA5. Read instructions on work orders and procedures
	Oral Communication
	SA6. Receive instructions and seek advice from superiors SA7. Communicate clearly and effectively with others
B. Professional Skills	**Decision Making**
	To be competent, the individual must be able to: SB1. Take a decision for any change/issue based on earlier successes(documented previous history)on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material/chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making

	SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Schedule daily activities and drawing up priorities; Allocate start times, estimation of completion times and materials, equipment and assistance required for completion.
	Customer Centricity
	SB11. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB12. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB13. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB14. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB15. Work towards fulfilling the customers requirement as per their demand. SB16. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB17. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB18. Maintain good/cordial relation with customers. SB19. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB20. Use first aid treatment in case of any injury/accident.
	Analytical Thinking
	SB21. Monitor and maintain the condition of tools and equipment SB22. Assess situation & identify appropriate control measures
	Critical Thinking
	SB23. Act, communicate and report in emergency situation

NOS Version Control

NOS Code	**RSC/N5007**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**02/12/2014**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**23/08/2017**
Occupation	**Mixing**	**Next review date**	**23/08/2021**

National Occupational Standard



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Overview

This unit is about charging /filling process oil to overhead tanks and carbon black/silica in bins/hoppers for feeding mixers for mixing compounds

National Occupational Standard

Unit Code	RSC /N0110
Unit Title (Task)	To carry out carbon oil charging operation
Description	This unit is about charging /filling process oil to overhead tanks and carbon black/silica in bins/hoppers for feeding mixers for mixing compounds
Scope	This unit/task covers the following: • Ensure cleanliness and safety in storage tanks and bins. • Check the availability of process oils /carbon black/silica in raw material stores. • Check the inventory of process oil/carbon black /silica in the mixer area • Charging/ filling up bins /tanks /hoppers with oil and carbon black /silica per specifications • Ensuring availability of carbon black , silica and oil for completion of days schedule for mixing compounds • Proper waste disposal

Performance Criteria (PC) w.r.t. the Scope

Element	Performance Criteria
Equipment readiness	To be competent, the user/individual on the job must be able to PC1. Ensure the cleanliness of bin and tanks. PC2. Ensure no leakages in the oil feeding lines or conveyors for black/silica and the proper maintenance of supply ducts/chutes pipes PC3. Ensure that the oil /black and silica feeding pipe line/ conveyors are properly operational PC4. Ensure smooth flow of oil from feed over head tanks and silica /black through screw conveyors PC5. Ensure that the system for oil heating is available – Such as steam supply line for heating the feed storage tank and supply line from feeding tank to mixers are with proper insulators. PC6. Carry out saddle heating, in case of small proportion of some oils being used.
Raw material appropriateness	PC7. Ensure proper amount of Lab released required grade/code of carbon black/silica is stored in the designated bins/tanks /super sacks for continuous availability. PC8. Ensure the quality of oil and carbon black (visual and quality checking) and correctness of the codes in use PC9. Ensure heat tracing to warm up the process oil
Operation	PC10. Filling /topping up processed oil and carbon black in the tanks /bins/hoppers as per specifications PC11. Start heating on using the steam supply system provided . PC12. Follow SOP for oil heating – namely which oils need to be heated and upto what temperature PC13. Load Super sacks of carbon black /silica for direct feeding in designated locations for direct feeding to mixers PC14. Log the details date and shift wise the material code, batch/lot number, supplier , date of release number material withdrawn from raw material stores PC15. Recheck if the all the black /silica and process oil are in proper designated

	locations and containers. PC16. Check for leakages or fly losses from the containers where these materials are stored. PC17. Report the storage operator/supervisor about the present stock and requirement of oil and carbon black PC18. Inform the mixer operator about the readiness of the available batches
Material disposal	PC19. Dispose of waste material safely, as per organizational SOP.
Health & Safety	PC20. Handle the material coming out of supply channels/ pipes using hand gloves and other safety equipment. PC21. Avoid skin contact of oil and carbon black PC22. Uses of shower or eye wash in case of oil /black /silica spillage. PC23. Adhere to all safety norms (such as wearing protective gloves and shoes, safety goggles etc) PC24. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.
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. Implications of poorly prepared storage devices and supply channels. KA2. Carbon/oil/silica charging operation and its importance. KA3. Implications of supplying wrong grade material on compound mix. KA4. Implications of grade selection of material. KA5. Significance of code marking, released for usage and held up material for non usage KA6. Importance of identifying non-conforming materials and their storage KA7. The material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure. KA8. How to conduct quality and damage checks and their importance. KA9. Importance of identifying non-conforming products and their storage. KA10. Risk and impact of not following defined procedures/work instructions. KA11. The escalation matrix for reporting identified issues. KA12. Types of documentation in the organization and their importance. KA13. Records to be maintained and the implications of their non-maintenance. KA14. Importance of housekeeping & good shopfloor practices (eg. 3S & 5S) KA15. Health, safety and environment guidelines, legislations and regulations, as applicable. KA16. Personal protection (which protective equipment to be used and how). KA17. Impact of poor practices on health, safety and environment. KA18. Potential hazards and actions to minimize them. KA19. The escalation matrix and procedures for reporting hazards. KA20. Importance of FIFO KA21. Impact of various practices on cost, quality, productivity, delivery and safety. KA22. Handover/Takeover of the equipment/work area as per organizational SOP.

B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Different grades of oils and carbon black/silica required for mixing compound KB2. Identify quality certified oils and carbon black KB3. Knowledge of supply channels from bin/hopper and tank to mixers KB4. Storage capacity of bin and tanks KB5. Effect of inaccurate quantity of oil and carbon black supply on properties of mixing compound KB6. Knowledge of appropriate batch sizes with respect to appropriate material. KB7. Knowledge of repair work related to pipes, tank and bin/hopper KB8. Knowledge of checking the carbon black and oil scale error and corrective actions KB9. Knowledge of Carbon black ASTM / Colour code of the carbon KB10. How to adjust pressure/control valves and its importance. KB11. Various abnormalities and suitable response for abnormalities in equipment performance. KB12. Implications of delays in the preparation process. KB13. Cleanliness and safety requirements for commencing carbon/oil charging operation. KB14. Knowledge of managing inventory of material and replenishing them with zero or minimum wastage KB15. Appropriate method for supplying material. KB16. Methods for opening and shutting down the supply channels. KB17. Importance of correct grade of processed oils and carbon black/silica for compound mix. KB18. Process and importance of quality checks. KB19. Coding/recording systems for identification and traceability. KB20. Knowledge of weighing scales. KB21. Knowledge of the storage life of processed oils and other ingredients. KB22. Avoiding leakages and contamination. KB23. Units of measurement. KB24. Response to emergencies, for example, power failures, fire, system failures and manual intervention to avoid disasters. KB25. Importance of appropriate waste disposal
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how to: 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 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

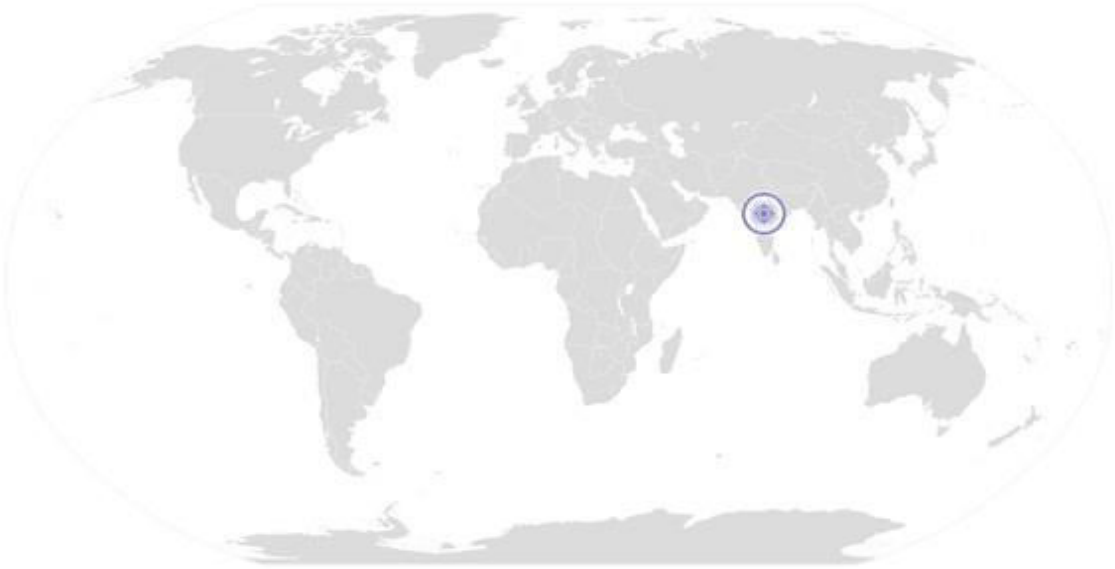
	Oral Communication
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams **Integrity** SA12. Practice honesty with respect to company property and time SA13. Communicate with people in a form and manner and using language that is open and respectful SA14. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA20. Avoid absenteeism SA21. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**
	The individual needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes(documented previous history)on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material/chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks

	Customer Centricity
	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Solve problems related to equipment and supply of inputs SB24. Solve problems among colleagues SB25. Diagnose problems and resolve at initial stage itself
	Analytical Thinking
	SB26. Diagnose common problems in the storage bins, tanks and supply channels SB27. Work on possible areas of leakage SB28. Work on easy smooth flow of oil/black/silica from bins to mixer SB29. Report repair and maintenance requirement at the earliest SB30. Suggest improvements(if any) in process based on experience
	Critical Thinking
	SB31. Take appropriate action/seek expert opinion to overcome critical situations

NOS Version Control

NOS Code	**RSC/N0110**		
Credits(NSQF)	**TBD**	**Version number**	**2.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**02/12/2014**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**23/08/2017**
Occupation	**Mixing**	**Next review date**	**23/08/2021**

National Occupational Standard



Overview

This unit is about supervising automated charging /filling of ingredients required for preparing rubber compound.

National Occupational Standard

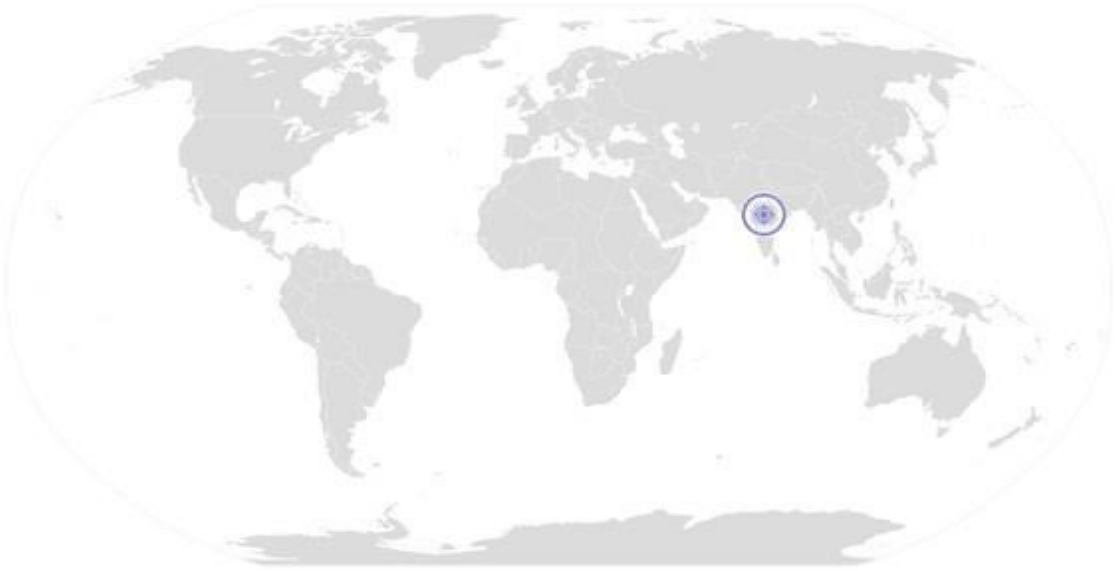
Unit Code	RSC /N0111
Unit Title (Task)	Carry out automated charging of ingredients
Description	This unit is about supervising automated charging /filling of ingredients required for preparing rubber compound.
Scope	This unit/task covers the following: • Check the availability of process oils /carbon black/silica and other ingredients • Ensure that the automated system is functioning properly • Ensure safety while handling ingredients
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Raw material appropriateness	To be competent, the user/individual on the job must be able to : PC1. Ensure proper amount of Lab released required grade /code of carbon black/silica and other ingredients are available on continuous basis for automated charging. PC2. Supervise the loading of ingredients in their designated locations for supply PC3. Ensure the quality of oil , carbon black (visual and quality checking)and other ingredients and correctness of their codes in use PC4. Ensure the heaters are set at required specified temperatures, in case a viscous oil is also used in automated oil feeding. PC5. Check in case of pre-weighted chemical (like in EVA bags) such as Silica or dispersion agents etc are kept ready after removing top paper bag if any
Operation	PC6. Setting the parameters for automated charging as per the specification. PC7. Follow SOP and maintain the record of ingredients consumed on regular basis PC8. Ensure that the automated system is functioning properly PC9. Ensure supply of ingredients is taking place as per specifications on display board / PLC or any other electronic media PC10. Check for any leakages and take corrective action PC11. Check if the weighing and feeding is done as per requirements
Health & Safety	PC12. Handle the material coming out of supply channels/ pipes using hand gloves and other safety equipments as per MSDS from supplier PC13. Avoid skin contact of oil and carbon black PC14. Uses of shower or eye wash in case of oil /black /silica spillage. PC15. Adhere to all safety norms (such as wearing protective gloves and shoes, safety goggles etc) PC16. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and	The user/individual on the job needs to know and understand: KA1. Ingredient charging operation and its importance. KA2. Implications of supplying wrong grade material and incorrect amount on compound mix. KA3. The importance of following material collection procedure and implications of

its processes)	not following the material disposal procedure. KA4. How to conduct quality and damage checks and their importance. KA5. Importance of identifying non-conforming products and their storage. KA6. Risk and impact of not following defined procedures/work instructions. KA7. The escalation matrix for reporting identified issues. KA8. Types of documentation in the organization and their importance. KA9. Records to be maintained and the implications of their non-maintenance. KA10. Importance of housekeeping and good shop floor practices (eg. 3S & 5S) KA11. Health, safety and environment guidelines, legislations 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 them. KA15. The escalation matrix and procedures for reporting hazards. KA16. Importance of FIFO KA17. Impact of various practices on cost, quality, productivity, delivery and safety. KA18. Handover/Takeover of the equipment/work area as per organizational SOP. KA19. Importance of PCL based recipe / Recipe management system
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Different grades of oils, carbon black/silica and other ingredients required for mixing compound KB2. Knowledge of supply channels from bins/super sacks/tanks and the automated system in place. KB3. Effect of inaccurate quality ingredients supply on properties of mixing compound KB4. Knowledge of repair work related to pipes, tank and bin/hopper KB5. Knowledge of checking the error in supply through automated route and corrective actions KB6. Knowledge of Carbon black ASTM / Colour code of the carbon or if any material is imported then correlation of their country code v/s Indian approved code if not as per ASTM KB7. How to adjust pressure/control valves and its importance. KB8. Various abnormalities and suitable response for abnormalities in equipment performance. KB9. Implications of delays in the preparation process. KB10. Cleanliness and safety requirements for continuous ingredient charging operation. KB11. Units of measurement. KB12. Response to emergencies, for example, power failures, fire, system failures and manual intervention to avoid disasters. KB13. Knowledge of managing inventory of material and replenishing them with zero or minimum wastage
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how to: 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
	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
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams **Integrity** SA12. Practice honesty with respect to company property and time SA13. Communicate with people in a form and manner and using language that is open and respectful SA14. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA20. Avoid absenteeism SA21. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**

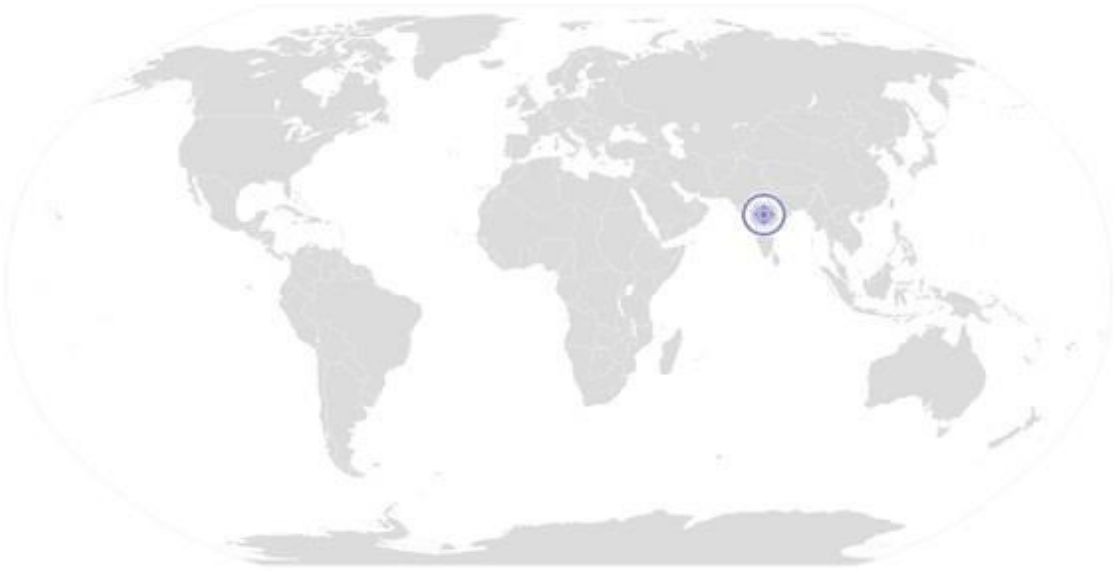
	The individual needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes(documented previous history)on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material/chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity
	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Solve problems related to equipment and supply of inputs SB24. Solve problems among colleagues SB25. Diagnose problems and resolve at initial stage itself
	Analytical Thinking
	SB26. Diagnose common problems in the storage bins, tanks and supply channels SB27. Work on possible areas of leakage and system malfunctioning SB28. Suggest improvements(if any) in process based on experience
	Critical Thinking

	SB29. Take appropriate action/seek expert opinion to overcome critical situations



NOS Version Control

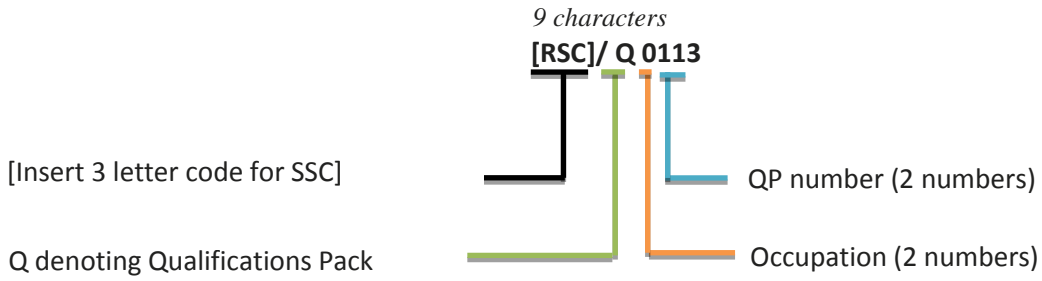
NOS Code	RSC/0111		
Credits(NSQF)	TBD	Version number	2.0
Industry	Rubber Manufacturing	Drafted on	02/12/2014
Industry Sub-sector	Tyre	Last reviewed on	23/08/2017
Occupation	Mixing	Next review date	23/08/2021



Annexure

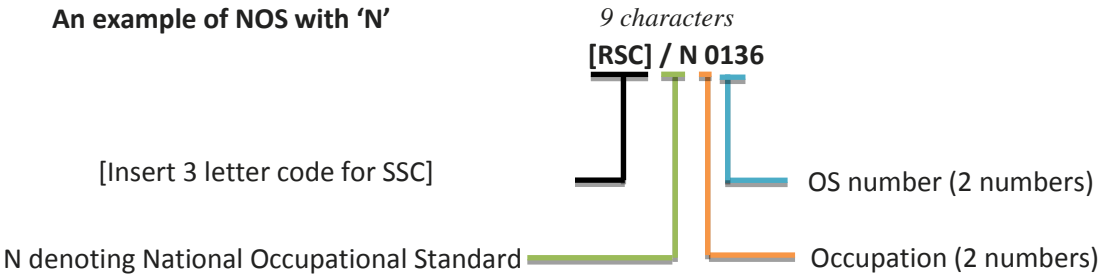
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



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The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Latex	**02-34**
Non-tyre	**12-12**
Rubber Manufacturing	**28-28**
Tyre	**02-36**
Tyre & Non -Tyre	**01-37**

Sequence	Description	Example
Three letters	Industry name	[RSC]
Slash	/	/
Next letter	Whether **Q**P or NOS	N
Next two numbers	Occupation code	01
Next two numbers	OS number	36

Criteria For Assessment Of Trainees

Job Role: Rubber Pre-Mixing Operator
Qualification Pack Code: RSC/Q0113
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. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
6. To pass the Qualification Pack , every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Compulsory NOS **Total Marks: 700**				**Marks Allocation**	
Assessment outcomes	**Assessment Criteria for outcomes**	**Total Marks**	**Out Of**	**Theory**	**Skills Practical**
RSC/N0136 (Prepare materials, tools and machines for pre-mixing)	PC1.Ensure the availability of all required tools and equipments.	100	4	2	2
	PC2.Ensure that the cleanliness of tools (knife, hydraulic cutter, machine), weighing scales, bins and tanks.		1	0	1
	PC3.Set parameters for the machine as per the organizational SOP.		6	4	2
	PC4.Place the tools on a safe location.		2	0	2
	PC5.Check the sharpness of the knife for the cutting purpose.		2	2	0
	PC6.Check the calibration stickers with dates of calibration done and its due date		3	3	0
	PC7.Check zero before every weighing and ensure correctness using standard weights, rectify in case of any error		3	3	0
	PC8.Check the scale is of right size and capacity for correctly weighing each material		4	2	2
	PC9.Check scales with standard dead weights		3	1	2
	PC10.Keep record book ready before weighing the components		1	0	1
	PC11.Ensure no leakages in the oil feeding lines or conveyors for black/silica and the proper maintenance of supply ducts/chutes pipes		3	1	2
	PC12.Ensure smooth flow of oil from feed over head tanks and silica /black through screw conveyors		4	2	2
	PC13.Ensure that the system for oil heating is available – Such as steam		4	2	2

	supply line for heating the feed storage tank and supply line from feeding tank to mixers are with proper insulators .				
	PC14.In case of small proportion of some oils being used, carry out saddle heating.		2	2	0
	PC15.Ensure that all the ingredients required are approved and released by laboratory.		4	2	2
	PC16.Check the availability of material, compound mix, semi finished and finished products and inform store/relevant department for low or no stock		3	2	1
	PC17.Ensure proper handling (loading) of the material from the place of storage to the place of weighing		2	1	1
	PC18.Move the required pallet/gandolla containing the approved Rubber bales to location where bales are to be cut		4	4	0
	PC19.Visual inspection of the ingredients to be weighed		5	4	1
	PC20.Remove bales from the wooden pallet/gandolla and ensure it is clean of any wooden pieces, poly wrapping / metal straps		3	2	1
	PC21.Collect all wrapping materials, wooden pallet and keep them in their designated places for pick up by scrap /waste handler		3	2	1
	PC22.Ensure proper amount of Lab released required grade /code of carbon black/silica is stored in the designated bins/tanks /super sacks for continuous availability.		4	2	2
	PC23.Ensure the quality of oil and carbon black (visual and quality checking) and correctness of the codes in use		3	1	2
	PC24.Ensure heat tracing to warm up the process oil		4	2	2
	PC25.Maintain housekeeping by ensuring no raw material is on the floor		3	2	1
	PC26.Ensure the use of certified/tested tools and machine (for lifting/moving/ weighing/cutting) and check their functioning.		3	2	1
	PC27.Ensure that the safety rope is active and is operational		3	2	1
	PC28.Avoid skin contact of oil and carbon black		3	2	1
	PC29.Use of shower or eye wash in case of oil /black /silica spillage.		3	2	1
	PC30.Adhere to all safety norms (such as wearing protective gloves and shoes).		4	2	2
	PC31.Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.		4	2	2
	Total		**100**	**60**	**40**
RSC/N0137 (Perform cutting /weighing and storing weighed ingredients)	PC1.Ensure, through visual inspections, that materials are of the desired quality (uncontaminated –wet or with foreign matter)	100	3	1	2
	PC2.Ensure that the material is of correct code through colour codes or markings on the bags /tanks/drums /super sacks.		3	1	2
	PC3.Ensure that the weight of each ingredient is of the right quantity as specified in the mixing instructions/ organizations SOP.		3	1	2
	PC4.Cut rubber pieces as per the required specification (weight /size)		6	3	3
	PC5.Use Hydraulic cutter for larger pieces; for smaller pieces, to make up the required weight specification, use Butcher knife		4	3	1
	PC6.Load/Feed rubber bales appropriately in the machine to cut it as per the required specification		4	2	2
	PC7.Monitor the machine properly during the cutting operation.		4	2	2
	PC8.Check scale for zero error and set zero before commencing weighing		4	2	2
	PC9.Weigh each ingredient/material correctly		4	2	2

	PC10.Weigh according to the schedule		5	3	2
	PC11.In case of clubbing of weighments in some scales , avoid pyramid weighing by tarring to zero after every ingredient weighed		4	2	2
	PC12.Recording the weight of materials		4	2	2
	PC13.Counter check the weighed ingredients using a check weight scale		2	0	2
	PC14.Filling /topping up processed oil and carbon black in the tanks /bins/hoppers as per specifications		3	3	0
	PC15.Start heating on using the steam supply system provided .		4	2	2
	PC16.Follow SOP for oil heating – namely which oils need to be heated and upto what temperature		8	4	4
	PC17.Load Super sacks of carbon black /silica for direct feeding in designated locations for direct feeding to mixers		5	3	2
	PC18.In case of no direct feeding of black or oil ,weighing oil and black as any other ingredient and keep the weighed oil/black in containers as per sop		4	2	2
	PC19.Log the details date and shift wise the material code, batch/lot number, supplier , date of release number material withdrawn from raw material stores		4	2	2
	PC20.Ensure hands or any part of the body of self or any helper is NOT under the Hydraulic cutter blade while under operation.		3	0	3
	PC21.Ensure the use of certified weighing scales		3	0	3
	PC22.Handle the material coming out of supply channels/ pipes using hand gloves and other safety equipment.		4	2	2
	PC23.Avoid skin contact of oil ,chemicals and carbon black		4	2	2
	PC24.Use of shower or eye wash in case of oil /black /silica/chemicals spillage.		4	2	2
	PC25. Adhere to all safety norms (such as wearing protective gloves and shoes, safety goggles etc)		2	2	0
	PC26.Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.		2	2	0
	Total		**100**	**50**	**50**
RSC/N0138 Perform post weighing/cutting activities	PC1.Clean tools and keep the tools at designated place after the completion of pre-mixing operation.	100	3	1	2
	PC2.Organize to keep the cut rubber pieces appropriately.		2	0	2
	PC3.Proper marking of rubber pieces– batch number, specified size and quantity, date , shift and the operators name		5	3	2
	PC4.Record on the schedule sheet the total units/kgs of rubber bales cut and mention excess / shortfalls for scheduler to adjust the schedule for next shift . Also mention the reason why.		5	3	2
	PC5.Remove remaining portions of the rubber from the cutting area.		5	2	3
	PC6.Ensure that the weighed quantity of material is properly recorded		3	0	3
	PC7.Ensure that all weighed materials are identified batch wise, place the ID on each bag having code, date shift and date of weighing		4	2	2
	PC8.Place an ID tag on the trolley/pallet on which the weighed ingredients/material bags are stored		3	0	3
	PC9.Report any shortage/excess vis-à-vis the requirement		3	3	0
	PC10.Send the various components weighed according to the formulation at the designated place		3	0	3
	PC11.Ensure the left over bags of ingredients/material are sealed to protect		3	0	3

	from being contaminated or from moisture and sent back to the storage area				
	PC12.Ensure the proper no spillages/leakages of oil and carbon /silica from stored containers or material conveying pipelines to mixers.		3	0	3
	PC13.Prepare record of the stock and sent material		4	2	2
	PC14.Inform the mixer operator about the readiness of the available batches		4	2	2
	PC15.Dispose of waste material safely, as per organizational SOP.		10	8	2
	PC16.Ensure identification and traceability by batch marking/coding for the right product as per the instructions laid down by the company (in terms of batch number, weight, color and date stamp).		7	3	2
	PC17.Ensure identification and traceability by ensuring the recording the details of material used for filling up the tanks/bins /hoppers in a logbook/computers. Details should include material code, batch/lot number, source of material. Date of lab release, lab release ref number, date and shift when the filling was done.		7	3	2
	PC18.Send sample of the rubber pieces and weighed material in the specified sample size and method as directed by the company		5	4	1
	PC19.Send the remaining material to designated storage areas.		5	4	1
	PC20.Handle the material using hand gloves and other safety equipment.		6	3	3
	PC21.Avoid skin contact of oil and carbon black		6	3	3
	PC22.Use of shower or eye wash in case of oil /black /silica /chemical spillage.		4	2	2
	PC23.Adhere to all safety norms (such as wearing protective gloves, shoes, safety goggles etc).		2	1	1
	PC24.Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.		2	1	1
	Total		**100**	**50**	**50**
RSC/N5001 Carry out housekeeping in rubber product manufacturing	PC1. Inspect the area while taking into account various surfaces	100	3	3	0
	PC2. Inspect the area and ensure no usable material intended for mixing is on the floor.		0	0	0
	PC3. Identify the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain		3	3	0
	PC4. Ensure that the cleaning equipment is in proper working condition		3	3	0
	PC5. 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
	PC6. Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces		3	3	0
	PC7. Inform the affected people about the cleaning activity		2	2	0
	PC8. Display the appropriate signage for the work being conducted		3	3	0
	PC9. Ensure that there is adequate ventilation for the work being carried out		3	3	0
	PC10. Wear the personal protective equipment required for the cleaning method and materials being used		3	3	0
	PC11. Use the correct cleaning method for the work area, type of soiling and surface		3	3	0
	PC12. Carry out cleaning activity without disturbing others		3	3	0
	PC13. Deal with accidental damage, if any, caused while carrying out the work		3	3	0
	PC14. Report to the appropriate person any difficulties in carrying out your work		3	3	0

	PC15. Identify and report to the appropriate person any additional cleaning required that is outside one's responsibility or skill		3	3	0
	PC16. Ensure that there is no oily substance on the floor to avoid slippage		9	3	6
	PC17. Ensure that no scrap material is lying around		9	3	6
	PC18. Maintain and store housekeeping equipment and supplies		3	3	0
	PC19. Follow workplace procedures to deal with any accidental damage caused during the cleaning process		3	3	0
	PC20. Ensure that, on completion of the work, the area is left clean and dry and meets requirements		8	2	6
	PC21. 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
	PC22. Dispose the waste garnered from the activity in an appropriate manner		9	3	6
	PC23. Dispose of used and un-used solutions according to manufacturer's instructions, and clean the equipment thoroughly		9	3	6
	PC24. Maintain schedules and records for housekeeping duty		3	3	0
	PC25. Replenish any necessary supplies or consumables		3	3	0
	Total		**100**	**70**	**30**
RSC/N5002 Carry Out Reporting And Documentation	PC1. Report data/problems/incidents as applicable in a timely manner	100	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
	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
	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
	Total		**100**	**60**	**40**
RSC/N5003 Carry Out Quality Checks	PC1. Ensure that total range of checks are regularly and consistently performed	100	24	10	14
	PC2. Use appropriate measuring instruments, equipment, tools, accessories etc ,as required		24	10	14
	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
	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
	Total		**100**	**60**	**40**
RSC/N5004 Carry Out Problem Identification And Escalation	PC1. Identify defects/indicators of problems	**100**	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
	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
	PC9. Consider applicable corrections and formulate corrective action	100	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
	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
	Total		**100**	**70**	**30**
RSC/N5007 Carry out health and safety	PC1. Undertake basic safety checks before operation of all machinery and equipment and report hazards to the appropriate supervisor	100	6	4	2
	PC2. Work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing		6	4	2

	these duties in accordance with workplace policy.				
	PC3. Read and understand the hazards of use and contamination mentioned on the labels of chemicals, utilities etc		0	0	0
	PC4. Prior to performing manual handling jobs, risk is assessed and work is carried out according to currently recommended safe practices.		6	4	2
	PC5. Use equipment and materials safely and correctly and return the same to designated storage when not in use		3	2	1
	PC6.Dispose off waste safely and correctly in a designated area		6	4	2
	PC7. Risks to bystanders are recognized and action taken to reduce risk associated with jobs in the workplace		0	0	0
	PC8. Perform work in a manner which minimizes environmental damage		0	0	0
	PC9. All procedures and work instructions for controlling risk are followed closely.		0	0	0
	PC10. Report any accidents, incidents or problems without delay to an appropriate person and take immediate necessary action to reduce further danger.		0	0	0
	PC11.Follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.		6	4	2
	PC12.Follow emergency procedures as per company standards and workplace requirements.		8	5	3
	PC13.Use Emergency equipment in accordance with manufacturers' specifications and workplace requirements.		8	5	3
	PC14. Provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques.		0	0	0
	PC15. Recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate		0	0	0
	PC16. Dispose off medical waste in accordance with workplace requirements		0	0	0
	PC17.Report details of first aid administered in accordance with work place procedures.		7	4	3
	PC18. Comply with general safety procedures		8	4	4
	PC 19. Follow standard safety procedures while handling equipment, hazardous material or tool		0	0	0
	PC20. Check parts of the workplace and take preventive actions like spraying and other steps to protect from leakages, water logging, pests, fire, pollution, etc.		8	5	3
	PC21. Ensure no accidents and damages at the workplace, reporting of any breach of company safety procedure		0	0	0
	PC22. Keep the workplace organized, swept, clean and hazard free		8	5	3
	PC23. Attend fire drills and other safety related workshops organized at the workplace		4	2	2
	PC24. Be aware of first aid, evacuation and emergency procedures		4	2	2
	PC25. Be alert of any events and do not be negligent to any safety procedures to be followed		0	0	0
	PC26. Avoid accidents while using hazardous chemicals, machines, sharp tools and equipment		4	2	2
	PC27.Use safety materials such as protective gear, goggles, caps, shoes, etc.(as applicable with workplace)		4	2	2
	PC28. Handle heavy and hazardous materials with care and using appropriate tools and handling equipment such as trolleys, ladders		4	2	2
	Total		**100**	**60**	**40**

OPTIONS **Optional 1.1 : Carry out carbon oil charging operation** **Optional 1.2 : Carry out automated charging of ingredients**					
Total Marks: 200				**Marks Allocation**	
Assessment outcomes	**Assessment Criteria for outcomes**	**Total Marks**	**Out Of**	**Theory**	**Skills Practical**
RSC /N0110 Carry out carbon oil charging operation	PC1. Ensure the cleanliness of bin and tanks.		4	3	1
	PC2. Ensure no leakages in the oil feeding lines or conveyors for black/silica and the proper maintenance of supply ducts/chutes pipes		4	3	1
	PC3. Ensure that the oil /black and silica feeding pipe line/ conveyors are properly operational		4	3	1
	PC4. Ensure smooth flow of oil from feed over head tanks and silica /black through screw conveyors		4	3	1
	PC5. Ensure that the system for oil heating is available – Such as steam supply line for heating the feed storage tank and supply line from feeding tank to mixers are with proper insulators.		4	2	2
	PC6. In case of small proportion of some oils being used, carry out saddle heating.		4	3	1
	PC7. Ensure proper amount of Lab released required grade /code of carbon black/silica is stored in the designated bins/tanks /super sacks for continuous availability.		4	2	2
	PC8. Ensure the quality of oil and carbon black (visual and quality checking) and correctness of the codes in use		4	3	1
	PC9. Ensure heat tracing to warm up the process oil	100	5	3	2
	PC10. Filling /topping up processed oil and carbon black in the tanks /bins/hoppers as per specifications		4	2	2
	PC11 Start heating on using the steam supply system provided.		5	2	3
	PC12. Follow SOP for oil heating – namely which oils need to be heated and upto what temperature		6	4	2
	PC13. Load Super sacks of carbon black /silica for direct feeding in designated locations for direct feeding to mixers		4	2	2
	PC14. Log the details date and shift wise the material code, batch/lot number, supplier , date of release number material withdrawn from raw material stores		3	3	0
	PC15. Recheck if the all the black /silica and process oil are in proper designated locations and containers.		4	1	3
	PC16. Check for leakages or fly losses from the containers where these materials are stored.		4	2	2
	PC17. Report the storage operator/supervisor about the present stock and requirement of oil and carbon black		4	3	1
	PC18. Inform the mixer operator about the readiness of the available batches		4	2	2
	PC19. Dispose of waste material safely, as per organizational SOP.		6	4	2
	PC20. Handle the material coming out of supply channels/ pipes using hand gloves and other safety equipment.		4	2	2
	PC21. Avoid skin contact of oil and carbon black		2	2	0
	PC22. Use of shower or eye wash in case of oil /black /silica spillage.		5	3	2
	PC23. Adhere to all safety norms (such as wearing protective gloves and		5	3	2

	shoes, safety goggles etc)				
	PC24. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.		3	0	3
	Total		**100**	**60**	**40**

Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
RSC/N0111 Carry out automated charging of ingredients	PC1. Ensure proper amount of Lab released required grade /code of carbon black/silica and other ingredients are available on continuous basis for automated charging.	100	6	3	3
	PC2. Supervise the loading of ingredients in their designated locations for supply		6	3	3
	PC3. Ensure the quality of oil , carbon black (visual and quality checking)and other ingredients and correctness of their codes in use		6	4	2
	PC4. In case a viscous oil is also used in automated oil feeding then ensure the heaters are set at required specified temperatures		6	3	3
	PC5. In case of pre-weighted chemical (like in EVA bags) such as Silica or dispersion agents etc are kept ready after removing top paper bag if any		6	4	2
	PC6. Setting the parameters for automated charging as per the specification.		8	3	5
	PC7. Follow SOP and maintain the record of ingredients consumed on regular basis		8	6	2
	PC8. Ensure that the automated system is functioning properly		6	3	3
	PC9. Ensure supply of ingredients is taking place as per specifications on display board / PLC or any other electronic media		6	4	2
	PC10. Check for any leakages and take corrective action		6	4	2
	PC11. Check if the weighing and feeding is done as per requirements		6	4	2
	PC12. Handle the material coming out of supply channels/ pipes using hand gloves and other safety equipments as per MSDS from supplier		6	4	2
	PC13. Avoid skin contact of oil and carbon black		6	4	2
	PC14. Use of shower or eye wash in case of oil /black /silica spillage.		5	3	2
	PC15. Adhere to all safety norms (such as wearing protective gloves and shoes, safety goggles etc)		6	4	2
	PC16. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.		7	4	3
Total			**100**	**60**	**40**