

 Eskom National Transmission Company South Africa TM	Specification	NTCSA
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(PPE) Specification**

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1. Introduction

The Occupational Health and Safety Act (Act No. 85 of 1993) places a legal obligation on employers and/or users of machinery to assess and mitigate all risks associated with conditions or situations that may arise from their operations and to which employees may be exposed. Employers are required to implement appropriate measures to eliminate or control such risks to ensure a safe working environment.

Where complete risk elimination is not feasible, the employer is obligated to provide, at no cost to employees, suitable safety equipment and facilities that are maintained in a good and hygienic condition. Additionally, employers must ensure that all individuals exposed to hazardous conditions are adequately protected.

In line with these obligations, employers must also ensure that employees receive proper instruction and training on the correct use, maintenance, and limitations of the safety equipment and facilities provided. Such training must be appropriately documented.

This document has been developed to set out the minimum requirements for the selection, use, care, and maintenance of Personal Protective Equipment (PPE) within the National Transmission Company South Africa (NTCSA). It is intended to promote the consistent application of PPE standards across the organisation, thereby safeguarding the health and safety of all NTCSA employees and ensuring full compliance with applicable legal and regulatory requirements.

2. Supporting Clauses

2.1 Scope

2.1.1 Purpose

The purpose of this document is to define the minimum requirements for generic Personal Protective Equipment (PPE) used within the National Transmission Company South Africa (NTCSA) and to provide clear guidance on the processes related to the selection, use, care, and maintenance of such equipment.

This specification is intended to apply to standard PPE requirements across NTCSA and does not extend to specialised equipment or tasks such as Live Line Work, Working at Heights, Aviation, or any other activities requiring purpose-specific PPE. The requirements for such specialised disciplines are addressed in their respective standards and specifications, as outlined below:

- *Personal Protective Equipment for Work at Height*: Refer to Specification Document 240-100979499
- *Airmobile Helmets*: Refer to Technical Specification Document 240-18000031

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- *Conductive Clothing for Transmission Live Line Work*: Refer to Technical Specification Document 240-112032916

Note: In instances where a particular PPE requirement is not explicitly addressed in this specification, the responsibility lies with the relevant Business Unit (BU) to ensure compliance with applicable safety standards, regulations, and codes of practice for the specific PPE in question.

2.1.2 Applicability

This document is applicable across the National Transmission Company South Africa SOC Ltd (Registration No. 2021/539129/30).

Individual Business Units (BUs) may establish additional Personal Protective Equipment (PPE) requirements tailored to their specific operational needs or working environments, provided that:

- The minimum standards outlined in this specification are strictly adhered to,
- All applicable Occupational Health and Safety legislation is complied with, and
- The additional requirements do not introduce or increase any risk to employees.

Any such enhancements or deviations must be informed by a comprehensive activity-based Occupational Health and Safety (OHS) risk assessment, ensuring that employee safety remains paramount at all times.

2.1.3 Effective date

This document will be effective from the day of authorisation. Implementation of this document shall be monitored after a period of six months from the authorisation date to allow the business to properly transition to new requirements.

2.2 Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] Occupational Health and Safety Act No. 85 of 1993.
- [2] 240-62196227 Eskom Life-saving Rules.
- [3] 240-62582234 OHS Roles and Responsibilities and Statutory Appointments.
- [4] 240-43848327 Employees' Right of Refusal to Work in Unsafe Situations.
- [5] 32-245 Eskom Waste Management Standard.
- [6] 32-520 Occupational Health and Safety Risk Assessment Procedure.
- [7] SANS 9001:2015 Quality Management Systems.
- [8] SANS 416 Chemical resistant gloves.

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- [9] SANS 434 General Protective Clothing.
- [10] SANS 1387- Woven cotton and similar apparel fabrics Parts 1 - 11
- [11] SANS 1397 Industrial Safety Helmet.
- [12] SANS 1400 Equipment (including oculars) for eye, face and neck protection against non-ionizing radiation arising during welding and similar operations - Welding helmets, hand shields, goggles, and welding spectacles.
- [13] SANS 1404 Eye-protectors for industrial and non-industrial use.
- [14] SANS 1423-1 Performance requirements for textile fabrics of low flammability.
- [15] SANS 1451-1 Hearing protectors Part 1 Earmuffs.
- [16] SANS 1451-2 Hearing protectors Part 2 Ear plugs.
- [17] SANS 1451-3 Hearing protectors Part 3 Earmuffs attached to an industrial safety helmet.
- [18] SANS 1822 Slide (zip) fasteners.
- [1] SANS 10101 Standard nomenclature for stitches, seams, and stitching.
- [2] SANS 20344 & 20345 (2023): Personal Protective Equipment – Safety Footwear
- [3] SABS SANS 20345: Mark of Approval for Safety Footwear
- [4] SANS 50136 Respiratory protective devices – Full face masks - Requirements, testing, marking
- [5] SANS 50140 Respiratory protective devices – Half masks and quarter masks – Requirements, testing and marking.
- [6] SANS 50142 Respiratory protective devices – Mouthpiece assemblies - Requirements, testing and marking.
- [7] SANS 50143 Respiratory protective devices – Particle filters - Requirements, testing and marking.
- [8] SANS 50149 Respiratory protective devices – Filtering half masks to protect against particles – Requirements, testing, marking.
- [9] SANS 50381-2 Protective clothing for users of hand-held chain saws Part 2: Test methods for leg protectors.
- [10] SANS 50381-5 Protective clothing for users of hand-held chain saws Part 5: Requirements for leg protectors.
- [11] SANS 20471 High-visibility warning clothing for professional use - Test methods and requirements.

2.2.2 Informative

- [1] 32-109 Brand Architecture and Corporate Identity Policy.
- [2] 32-288 Policy Procurement and Supply Chain Management Standard.
- [3] 32-599 Standard Procurement and Supply Chain Management Standard.
- [4] 32-727 SHEQ Policy.

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2.3 Definitions

Danger

Anything that may cause injury or damage to persons or property.

Employee

Any person who is employed by or works for an employer and who receives or is entitled to receive any remuneration or who works under direction or supervision of an employer or any other person.

Hazard

A potential source of harm or a source of, or exposure to, danger.

Hem

Free edge of a garment that is folded over and sewn down.

Lining

Layer of fabric sewn to the inside of a garment to give the garment a neat finish.

PPE-Free Zone

An area of a work site where employees are not required to wear certain types of PPE. This includes offices and walkways.

Pleat

A feature on a garment that makes provision for extra ease and formed by folding fabric onto itself.

Risk Assessment

Overall process of hazard identification, risk analysis, and risk evaluation.

Seam

Joint consisting of a sequence of stitches uniting material or materials.

Syce

An armhole (or occasionally, a leg hole) in tailoring or dressmaking.

Yoke

Part of a shirt or jacket that is positioned at the shoulder area and joined to the lower section with a seam.

Acids

Chemical liquids which contain hydrogen and are corrosive such as Sulphuric Acid (battery acid), Hydrochloric acid, etc.

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2.4 Abbreviations

Abbreviation	Explanation
ATPV	Arc Thermal Performance Value
BS	British Standard
BU	Business Unit
Cal/cm ²	Calories per square centimetre
dB	Decibel
EN	European Norms
g/m ²	Grams per square meter
HBAs	Hazardous Biological Agents
HCAs	Hazardous Chemical Agents
MAG	Metal Active Gas (welding)
MIG	Metal Inert Gas (welding)
MSDS	Material Safety Data Sheet
NRR	Noise Reduction Rate
NTCSA	National Transmission Company South Africa
OHS Act	The Occupational Health and Safety Act, Act 85 of 1993
OU	Operating Unit
PPE	Personal Protective Equipment
PU	Polyurethane

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Abbreviation	Explanation
PVC	Polyvinyl Chloride
SANS	South African National Standard
SNR	Signal to Noise Rate
TIG	Tungsten Inert Gas Welding

2.5 Roles and Responsibilities

2.5.1 Duties of Employer/Line Managers

- Ensure that a comprehensive risk assessment is conducted, and that the hierarchy of controls is applied before Personal Protective Equipment (PPE) is identified as a control measure. PPE must always be considered a last line of defence after other control measures have been exhausted.
- Ensure that employees are provided with appropriate PPE based on the outcomes of the hazard identification and risk assessment (HIRA) process and aligned to the relevant PPE Matrix for the task or environment.
- Ensure that all relevant information, instructions, and training on the correct usage, care, maintenance, and limitations of PPE and associated accessories are effectively communicated to all affected employees prior to deployment. This includes clear guidance on what the PPE can and cannot protect against.
- Verify that PPE issued is fit for purpose and suitable to minimise exposure to the specific hazard(s) identified in the workplace. The selection must be informed by documented risk assessments and technical specifications.
- An employer shall not require or permit any employee to perform work without being issued with the appropriate PPE and shall ensure its proper and consistent use during work activities.
- Respect the employee's right to refuse to work in circumstances where hazards cannot be eliminated or adequately mitigated, and PPE alone does not provide sufficient protection. This is in line with Section 13 of the OHS Act and broader principles of employee safety and autonomy.
- In cases where cleaning or maintenance of PPE may result in the spread of contaminants (e.g., Hazardous Biological Agents [HBAs] or Hazardous Chemical Agents [HCAs]), the employer shall take full responsibility for the safe cleaning, decontamination, or disposal of such PPE, in compliance with applicable regulations.

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- Where applicable, employers must provide designated, clean, and secure facilities for the storage of PPE to maintain its integrity and hygiene.

Note: When procuring PPE and local South African National Standards (SANS) specifications are not available, preference should be given to equipment that complies with internationally recognised standards, such as the British Standard (BS), American National Standards Institute (ANSI), or European Norms (EN). Every effort must be made to ensure that the PPE meets credible safety benchmarks.

2.5.2 Duties of Employees

Employees shall:

- Attend and complete comprehensive training on the correct use, care, limitations, and responsibilities associated with the PPE provided to them.
- Personally acknowledge receipt of PPE through formal sign-off processes and consistently wear or use the issued PPE whenever required to mitigate occupational risks.
- Maintain all issued PPE in a clean, hygienic, and serviceable condition. Under no circumstances may PPE be modified, altered, or tampered with.
- Ensure PPE is readily available and in their possession during all working hours, including standby duty, emergencies, and overtime shifts.
- Wear or use PPE as prescribed by risk assessments, standard operating procedures (SOPs), or any other relevant health and safety requirements.
- Immediately report any instance where PPE is lost, damaged, worn out, or stolen to their supervisor or designated authority.
- Accept responsibility for routine cleaning and maintenance of PPE, except where such activities may result in exposure to hazardous contaminants (e.g., HBAs or HCAs). In such cases, the employer assumes responsibility for safe decontamination.
- Clean PPE according to the manufacturer's specifications to preserve its integrity, protective properties, and compliance with safety standards.
- Notify management, through the designated health and safety representative, supervisor, occupational health practitioner, or hygienist, if unable to use standard-issue PPE due to ergonomic or physical constraints. Specially designed PPE (e.g., custom-sized boots or overalls) shall be provided upon assessment.
- Use PPE exclusively on an individual basis to prevent cross-contamination and preserve hygiene. PPE must not be shared unless explicitly designed for shared use.
- Where PPE is designated for shared use (e.g., earmuffs or visitor hard hats), the issuer is responsible for ensuring proper cleaning or disinfection between uses and prior to storage.
- Refrain from using PPE that has not been inspected, maintained, or certified according to the manufacturer's specifications.
- Verify that all PPE and accessories are within their service life and not expired, damaged, or compromised in any way before use.

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2.5.3 OHS Department

The OHS Department shall:

- Support line management in the implementation, oversight, and continuous improvement of PPE-related programmes and compliance frameworks.
- Assist in the development, coordination, and facilitation of training initiatives focused on the correct use of PPE, its limitations, and maintenance requirements.
- Ensure that comprehensive risk assessments are conducted and documented prior to the identification and issuance of PPE to any employee.
- Monitor compliance with the Occupational Health and Safety Act (Act 85 of 1993) and ensure alignment with all relevant NTCSA PPE standards and specifications.
- Investigate and resolve PPE-related concerns or queries raised by employees and escalate findings and recommendations to management.
- Conduct unannounced or scheduled PPE inspections to assess usage, condition, and adherence to safety protocols.
- Deliver regular awareness campaigns and refresher training sessions on the correct application, care, and disposal of PPE.
- Inspect all procured PPE to verify that it meets the minimum technical specifications outlined in NTCSA documentation and is appropriate for the associated risks identified in the workplace.
- Ensure that all appointed contractors submit product samples for evaluation by personnel responsible for the PPE contract. All submitted items must be accompanied by detailed technical data sheets.
- Coordinate with the Technical Evaluation Team or other designated evaluation structures to ensure that all PPE samples are rigorously assessed for compliance with NTCSA's PPE specifications and applicable risk profiles.

2.6 Process for Monitoring

Compliance to this document shall be monitored and audited by the NTCSA OHS department and line management on an annual basis.

2.7 Related/Supporting Documents

None

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3. Specifications for Personal Protective Equipment

3.1 General

3.1.1 Minimum Requirements

All PPE shall meet the following minimum requirements:

- **Last Line of Defence:** PPE must be implemented only as a last resort, in accordance with the Occupational Health and Safety Act and the established hierarchy of controls, after all other measures to eliminate or mitigate risk have been exhausted.
- **Free and Readily Available:** PPE shall be provided to employees free of charge and must be readily accessible at all times in relevant work areas.
- **Fit for Purpose:** PPE must be fit for its intended use, appropriate to the hazard, and ergonomically suitable for the individual user.
- **Condition and Functionality:** PPE must be maintained in good condition, regularly inspected, and kept in proper working order to ensure continued effectiveness.
- **Prevent Misuse:** The misuse or neglect of PPE is strictly prohibited. All employees must be made aware of the importance of correct PPE usage to ensure optimal protection.
- **Adequate Hazard Control:** When used correctly, PPE must effectively reduce exposure to specific workplace hazards and provide sufficient protection to meet legal and operational standards.
- **Standards Compliance:** Where applicable, PPE must meet the requirements of authorised regulatory bodies and comply with technical specifications relevant to the type of protection needed.
- **Frequency of Issuance:** PPE shall be replaced or renewed at intervals determined by usage patterns, wear and tear, and manufacturer guidance, or as stipulated by the responsible manager.
- **Business Unit Responsibility:** Each Business Unit (BU) is responsible for developing and enforcing site-specific PPE procedures or processes tailored to their unique operational risks.
- **Local Procurement Preference:** Locally manufactured PPE shall be prioritised, provided it meets the necessary quality and safety standards.
- **Categorisation of PPE:** The standard PPE supply is classified into four main categories, which offer baseline protection for different operational environments. These are detailed in Appendix A: Minimum PPE Required for Each Work Area.
 - This appendix provides a minimum guideline; additional PPE requirements, based on site-specific hazards, must be outlined in the BU-Specific PPE Work Instructions and associated risk assessments.

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3.1.2 Issuing of PPE

- **Free Issuance:** PPE shall be issued to employees free of charge to protect them against identified occupational hazards.
- **Risk-Based Allocation:** All PPE shall be issued in accordance with the approved PPE Matrix, which is informed by comprehensive risk and exposure assessments conducted in the relevant work areas.
- **Individual Issuance:** PPE shall be issued on an individual basis to each employee to ensure fit, hygiene, and accountability.
- **Shared PPE Protocol:** In instances where PPE is shared (e.g., visitor items), such equipment must be thoroughly sanitised or disinfected prior to being stored or used by another person.
- **Issuance Records:** A detailed record of all PPE issued must be maintained and updated for each employee, including type, quantity, and date of issuance.
- **Routine Inspection:** The physical condition of PPE shall be inspected at least every three months by the supervisor or a designated delegate, or more frequently as guided by the manufacturer, relevant legislation, or applicable standards and codes.
- **Replacement Schedule:** Each Business Unit (BU) shall establish a PPE replacement schedule, tailored to the risk profile, usage frequency, and operational requirements of the work environment.
- **Return on Termination:** Upon termination of employment, all issued PPE must be returned to the responsible line manager. These items remain the property of NTCSA and shall be disposed of or repurposed in line with the organisation's approved disposal procedures.

3.1.3 Replacement of PPE

- **Replacement Criteria:** PPE replacements shall only be made upon return of unserviceable equipment, based on fair wear and tear, operational usage, or manufacturer-defined lifespan.
- **Supervised Disposal:** The employee's line manager or supervisor shall be responsible for the destruction of unserviceable PPE. All returned clothing must be rendered unusable (e.g., disfigured, cut, or otherwise altered) to prevent re-use or fraudulent exchange.
- **Sustainable Waste Management:** Damaged or obsolete PPE shall be managed and disposed of in accordance with the Eskom Waste Standard (32-245). Where possible, waste minimisation strategies such as reuse, and recycling shall be applied prior to final disposal.
- **Loss Due to Negligence:** All PPE and protective clothing are issued free of charge. However, where PPE is lost, damaged, or misused due to negligence or misconduct, the matter shall be addressed through the relevant Eskom disciplinary processes

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3.1.4 Special Circumstances

Employees who are unable to perform their duties using standard-issue Personal Protective Equipment (PPE) due to physical, medical, or ergonomic limitations may be permitted to obtain specially manufactured PPE. This shall be subject to the following conditions:

- A formal written recommendation from a relevant medical or ergonomic specialist must be submitted, detailing the nature of the constraint and the need for alternative PPE.
- This documentation must be submitted through one of the following channels:
 - Health and Safety Representative
 - Occupational Health Practitioner
 - Occupational Hygiene Professional
 - Line Manager or Supervisor
- The procurement of such customised PPE shall follow the prescribed Eskom or NTCSA procurement processes, as applicable.
- The employer shall ensure that reasonable accommodation is made to support employee safety and functionality without compromising compliance with occupational health and safety standards.

3.1.5 PPE-Free Zones

PPE-free zones may only be designated following a comprehensive risk assessment that confirms the absence of occupational hazards requiring the use of Personal Protective Equipment (PPE). The risk assessment must demonstrate that:

- It is safe for employees and visitors to occupy the area without PPE,
- No foreseeable exposure to physical, chemical, biological, or ergonomic hazards exists in the zone, and
- The declaration of the area as PPE-free does not compromise health, safety, or legal compliance.

Such zones must be clearly demarcated and signposted, and their status should be reviewed regularly or whenever there are changes in operations, layout, or hazard profiles.

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3.2 Minimum Specific Requirements for PPE

3.2.1 Head Protection

3.2.1.1 Hard Hats

Use

Hard hats shall be worn:

- By all persons working or entering an area where people are working above them or where there is a danger of objects falling or flying, whether it be at ground level or at height.
- In areas where the international symbolic sign is displayed (designated hard hat area).
- When so requested by the person in charge of a work site.
- In confined spaces where the risk of bumping the head exists; and
- Where a risk assessment has identified a need for hard hats.

Care and Maintenance by the Employee

Hard hats shall be managed and used in accordance with best practices to ensure maximum protection and compliance with applicable standards:

- Hard hats must be kept clean and maintained in good working condition. Cradles and sweatbands must be washed at least once a month using warm, soapy water only. The use of solvents or harsh chemicals is strictly prohibited as these may degrade the material.
- Each employee must inspect their hard hat before every use for signs of cracks, impact damage, or wear that could compromise its protective capabilities.
- Hard hats may not be painted, drilled, or defaced in any way. The only permissible modification is the attachment of manufacturer-approved stickers, which must also comply with NTCSA Corporate Identity guidelines.
- The wearer must ensure the hard hat fits securely, with the cradle properly adjusted to the shape and size of the head. It should be fitted such that it does not fall off when leaning forward.
- No items shall be worn under the hard hat, except for a flat balaclava without a pom-pom, to preserve the correct positioning and function of the helmet. Chin straps must be worn at all times to ensure the helmet remains secure during operations.
- Hard hats that are continuously exposed to direct sunlight, chemicals, or other deteriorating conditions should be replaced after two years. Otherwise, replacement will be based on visible wear and tear, as assessed by the responsible supervisor.
- A “bend test” may be conducted periodically to assess whether the hard hat material has become brittle or degraded. If brittleness is detected, the hard hat must be immediately removed from service and replaced.

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3.2.1.2 Sun Brim for Hard Hats

Sun brims shall be used under the following conditions:

- By all individuals exposed to direct sunlight while working in areas that require the use of hard hats. The sun brim must be securely fitted onto the hard hat.
- In any work environment where a risk assessment has identified the necessity for additional protection from sun exposure.

Care and Maintenance (Employee Responsibility):

Employees shall ensure the following:

- Sun brims must be kept clean and in good condition at all times.
- Defacing, altering, or modifying the sun brim in any manner is strictly prohibited.
- When attaching the sun brim to the hard hat, employees must ensure it is properly fitted and securely fastened to maintain full coverage and effectiveness.
- Exposed facial and neck areas not covered by the sun brim must be protected with approved sunblock, which shall be provided by the employer.

3.2.1.3 Hair Protection Hoods

Usage Requirements:

Hair hoods shall be used under the following conditions:

- By all individuals with long or extended hair who are required to wear a hard hat.
- The hair hood is designed to prevent hair from being forced into the hard hat, which could compromise the effectiveness and proper fit of the helmet.

Care and Maintenance (Employee Responsibility):

Employees shall ensure the following:

- Hair hood must be kept clean and in good condition at all times.
- Defacing, altering, or modifying the hair hood in any way is not permitted.
- When wearing a hair hood, it must be properly fitted beneath the hard hat, ensuring that all hair is securely placed within the hairnet pocket.

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3.2.1.4 Bush Hats

Usage Requirements:

Soft hats shall be worn under the following conditions:

- By all individuals exposed to sunlight in areas where hard hats are not required.
- Where a risk assessment has identified the need for the use of soft hats to mitigate sun exposure or similar environmental hazards.

Care and Maintenance (Employee Responsibility):

Employees shall ensure that soft hats:

- Are kept clean, free from damage, and maintained in good condition.
- Shall not be defaced, altered, or modified in any way.
- Are properly fitted to provide adequate protection.
- Are complemented with the application of approved sunblock (as issued by the employer) to protect any exposed facial or neck areas not covered by the hat.

3.2.1.5 Balaclavas / Thermal Headgear / Beanies

Use:

- Shall be used to provide warmth and protect workers from cold environments or low-temperature conditions.
- May be worn underneath hard hats or safety helmets to offer additional insulation, provided they do not compromise the fit or function of the hard hat or helmet.

Only approved designs (e.g., without pom-poms or bulky seams) shall be used to ensure they do not interfere with the protective performance of headgear.

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Table 1: Minimum Standard requirements for Head Protection

Type	Specifications	Branding
Hard Hats (Industrial Helmet)	- All hard hats must be of the type that has an adjustable three-point webbing chin strap as prescribed in accordance with SANS 1397. - Have a shortened sun peak. - Have limited side rims/gutter. - Have a webbing suspension harness. - Have a thick sweat band of +/- 4.5 cm (THICKNESS). - Have adjustable head bands of standard size 53 cm to 63 cm. - The shape of the brim shall be oval and shall have a front back and neck protector attached to bottom of the brim.	- The colour of the NTCSA logo on the hard hats shall be in accordance with NTCSA's Corporate Identity. - The NTCSA Logo must be on the front of the helmet. - The Zero Harm slogan shall be silk screened on the left-hand side of the hat. - The hard hat shall have a reflective sticker with emergency numbers attached at the back.
Sun Brim (For Hard Hat)	- The material shall be pre-shrunk 100 % woven cotton fabric in accordance with SANS 1387-4, material type D59, and flame-retardant class C category 1. - The colours shall be Navy Blue. Pantone 19_3920. - Sun brim shall have a reinforced stiffened broad brim of at least 90 mm (Brim malgray chip board material 600 to 800g/m2). - Inside diameter 740mm (front to back 240mm and side to side 200mm). - Outside front to back 430mm and from side-to-side 380mm. - The stitching shall comply with SANS 10101. - The thread used shall comply with SANS 1362. - Insert for hard hat front peak flap centre 130mm and side fitted to other brim.	- The NTCSA logo shall be embroidered on the back flap in accordance with the NTCSA Corporate Identity.

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Table 1: Minimum Standard requirements for Head Protection		
Type	Specifications	Branding
	- Insert for hard hat rear section centre 130mm and sides fitted to other brim. - Neck protector at back centre 230mm long and sides fitted halfway to outer sun brim protector. - Velcro 40 by 25mm attach on left side of brim and rear insert of flap for stability. - Cotton twill tape 20mm to be fit on inner, outer brim front and back peak supports and neck protector. - Front peak support to be stitched down 70mm from other brim edge. - Top bottom and inner layer shall have a minimum of 6 rows reinforcement stitching around the brim.	
Hair Protection Hood	- The protection hood shall be made of pre-shrunk 100% soft woven cotton fabric in accordance with SANS 1387-4, Material Type D59, flame retardant SANS 1423-1 class C category 1. - Hood with inside pocket for hair protection and additional ear protection. - Velcro closure on hat harness, the hood will be bound with self-material binding length of hood 320mm, Width of hood 280mm, Pocket depth 220mm.	- No branding
Bush Hats	- The material shall be pre-shrunk 100 % woven cotton fabric in accordance with SANS 1387-4, material type D59. - The colours shall be Navy Blue. Pantone 19_3920. - Inside diameter 740mm (front to back 240mm and side to side 200mm).	- The NTCSA logo shall be embroidered on the front of the hat in accordance with the NTCSA Corporate Identity.

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Table 1: Minimum Standard requirements for Head Protection		
Type	Specifications	Branding
	- Outside front to back 430mm and from side-to-side 380mm. - The stitching shall comply with SANS 10101. - The thread used shall comply with SANS 1362. - Size Small to 3XL as per chart size in Appendix C: Table 7 of this Specification.	- The Zero Harm identification shall be embroidered on the rear of the hat and shall be in accordance with NTCSA's Corporate Identity.
Winter Beanies	- The colours shall be Navy Blue. Pantone 19_3920. - Durably knitted with 100% acrylic yarn. - It shall have Adjustable fold over brim and of Exceptional stretch that always retains its original fit.	- The NTCSA logo shall be embroidered on the front of the hat in accordance with the NTCSA Corporate Identity. - The Zero Harm identification shall be embroidered on the rear of the hat and shall be in accordance with NTCSA's Corporate Identity

3.2.2 Eye/Face Protection – Goggles, Eyeglasses, and Face Shields

3.2.2.1 Face shield, Battery acid / Alkali protection

Usage Requirements:

- Shall be worn by any person exposed to the risk of contact with battery acid or alkaline substances, whether through splashing, spills, or fumes.
- Mandatory when performing any task within a battery room or handling batteries, including maintenance, refilling, inspection, or disposal activities.

Additional Notes:

- Face shields must be chemical-resistant and specifically rated for acid and alkali protection.
- Face shields shall be used in conjunction with safety goggles or other primary eye protection to ensure complete coverage.

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3.2.2.2 Safety Goggles or glasses and Prescription Eyeglasses

Purpose and Function:

Eye protectors are designed to safeguard against a range of occupational hazards, including:

- Impact from flying objects of varying severity
- Harmful optical radiation (e.g., UV, IR, intense visible light)
- Exposure to molten metals and hot solids
- Splashes from liquids, including chemicals
- Airborne dust particles
- Hazardous gases or vapours
- Short-circuit electric arcs
- Or any combination of the above

Usage Requirements:

Eye and face protection shall be worn:

- By all individuals working in areas where there is a risk of eye or facial injury.
- During tasks involving welding, cutting, grinding, or brazing. The correct welding filter shade must be selected according to the task.
- In designated areas where international symbolic signage indicates mandatory eye/face protection.
- In any work environment where a formal risk assessment has identified the need for such protection.
- By all persons issued with prescribed safety eyewear or protective face gear, such as welding helmets, visors, or chemical splash goggles.

Important Notes:

- All issued eye and face protection must comply with recognised safety standards and be suitable for the identified hazards.
- Face shields must be worn in addition to basic eye protection (such as safety goggles) where there is a risk of facial exposure to flying particles, hazardous liquids, molten materials, or radiant energy.
- Anti-glare or UV-protective face shields must be used where appropriate.

Care and Maintenance (Employee Responsibility):

- Eye and face protection shall be kept clean, free of damage, and in good working condition.
- When not in use, protective items must be stored safely—preferably in a designated case—to prevent scratches, warping, or contamination.

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- Employees shall ensure a proper fit and verify that the eye/face protection selected is appropriate for the specific task.
- Helmets or face shields attached to hard hats or welding headgear must be compatible with the base PPE and properly secured.
- Damaged filters, lenses, or straps must be replaced immediately to maintain safety and visibility standards.

The table below provide details on the Minimum Standard requirements for Eye/Face Protection.

Table 2: Minimum Standard requirements for Eye/Face Protection	
Type	Specifications
Safety Spectacles with or without lateral protection	- All eye protection equipment must conform to EN166 adopted as SANS 50166, as amended. Sun Protection Eyewear: Shall have the following features: - Anti-scratch: coatings that prevent scratches, prolonging lens life. - Anti-fog: coatings that prevent fogging, ensuring clear vision in variable or humid temperatures. - UV protection: protects against harmful ultraviolet rays, only for outdoor work. General Safety Eyewear: Safety glasses/goggles Shall have the following features: - Anti-scratch: coatings that prevent scratches, prolonging lens life. - Anti-fog: coatings that prevent fogging, ensuring clear vision in variable or humid temperatures. - Impact resistance: essential for environments with flying debris or particles, ensuring that lenses don't shatter on impact. - Side and top shields: provide additional protection to prevent particles from entering the eyes from the sides or top. Welding eyewear: - Complies with CE, EN 166:2001. - Material and Style: Polycarbonate with side shields and nylon adjustable temples. Lens: Clear Polycarbonate anti-scratch. - Frame: Nylon. - Refractive Power: ± 0.06 D. - Astigmatism: 0.06 D. - Optical class: 1 - $\pm 0,06$ DIOPTRES for permanent wear.
Goggles	

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Table 2: Minimum Standard requirements for Eye/Face Protection	
Type	Specifications
	- Lateral vision: 180 degrees. Minimum Velocity particles: Class F, 45 m/s. Mass: 34g. Additional: - Colour: Green or black - Headbands, when used as the principal means of retention, shall be at least 10 mm wide over any portion which may come into contact with the wearer's head. Headbands shall be adjustable or self-adjusting. - Safety Eyewear Cord Colour shall be black, Elastic slip-on construction and have Adjustable length - Spectacle Storage Case Must be foam padded, Nylon eyewear case and Zipper closure with belt clip colour black to fit all spectacles. - Markings: The manufacturer or supplier certification mark must be present on all approved safety lenses, frames (front and temple), removable side shields, and other parts of the glasses, goggles. Products that are tested and approved by will bear the certification mark. - NOTE: Face-shields normally incorporate a suitable headband, brow guard, helmet, protective hood or other appropriate mounting device.
Face-shields	- Features: Flip up brow guard with adjustable fastening side knobs, Headgear with automatic locking ratchet adjustment system, Tricot cushion sweatband, 3 Stage adjustment on brow guard resting position, 5 Point adjustment on crown strap, 3-point lens attachment - Material and lens: Standard polycarbonate and EN 166: 2001 compliant lens - Automatic locking ratchet adjustment system - Flip up brow guard with 3-point adjustment on resting position - Materials: Polypropylene brow guard, side adjustments, gear housing and gears. HDPE headband. Acetyl side screws - Colours: Natural
Prescription safety glasses	- (Eye-protectors fitted with prescription lenses are not excluded from the field of application. The refractive power tolerances and other special characteristics dependent upon the prescription requirement are specified in EN ISO 8980-1 and EN ISO 8980-2)

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3.2.3 Garments (Clothing)

3.2.3.1 Boiler Suits/Overalls (One-Piece or Two-Piece Workwear Suit)

Usage Requirements:

Boiler suits or overalls shall be worn under the following conditions:

- By all personnel performing tasks where alternative or optional clothing does not provide adequate protection.
- During work conducted in construction sites, maintenance areas, or workshop environments.
- In any environment where a risk assessment has identified the need for enhanced body protection.
- Oil and chemical resistant boiler suits/overalls must be worn in areas where there is potential exposure to hazardous chemicals.
- Acid repellent workwear suits shall be used where high concentrations of acids are handled. Additional PPE—such as an acid-proof apron or full-body chemical suit—shall be worn over the suits.

Care and Maintenance (Employee Responsibility)

Employees are responsible for the following:

- Boiler suits/overalls must be kept clean, regularly inspected, and maintained in good working condition.
- They must not be defaced, altered, or modified in any manner that compromises their protective function.
- Employees are personally responsible for the regular washing of their overalls.
 - Garments must be washed in accordance with the manufacturer's care instructions indicated on the label to preserve protective properties, such as flame retardancy or chemical resistance.
- Overalls must fit properly, ensuring freedom of movement without excessive looseness, and must be fully fastened during use to provide optimal protection.

3.2.3.2 Dust Coats

Usage Requirements:

Dust coats shall be worn under the following conditions:

- In all work areas or environments where a risk assessment has identified the need for protection against dust, light contaminants, or surface-level hazards.

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Care and Maintenance (User Responsibility)

All personnel issued with dust coats shall ensure the following:

- Dust coats must be kept clean, free of contaminants, and maintained in good working condition.
- The garment shall not be defaced, altered, or modified in any way that may compromise its protective function or professional appearance.
- The wearer must ensure the dust coat is properly fitted, allowing for full coverage without impeding movement.
- Dust coats must be washed and cared for according to the manufacturer's specifications to preserve material integrity and ensure continued protection.

3.2.3.3 Thermal Jackets

Use

- Thermal jackets shall be worn in addition to a two-piece ensemble (long pants and a long-sleeved shirt) when working in cold weather conditions to ensure adequate insulation and thermal comfort.
- They must also be worn where a formal risk assessment has identified exposure to cold environments as a health and safety hazard.

Care and Maintenance (Employee Responsibility)

Employees issued with thermal jackets are responsible for the following:

- Ensuring thermal jackets are kept clean and in good working condition to maintain their insulating properties.
- Jackets must not be defaced, altered, or modified in any way that could compromise their functionality.
- Proper fit must be ensured at all times to allow for effective insulation without restricting movement.
- Cleaning and maintenance of thermal jackets is the responsibility of the employee and must be done in accordance with the manufacturer's care instructions to preserve the garment's thermal performance.

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3.2.3.4 Rain Protection (Rain Suits)

Use of Rainwear

- Rain protection shall be worn by all personnel who are exposed to wet weather conditions in the course of their duties, where a risk assessment has identified the need for such protection.
- Rain suits shall not be used for insulation or warmth purposes.

Care and Maintenance (Employee Responsibility)

When not in use, rainwear must be:

- Stored in an approved and designated manner.
- Thoroughly dried before storage to prevent mildew or damage.
- Kept clean and maintained in good condition at all times.

While in use, employees shall:

- Ensure the rainwear fits properly and is free from damage or excessive wear.
- Refrain from defacing or altering the rainwear in any manner.

3.2.3.5 Chemical Protection

A chemical protective outfit may include a one-piece or two-piece chemical-resistant suit, chemical-resistant gloves, chemical-resistant aprons, disposable shoe covers, a breathing apparatus, and full-face masks, depending on the nature of the task and associated risks.

Use

Chemical-resistant protective clothing shall be worn under the following circumstances:

- By all personnel performing tasks where alternative or optional clothing does not provide adequate protection.
- By individuals handling hazardous chemicals where there is a risk of exposure through spills, splashes, or direct contact, or where the Material Safety Data Sheets (MSDSs) explicitly require such protective clothing.
- In all scenarios where a risk assessment has identified the necessity for chemical-resistant protection.
- In cases where standard chemical-resistant suits are insufficient, chemical-proof suits or protective aprons shall be used to provide the required level of protection.

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Care and Maintenance (Employee Responsibility)

Employees are responsible for the proper care and upkeep of their chemical-resistant PPE. The following guidelines must be adhered to:

- All chemical-resistant clothing must be kept clean and in good condition to ensure optimal protective performance.
- PPE shall not be defaced, altered, or modified in any manner.
- Acid-resistant PPE must be washed strictly according to the manufacturer's care instructions attached to the garment.
- Chemical-resistant PPE must be washed separately from domestic laundry to avoid contamination and prevent the deterioration of household garments.
- Acid-resistant PPE must be routinely maintained and inspected to ensure its continued effectiveness.
- Any PPE that is damaged, cut, shows signs of degradation, or is perishing must be replaced immediately.
- When wearing chemical protective clothing, both the employee and their supervisor must ensure that the correct PPE is selected and used for the specific chemical exposure and task requirements.

3.2.3.6 Shirts

Use

- Shirts shall be worn in accordance with the outcomes of the applicable risk assessment and the PPE Matrix.
- Unless otherwise specified in the risk assessment, an operator's jacket shall be worn over the shirt when performing work-related tasks.

Care and Maintenance (User Responsibility)

- Shirts must be kept clean and in good condition to ensure they maintain their protective and professional appearance.
- Shirts shall not be defaced, altered, or marked in any unauthorized manner.
- When worn, the shirt must fit properly and be free from excessive wear or damage.
- Shirts shall be laundered strictly in accordance with the manufacturer's care instructions to preserve fabric integrity and ensure compliance with safety standards.

3.2.3.7 Soft Shell Wind Resistance Jacket, Down vests/Gillets, Flying Overall

Use

- Designated exclusively for use within the Aviation department.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gillets, Flying Overall, etc

Type	Specifications	Branding
One Piece Flame and/or chemical retardant Overall/Boilersuit:	Design: - One-piece as per sans 434 figure 2 (drg.10332) - Two-piece as per SANS 434 Figure 4 (drg.15289da) - Shirt-style open front with collar (min. 80 mm back width, 35 mm steps) - Waist seam joins top and trouser sections; elasticized waist (side seam to side seam) - Set-in sleeves with plain cuffs (15 mm double-fold hem) - Bottom leg hems: 15 mm double-fold - Fly front with two-way slide fastener (SANS 1822 Fig. 4 Type A), bar-tacked and stitched Fabric & Treatment: - Flame-retardant: 100% pre-shrunk cotton (SANS 1387-4 Type D59), SANS 1423-1 Class C Cat 1 - Chemical-resistant: 65/35 polyester/viscose (SANS 1387-3), acid-resistant finish Note: Chemical suits (Bottle Green) are acid-treated only, not flame-retardant Colour: - Flame-retardant – Navy Blue (Pantone 19-3920) - Chemical-resistant – Bottle Green (Pantone 19-6110TC)	- NTCSA Logo Positioned on the left breast pocket in white, as per NTCSA's Corporate Identity. - Zero Harm Identifier Placed on the right sleeve, aligned with NTCSA branding. - One NTCSA Value i.e. Excellence, Integrity, Reliability, Sinobuntu, Collaboration printed on the left sleeve. - Each garment batch features one value, rotating across batches to ensure full representation of values. - NTCSA Logo Positioned on the left breast pocket in white, as per NTCSA's Corporate Identity. - Zero Harm Identifier Placed on the right sleeve, aligned with NTCSA branding.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gillets, Flying Overall, etc	
Type	Specifications
	Fasteners & Stitching: - Zip: SANS 1822 Style C, non-conductive, color-matched stringers - Stitching: SANS 10101 - Thread: SANS 1362 - All garments must bear the SANS mark of approval Pockets - Breast & hip: Patch pockets with rounded corners - Side: Slanted mouth (min. 180 mm), inside patch pocket - Pencil pocket: 40 mm wide, full depth, stitched vertically - Flaps: Mitred, lined, buttoned, min. 50 mm depth, tapered to 30 mm - Pocket mouths: Hemmed, bar-tacked, positioned per patternmaking standards - Sizing: Refer to Appendix C – Table 1 Reflective Strips: - Be fitted with flame retro reflective material strips on both sleeves' circumference on the inner upper arm, and reflective strips on both legs at the knee height, with an exception for conditions stated in Point 5 of the notes under this table.
Branding	
	- One NTCSA Value i.e. Excellence, Integrity, Reliability, Sinobuntu, Collaboration printed on the left sleeve. - Each garment batch features one value, rotating across batches to ensure full representation of values.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc		
Type	Specifications	Branding
Two-Piece Chemical and Fire-Retardant Workwear Suits: Trouser	Design: - Two-piece work wear suits as per SANS 434, Figure 4 (drg.15289da). - Pleats: Pants shall have reverse pleats. - Waistband: Width: 38–40 mm. - Fit: Elasticated ruched back, zip front, and one button at the front. Plain bottom hem, double-folded, at least 15 mm wide, belt loops per SANS 434. - Fly: Lined with outer material. Closure: Slide fastener (non-conductive, SANS 1822 style A figure 3) or ≥ 4 concealed buttons. - Fly catch: Sewn or grown-on, width ≥ 35 mm. - Stitching: Must comply with SANS 10101. - Thread: Must comply with SANS 1362. - Zip Fastener: Non-conductive, compliant with SANS 1822, style A figure 3. - Size Compliance: In accordance with Appendix C of this specifications. Fabric & Treatment: - Flame-retardant pants: 100% pre-shrunk cotton (SANS 1387-4 Type D59), treated to SANS 1423-1 Class C Category 1. - Chemical-resistant pants: 65/35 polyester/viscose (SANS 1387-3), acid/alkali resistant finish. Colour: - Flame-retardant – Navy Blue (Pantone 19-3920)	- The logo shall be applied in accordance with NTCSA Corporate Identity and shall be embroidered on the right back pocket - The Zero Harm identification shall appear on the left back pocket of the pants and shall be in be in accordance with NTCSA's Corporate Identity.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc			
Type	Specifications	Branding	
	- Chemical-resistant – Bottle Green Pockets - Comply with pockets requirements in Section 4.5.7 of SANS 434. - Thigh Pocket: Patch style, min. 18 cm width/depth, Hem ≥ 30 mm, bar tacked ends, pleat bellow (≥ 40 mm). - Rule Pocket: Right back panel, sewn into side seam. • At least 50 mm below hip pocket. Pocket Flaps: - Mitred or square, lined with outer material. - Fastened with button, press stud, or touch-and-close. - Depth ≥ 80 mm (mitred point), tapered to ≥ 50 mm. - Positioned ≥ 10 mm above pocket mouth. Reflective Strips - All pants to be fitted with reflective strips on both legs above the knees, with an exception for conditions stated under General Garments or Work Wear Specification point 5 of this of the notes in this Table.		
Two-Piece Flame and/or Chemical Retardant Workwear Suits: Jackets	Fabric & Treatment - Flame treated jackets: Made of pre-shrunk 100% soft woven cotton fabric in accordance with SANS 1387-4, Material Type D 59. Flame retardant per SANS 1423-1 class C category 1.	- The Zero Harm identification shall appear on the right-side sleeve of the top and shall be in accordance with NTCSA's Corporate Identity.	

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gillets, Flying Overall, etc

Type	Specifications	Branding
	- Chemical treated jackets (Alkali & Acids): Made of pre-shrunk 65% / 35% polyester/viscose fabric in accordance with SANS 1387-3 with acid resistant finish. Design & Construction - Jacket shall have a collar. - Front: Open type with fastenings. - Bottom: Plain hem, without side vents. - Sleeves: One-piece long and set-in. - Front edges: Sewn-on or grown-on facings (≥ 45 mm), neatly finished inside edges, no yoke. - Fastening: Slide fastener extending ≥ 90 mm above bottom hem concealed and stitched down if butted edges. - Slide fasteners: Secured with two rows of stitching along each stringer. - Back: Plain, no centre back seam. - Sleeve ends: Plain cuff of width ≥ 15 mm. Pockets - Patch pockets made of outer material with round corners. - Pocket mouth hems: Finished with 10 mm or 20 mm (see 4.5.14 of SANS 434). - Breast and side pockets: Measurements per Table 6 of SANS 434.	- The NTCSA Values (Excellence, Integrity, Reliability, Sinobuntu and Collaboration) shall appear on the left side sleeve of the top and shall be in accordance with NTCSA Corporate Identity. - Each batch of garments manufactured shall feature one of these values, with the selected value rotating across batches to ensure representation of all NTCSA Values over time. - This approach reinforces NTCSA's commitment to its principles while promoting diversity and inclusion in its brand identity.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gillets, Flying Overall, etc	
Type	Specifications
	- Breast pocket: Positioned above Syce level per garment construction standards. - Pencil pocket: Part of breast pocket, mouth opening ≥ 40 mm, full depth of breast pocket, positioned at centre front end, formed by vertical stitching. - Breast pocket flap: Mitred, lined with outer material, fastened with button and buttonhole. - Flap dimensions: Depth ≥ 50 mm at mitred point, tapering to ≥ 30 mm at ends, length overlaps pocket width, positioned ≥ 10 mm above pocket mouth, securely tacked at each end. Colour - Navy Blue (Pantone 19_3920) for flame treated jackets. - Bottle Green for chemical treated jackets. Reflective Strip Around the Sleeves. One strip around each sleeve, positioned just above the elbow, with an exception for conditions stated under General Garments or Work Wear Specification notes in point 5 of this Table.
Two Piece Acid Repellent Workwear Suits/Overalls	Fabric: - 80/20% Poly Viscose material 265gsm. Garment Features: - Concealed five-gauge nickel-free brass centre front slider; double needle stitch; single breast pocket with flap and stud closure; two patch pockets
	- NTCSA Logo Positioned on the left breast pocket in white, as per NTCSA's Corporate Identity.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc			
Type	Specifications	Branding	
	- Two side pockets - Triple stitched seams - Hip and rule pocket - five-gauge nickel-free brass zip fly - High visibility tape variations Fabric Features - Protection against these liquid chemicals (nitric acid, hydrochloric acid, sulphuric acid, sodium hydroxide); oil repellent; excellent crease resistance; excellent colour fasteners; comfortable & soft satin finish.	- Zero Harm Identifier Placed on the right sleeve, aligned with NTCSA branding. - One NTCSA Value i.e. Excellence, Integrity, Reliability, Sinobuntu, Collaboration printed on the left sleeve. - Each garment batch features one value, rotating across batches to ensure full representation of values.	
One Piece Acid Repellent Overalls /Boilersuits	Fabric: - 80%/20% Poly Viscose material 265gsm. Garment Features - long sleeve with elasticated cuffs - two breast pockets with flaps and stud closure - concealed five-gauge nickel-free brass centre front slider - double needle stitch - two side entry pockets with vents - hip and rule pocket	- The NTCSA logo shall appear on the left-hand top pocket in white and shall be as per NTCSA's Corporate Identity. - The Zero Harm identification shall appear on the right-side sleeve of the top and shall be in accordance with NTCSA's Corporate Identity. - The other NTCSA Values (Excellence, Integrity, Reliability, Sinobuntu and Collaboration) shall appear on	

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc		
Type	Specifications	Branding
	- five-gauge nickel-free brass zip fly - elasticated waist band on back Fabric Features - protection against these liquid chemicals (nitric acid, hydrochloric acid, sulphuric acid, sodium hydroxide) - oil repellent - excellent crease resistance - excellent colour fasteners - comfortable & soft satin finish Reflective Strips - to be fitted with flame retro reflective material strips on both sleeves' circumference on the inner upper arm, and reflective strips on both legs at the knee height, with an exception for conditions stated in point 5 of the notes under this table. Size Chart: - Refer to Appendix C-Table 1-5 for size charts.	the left side sleeve of the top and shall be in accordance with NTCSA Corporate Identity. - Each batch of garments manufactured shall feature one of these values, with the selected value rotating across batches to ensure representation of all NTCSA Values over time.
Minimum Standard Specifications for Dust Coats	- The dust coat length shall be $\frac{3}{4}$. - The dust coat shall have pockets, front buttons, two front pockets, slit at the back.	- The Zero Harm identification shall appear on the right-side sleeve of the top and shall be in accordance with NTCSA's Corporate Identity.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc		
Type	Specifications	Branding
	- Buttons acceptable four-hole, dyed plastics buttons that comply with the requirements of SANS 1457. - Coats shall fasten with button and buttonhole and shall be equidistantly spaced. - Buttons shall be secured to positions corresponding to the buttonholes. - The pencil pocket shall form part of the breast pocket and of width (mouth opening) at least 40 mm and the full depth of the breast pocket ad shall be positioned at the centre front end of breast pocket. - The pencil pocket shall be formed by a row of vertical stitching from the front edge. - The back shall have a seam down the centre fr4with a vent in the lower part of the seam. - The vent shall have an overlap of 40 mm and shall be securely tacked and bar-tacked at the top. - A hanger loop of outer double folded material of finished length at least 70 mm and of finished width at least 10 mm, shall be securely sewn in with the collar at the back neck on the inside. - The bottom of the coats and the lower edge of plain sleeve cuffs shall have hems of finished width at least 15 mm. - Pocket mouths shall have hems of finished width at least 20 mm. - Coat to be fitted with reflective strips on both sleeves' circumference on the inner upper arm.	- The NTCSA Values (Excellence, Integrity, Reliability, Sinobuntu and Collaboration) shall appear on the left side sleeve of the top and shall be in accordance with NTCSA Corporate Identity. - Each batch of garments manufactured shall feature one of these values, with the selected value rotating across batches to ensure representation of all NTCSA Values over time.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gillets, Flying Overall, etc

Type	Specifications	Branding
Thermal Jackets (Winter Jackets)	- Jackets shall be insulated with pre-shrunk hollow cotton fibre 135 g/m2 which is made of non-flammable material, the inner material shall be a tartan lining, 100% cotton of a darkish colour, with the outer covering be pre-shrunk 100% soft woven fabric in accordance with SANS 1387-4, Material Type D59, flame retardant. (SANS 1423-1), class C category 1. - The size shall be in accordance with Appendix C. - The jackets shall have one chest pocket and four side pockets. The side pocket shall be the bellows type with a side entry into another separate pocket and shall be 22 cm deep and 21 cm wide. - The pockets shall have flaps with cut-off edges that can be fastened by means of non-conductive press studs. - Chest pockets shall be the bellows type – 15 cm deep and 14 cm wide. - The jackets shall reach below the buttocks. - The jackets shall have non-conductive press-studs down the front on a double panel strip as well as a non-conductive zip complying with SANS 1822 and be intact front and back. - The sleeve cuffs shall have two non-conductive press-studs at the end of the sleeve so that the size can be adjusted. - The stitching shall comply with SANS 10101. - The thread used shall comply with SANS 1362. - The jacket shall be Navy blue (Pantone 19_3920 as per corporate colour code).	- The NTCSA logo shall appear on the left-hand top chest and shall be in accordance with NTCSA's Corporate Identity. - The NTCSA logo shall be embroidered in accordance with NTCSA's Corporate Identity. - The Zero Harm identification shall appear on the right side of the sleeve and shall be in accordance with NTCSA's Corporate Identity. - The NTCSA Values (Excellence, Integrity, Reliability, Sinobuntu and Collaboration) shall appear on the left side sleeve of the top and shall be in accordance with NTCSA Corporate Identity. - Each batch of garments manufactured shall feature one of these values, with the selected value rotating across batches to ensure

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc		
Type	Specifications	Branding
	- The thermal jacket to be fitted with reflective strips on both sleeves' circumference on the inner upper arms.	representation of all NTCSA Values over time.
Cold Weather Protection	Other special protection includes but not limited to: - Cotton thermal underwear - Woollen gloves - Woollen socks - BalACLavas - Gumboot inserts Body protection – Battery acid/alkali protection	- No Branding required
Soft Shell Wind Resistance Jacket	- Soft Shell Wind resistant jacket - Navy Blue.: Pantone 19_3920 as per corporate colour code - Body hugging / slim fit. - Windproof / Waterproof / Stretchable. - Slash pockets. - Zips with zip closure. - Adjustable / elasticated cuffs. - Adjustable / drawstring waistband or hem. - Material Polyester fleece, Polartec or similar. No nylon. - Refer to Appendix C for size charts.	- The NTCSA logo shall appear on the left-hand top chest and shall be in accordance with NTCSA's Corporate Identity. - The NTCSA logo shall be embrodered in accordance with NTCSA's Corporate Identity. - The Zero Harm identification shall appear on the right side of the sleeve and shall be in accordance with NTCSA's Corporate Identity.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc		
Type	Specifications	Branding
		- The NTCSA Values (Excellence, Integrity, Reliability, Sinobuntu and Collaboration) shall appear on the left side sleeve of the top and shall be in accordance with NTCSA Corporate Identity. - Each batch of garments manufactured shall feature one of these values, with the selected value rotating across batches to ensure representation of all NTCSA Values over time.
Down vests/Gilets	- Female / male Down Vest. - Fabric windproof. - Minimum fill 600. - Fill containing Duck Down. - Stitch through garment design structure. - Front zip enclosed pockets. - Zips with zip closure / wind baffle. Elastic or adjustable hem. - Design: As per attached diagram and custom fit to each pilot's measurements. Refer to Appendix J of this specification for design.	- No branding required.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gillets, Flying Overall, etc		
Type	Specifications	Branding
	- Navy Blue: Pantone 19_3920 as per corporate colour code - Refer to Appendix C for size charts.	
Flying Overall	- Material: Fire-resistant Kermel, Nomex, or equivalent. - Construction: Double stitching throughout. - Design: As per attached diagram and custom fit to each pilot's measurements. Refer to Appendix I of this specification for design Specification. - Pockets: Breast pockets, side pockets, and lower leg pockets. - Colour: Navy blue. Pantone 19_3920. - Shoulder Straps/Passanten: To be provided for attachment of epaulettes.	- No branding required.
Rain Protection or Rain Suits	- The fabric for the jacket and trousers shall be a minimum of 180 grams per square meter with the face side 100% polyester, plain weave with 170 threads per square inch and coated with a water-resistant coating. - The "under" side to be laminated with PVC coating. Seams strength to be 50kPa, (converts to 50kN/m²). The lining to be 80% polyester and 20% cotton. All sizing benchmark to SANS 434 see size chart Appendix C for rain wear and chemical chart specification.	- The Zero Harm identification shall appear on the right side of the sleeve and shall be in accordance with NTCSA's Corporate Identity. - The NTCSA Values (<i>Excellence, Integrity, Reliability, Sinobuntu and</i>

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc	
Type	Specifications
	- The rain jacket shall have a nylon spiral zip, and a closed fly front secured by non-conductive press-studs and shall comply with SANS 1822 type 5(auto lock alloy sliders). - The hood shall be attached to the rain jacket. - The rain jacket shall cover the buttocks. - The sleeves shall have a false elastic sleeve at the end (made of a softer material) to prevent rain entering the sleeve. - The pants shall have two side slits and elasticised waist. - Navy Blue: Pantone 19_3920 as per corporate colour code - The rain suit shall be fitted with reflective strips on both sleeves' circumference on the inner upper arm, reflective strips on both legs above the knees
Branding	
<i>Collaboration</i>) shall appear on the left side sleeve of the top and shall be in accordance with NTCSA Corporate Identity. Each batch of garments manufactured shall feature one of these values, with the selected value rotating across batches to ensure representation of all NTCSA Values over time. This approach reinforces NTCSA's commitment to its principles while promoting diversity and inclusion in its brand identity. - The NTCSA's logo shall be silk-screened in accordance with NTCSA's Corporate Identity, on the front and on the back. - The size of the NTCSA logo on the front shall be 65 mm high and, on the back, the NTCSA logo shall be 150 mm high.	

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gillets, Flying Overall, etc

Type	Specifications	Branding
Men's shirt	- All shirts must be of T006 satin weave 100% cotton fabric and treated with a flame-retardant finish that complies with SANS 1423-1, class C category 1. - The shirts shall comply only with the requirements and sizes referred in Appendix C. - Button front with yoke and two breast pockets and flaps to button closure. - The pockets shall be 16 cm deep and 14 cm wide. - The pockets and flaps shall have round edges. - The flaps on the pockets shall have a pen division on the left side. - The front pocket shall be fastened by means of non-conductive buttons. - The collar shall be a standard shirt collar. - The back of the shirt shall have an inverted pleat with hanger loop and yoke. - Long-sleeved shirts shall have a cuff- 65 mm wide set-in long sleeve with two knife pleats separate the cuff with button closure of non-conductive buttons. Sleeve opening bound with binding. - The shirt shall be corporate colour (Grey). (CKS129-188c). - The front buttons shall be sewn onto a strengthened front and shall be non-conductive. - The stitching shall comply with SANS 10101. Seams shoulder, sleeve and back yoke posted.	- The logo shall be embroidered in accordance with NTCSA Corporate Identity. - The NTCSA logo shall appear on the left-hand top chest and shall be in accordance with NTCSA's Corporate Identity. - The Zero Harm identification shall appear on the right side of the sleeve and shall be in accordance with NTCSA's Corporate Identity. - The NTCSA Values (<i>Excellence, Integrity, Reliability, Zero harm, Sinobuntu and Collaboration</i>) shall appear on the left side sleeve of the top and shall be in accordance with NTCSA Corporate Identity. - Each batch of garments manufactured shall feature one of these values, with the selected value rotating across batches to ensure

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc

Type	Specifications	Branding
	- Side seam and under arm safety stitch. Hems finished 10mm. - The thread used shall comply with SANS 1362.	representation of all NTCSA Values over time. - This approach reinforces NTCSA's commitment to its principles while promoting diversity and inclusion in its brand identity.
Ladies Shirts	- All shirts shall be made of T006 satin weave 100% cotton fabric and treated with a flame-retardant finish that complies with SANS 1423-1, class C category 1. - The shirt sizes shall comply to Appendix A - The front of the long-sleeved shirts shall be button down plain collar with bust and waist darts. - Two Breast pockets shall be 14cm deep and 14.5 cm wide. - The pockets and flaps shall have cut – edges. - The flaps on the pockets shall have a pen division. - The pocket corners shall be back tacked. - The pocket shall be fastened by means of non-conductive buttons. - The collar shall be a standard shirt collar. - Long-sleeved shirts shall have a cuff - 65 mm wide. - The shirt shall be corporate colour (Grey). (CKS 129 -188c).	- The Zero Harm identification shall appear on the right side of the sleeve and shall be in accordance with NTCSA's Corporate Identity. - The NTCSA Values (Excellence, Integrity, Reliability, Sinobuntu and Collaboration) shall appear on the left side sleeve of the top and shall be in accordance with NTCSA Corporate Identity. - Each batch of garments manufactured shall feature one of these values, with the selected value rotating across batches to ensure

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gillets, Flying Overall, etc

Type	Specifications	Branding
	- The front buttons shall be sewn onto a strengthened front and the buttons shall be non-conductive. - The buttonholes shall be 1.2 cm shirt type buttonholes. - The hem shall be plain finished and shall be 1.5 cm in width. - The stitching shall comply with SANS 10101. - The thread used shall comply with SANS 1362.	representation of all NTCSA Values over time. - This approach reinforces NTCSA's commitment to its principles while promoting diversity and inclusion in its brand identity.
Chemical Apron	- The apron shall be rubber-coated or heavy-duty plastic polyester viscose material. - The apron shall be full length and hang to the knees or below the knees.	- No Branding

Notes:

General Garments or Work Wear Specification

1. Garments shall be cut and made following the standard of the prescribed specifications and shall be free from defect that affect their appearance or may affect their serviceability (or both) and free from marks, spots and stains incurred during the manufacturing process.
2. All seams/stitching shall be in accordance with the prescribed national standard. Seams and stitching shall be free of twists, pleats, and puckers and shall be sufficiently extensible to obviate seams cracking and undue shrinkage in use.
3. All ends of sewing that are not secured in seams or in other sewing shall be adequately back tacked.
4. To improve the visibility of employee's, all garments shall have reflective strips sewn on it
5. In cases where the reflective strips create a risk due to glare, for example live line and aviation activities, garments without reflective strips shall be worn. This shall be supported by a proper risk assessment.
6. All ends of sewing shall be trimmed, and loose threads removed.

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Table 3: Minimum requirements for Clothing i.e. Overalls/Boiler Suits, Shirts and Dust Coat, Apron, Rainsuits, Soft Shell Wind Resistance Jacket, Down vests/ Gilets, Flying Overall, etc		
Type	Specifications	Branding
	7. All garments shall be in accordance with the prescribed NTCSA PPE design specification for the composition of these garments. 8. All garments shall be labelled according to SANS 434 and the label shall bear information as given in 5.3.1.2 (see figure 6(a) and figure 6(b)) of SANS 434. 9. The garment manufacturer shall receive a certificate of compliance from the manufacturer of the fabric confirming that the fabric complies with the SANS and EN specifications 10. Refer to Appendix C of this standard for sizes (Sizes in accordance with SANS 434).	

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3.2.4 Requirements for Vest and Bibs

Use

- Reflective vests/bibs shall be worn where there is a need for the wearer to be visible and where the risk assessment has identified the need for reflective vests.

Care and Maintenance by the Employee

- Reflective vests/bibs shall be cared for in accordance with the manufacturer's recommendations.
- They shall be kept clean and maintained in good condition.
- They shall not be defaced in any manner.
- The wearer shall take care when working in an area that has open flames to avoid the vest/bib catching fire.
- The table below provide guidance on the minimum requirements for Vest and Bibs

Table 4: Minimum Standard Specifications for Reflective Vests and Bibs	
Specifications	Branding
- The vest shall be constructed from durable polyester fabric for the outer shell, ensuring resistance to tearing, fading, and moisture. For enhanced comfort, cotton lining shall be used in high-contact areas such as the collar or inner panels, while mesh polyester inserts may be incorporated in ventilation zones to improve breathability in warmer conditions. - Garments shall comply with SANS 20471: High-Visibility Warning Clothing – Test Methods and Requirements. - Design shall follow Figure 1 of Section 4.2.1 in SANS 20471, except for employees at work, where alternative configurations may be permitted. Reflective tape (retro-reflective material) shall: - Comply with SANS 20471. - Be a minimum of 50 mm in width. - Design shall follow Figure 1 of Section 4.2.1 in SANS 20471, except for employees at work, where alternative configurations may be permitted. Colour requirements for background and combined performance material shall: - Comply with Section 5.1, Table 2 of SANS 20471. - If prescribed colours (fluorescent yellow, orange, red) are unavailable, the Business Unit (BU) may determine a suitable alternative colour. Zip fastener on the front shall: - Be of non-conductive material. - Comply with SANS 1822.	- The NTCSA logo shall appear on the left-hand top chest. - The printing shall be silk-screened. - The role category (e.g., Supervisor, Technician, Visitor) shall be printed on the back of the high-visibility vest, just below the shoulder area and centred across the upper back,

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Table 4: Minimum Standard Specifications for Reflective Vests and Bibs			
- Garment sizing shall comply with Section 4.3 of EN 340 (now superseded by EN ISO 13688), ensuring ergonomic fit and dimensional stability. - Refer to Appendix C, Table 10: Safety Vest Size Chart			
The colour of the Vest, colour Code and design shall be as follows:			
Category Name	Recommended Class	Colour Code	Design
Evacuation Coordinator	Class 3	Yellow with silver retro reflective material, as per SANS 20471	Sleeveless Vest Figure 1 (SANS 20471)
First Aid Coordinator	Class 2	Red with silver retro reflective material, as per sans 20471	Sleeveless Vest Figure 1 (SANS 20471)
Fire Protection Coordinator (Warden)	Class 3	Red with silver retro reflective material, as per SANS 20471	Sleeveless Vest Figure 1 (SANS 20471)
Emergency Preparedness Coordinator	Class 3	Orange-Red with silver retro reflective material, as per SANS 20471	Sleeveless Vest in accordance with Figure 1 (SANS 20471)
Head of Emergency Preparedness	Class 3	Orange-Red with silver retro reflective material, as per SANS 20471	Sleeveless Vest Figure 1 (SANS 20471)
Employee at Work	Class 3	Fluorescent orange-red silver retro reflective material	Sleeveless Vest: Figure 1 (SANS 20471)
Transport Co-ordinator	Class 2	Ice Blue with silver retro reflective material	Sleeveless Vest: Figure 1 (SANS 20471)
Managers, Auditors, Observers	Class 2	Fluorescent yellow with silver retro reflective material	Sleeveless Vest: Figure 1 (SANS 20471)
Security	Class 3	Fluorescent Yellow-Green (Lime) with silver retro reflective material with silver retro reflective material	Sleeveless Vest: Figure 1 (SANS 20471)

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3.2.5 Hearing Protection

Use

Hearing protection shall be worn under the following conditions:

- In environments where noise levels are equal to or exceed 85 decibels (dBA).
- In areas where noise hazard signage is displayed, within the specified demarcated radius of the noise zone.
- In any location where the international hearing protection symbol is displayed.
- Where a risk assessment or noise level survey has determined the need for hearing protection.

Care and Maintenance (Employee Responsibility)

- Hearing protection devices must be kept clean and in good working condition. Reusable items shall be washed with warm, soapy water, rinsed thoroughly, and dried properly to prevent contamination or ear infections.
- When not in use, hearing protection shall be stored in a clean, dry container (e.g., a case or bag) to prevent the accumulation of dust, dirt, or other foreign matter.
- Employees must ensure that hearing protection fits securely and effectively reduces noise exposure to acceptable levels, as per occupational health standards.
- Disposable earplugs are to be used once only and discarded after use.
- Earplugs and other hearing protection items must not be shared between employees under any circumstances and must be replaced as needed to ensure hygiene and effectiveness.

The table below provide guidance on the minimum requirements for Hearing Protection.

Table 5: Minimum requirements for Hearing Protection	
Type	Specifications
Earmuffs	- The earmuffs can be hard hat mounted or normal fit. - Must conform to the specifications of SANS 1451-1, Earmuffs. - Manufacturers or suppliers of hearing protection devices must provide the device's noise attenuation specifications such as Noise Reduction Rating (NRR) or Single Number Rating (SNR). - Earmuffs attached to an industrial safety helmet - Must conform to the specifications of SANS 1451-3. - Materials of seals which may come into contact with the skin shall be non-staining, soft, pliable and not known to cause skin irritation or to have any adverse effect on health. - All parts of a pair of earmuffs shall be so designed and manufactured that they are not likely to cause any injury to the wearer when they are used as intended. - All parts that are in contact with plastics seals shall be rounded, finished smooth and shall be free from sharp edges which could cause damage to the seals. - Where the seals are not intended to last the lifetime of the earmuffs, the seals shall be replaceable without the use of any tools.

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Table 5: Minimum requirements for Hearing Protection	
Type	Specifications
	- The longest dimension of the opening of an earmuff with the seals fitted (measured in the plane of the face of the earcup), shall be at least 50 mm, and the width of the opening (measured in the plane of the face of the earcup and at right angles to the longest dimension) shall be at least 35 mm. - Attenuation of earmuffs must be tested in accordance with ISO 4869-1. - Earmuffs shall be supplied with the information sheet which at least contain information regarding: - The following information shall be provided in an information sheet supplied with each pair of earmuffs: a) Guidance on ensuring correct selection and fit of the earmuffs. b) The method of fitting and adjustment. c) A description of the type of strap and of the seals. d) A recommended method of cleaning (which does not require the use of cleaning agents that are known to be harmful to the health of the wearer or detrimental to the performance of the earmuffs). e) Details of any maintenance required. f) The address of the manufacturer, importer or distributor. g) The warning "Hearing protector seals may deteriorate with use and will then need replacement", h) The information required when ordering new seals; and i) If appropriate, the method of seal replacement.
Earplugs	- Must conform to the specifications of SANS 1451-2, Earplugs and SANS 50352-2. Types of earplugs: a) Disposable ear-plugs- earplugs intended for one fitting only b) Re-usable ear-plugs- earplugs intended for more than one fitting c) Formable ear-plugs- earplugs which require some degree of manipulation before fitting d) Pre-formed ear-plugs- earplugs which require no manipulation before fitting e) Custom moulded ear-plugs-earplugs made using an impression of the individual concha and the external ear canal of the user. Normally reusable - Manufacturers or suppliers of hearing protection devices must provide the device's noise attenuation specifications such as Noise Reduction Rating (NRR) or Single Number Rating (SNR). - Earplugs intended for repeated use shall: a) Be supplied in a package in which they can be hygienically stored when not in use; and

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Table 5: Minimum requirements for Hearing Protection	
Type	Specifications
	b) Not be impaired or damaged after being cleaned in accordance with the manufacturer's instructions. (Such instructions shall not require the use of cleaning agents that are known to be harmful to the health of the wearer.) c) ISO 4869-1 shall be used to determine the attenuation at the test frequencies. - All parts of a pair of earplugs shall be so designed and manufactured that they are not likely to cause injury to the wearer when they are fitted and used in accordance with the manufacturer's instructions. - Materials used in parts of earplugs which may come into contact with the skin shall be non-staining and not known to cause skin irritation or to have any adverse effect on health. - Earplugs that have been inserted in accordance with the manufacturer's instructions shall be capable of being readily and completely removed from the ear canal by the wearer without the use of a tool. - Any part of the earplug that protrudes outside the ear canal when the earplug is fitted in accordance with the manufacturer's instructions shall be of such a construction that it is unlikely to lead to any internal injury if it is disturbed externally. Markings Earplugs or their immediate packaging or dispensers shall be legibly and indelibly marked with the following information: a) the manufacturer's name, trademark or other identifying mark. b) where appropriate, the size of the earplugs and the range of sizes offered by the manufacturer. c) instructions for the correct selection, fitting and use of the earplugs, with emphasis on the need for proper fitting. d) where earplugs are intended for repeated use, the method of cleaning recommended by the manufacturer. e) the address of the manufacturer, importer or distributor.

3.2.6 Foot Protection

3.2.6.1 Hiking Shoes

Use

- Hiking boots may be issued to employees who are required to walk long distances over varied terrain, such as during transmission line inspections or patrols.
- These boots are designed for comfort and stability over extended walking distances. However, hiking boots/shoes shall not be used in work environments where safety boots with steel toe protection are required, or where additional foot protection is mandated by risk assessments or safety regulations.

Care and Maintenance (Employee Responsibility)

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- Hiking boots shall be kept clean, dry, and in good condition to maintain their functionality and extend service life.
- Laces must be replaced when worn out, as part of normal wear and tear.
- Hiking Boots shall not be defaced, altered, or damaged in any way that compromises their performance or professional appearance.
- When not in use, hiking boots must be stored in a clean, dry, and designated storage area in accordance with approved procedures.
- Employees must ensure the boots fit properly and are securely fastened (laces tied) when in use to prevent injury and ensure comfort during walking tasks.

3.2.6.2 Safety Boots/Shoes

Use of Safety Boots

Safety boots shall be worn in the following circumstances:

- By all personnel exposed to potential foot injuries during the performance of their duties, including but not limited to construction work, workshops, and industrial environments.
- In designated foot protection areas where the international foot protection symbol is displayed.
- In all instances where a risk assessment has identified the need for foot protection, including specifications on the type of safety boot required (e.g., steel-toe, anti-static, puncture-resistant, etc.).

Care and Maintenance (Employee Responsibility)

- Safety boots/shoes shall be kept clean, dry, and in good condition to ensure continued protection and durability.
- Footwear shall be routinely polished where applicable, to preserve material integrity and appearance.
- Laces must be replaced as needed due to fair wear and tear to ensure secure fastening.
- Boots/shoes shall not be defaced, altered, or modified in any manner that could compromise their safety function or professional appearance.
- When not in use, safety boots/shoes must be stored in a clean, dry, and approved manner, such as in lockers or designated PPE storage areas.
- Employees are responsible for ensuring their safety boots fit correctly and that laces are properly tied and secured at all times while in use.

3.2.6.3 Gumboots

Use of Gumboots

Gumboots shall be worn under the following conditions:

- By all personnel exposed to wet concrete, muddy terrain, or waterlogged environments during the course of their duties.
- In areas designated as foot protection zones where the international symbolic sign for protective footwear is displayed.

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- Wherever a risk assessment has identified the requirement for waterproof or chemical-resistant foot protection, specifically indicating the use of gumboots.

Care and Maintenance (Employee Responsibility)

Employees are responsible for the proper care and upkeep of gumboots. Accordingly, gumboots shall:

- Be kept clean and in good condition to ensure continued protective functionality and hygiene.
- Not be defaced, altered, or marked in any unauthorized manner.
- Be stored securely and in an approved storage area when not in use to prevent damage or contamination.
- Fit properly and be worn securely to provide adequate protection and support during use.

3.2.6.4 Socks

Care and Maintenance of Socks

- Socks shall be kept clean, dry, and in good condition to maintain personal hygiene and comfort.
- They shall not be defaced, altered, or modified in any manner.
- When worn, socks must fit properly to prevent discomfort, blisters, or interference with the fit of protective footwear.

3.2.6.5 Snakebite protective gaiters

Use of Snakebite Protective Gaiters

- Snakebite protective gaiters are a critical safety item for all personnel entering or working in areas known to harbour venomous snakes.
- These gaiters are specifically engineered to safeguard the lower legs against snake bites, which pose serious and potentially life-threatening risks.
- Wearing snakebite gaiters significantly reduces the risk of envenomation and is a vital component of personal protective equipment in high-risk environments.

3.2.6.6 Boot spats

- Used for their original purpose of protecting footwear. For example, they can be worn in outdoor activities to keep dirt and moisture out of boots.

3.2.6.7 Pilot flying Boots

- Designated exclusively for use within the Aviation department.

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Table below prescribe the minimum requirements for Foot Protection

Table 6: Minimum requirements for Foot Protection	
General safety boots	- General safety boots are designed for protection against impact, penetration, and hazardous environments. They shall comply with SANS 20345 (2023). - The boots must feature a steel or carbon fibre toe cap, a tread surface sole made of rubber, polyurethane, or a combination of both, providing: - o Minimum oil resistance rating of 4 - o Slip resistance rating of 3 - o Water resistance rating of 3 - o Heat resistance rating of 4 (up to 90°C) - o Abrasion resistance rating of 4 - o Penetration-resistant insert - The upper material shall be full-grain leather, available in standard or wide sizes. The boots shall be dark brown, with black as the only acceptable alternative if brown is unavailable, and matching laces. - The item shall be marked with the SANS 20345 mark of approval.
Hiking Safety shoes	The Hiker boot must be tested to comply with EN / ISO 20345 specifications and carries the EN/ ISO 20345 certified mark. Upper - Cut from 2.0mm – 2.2mm full grain leather with microfiber tongue and collar - Full Grain Leather with Microfiber tongue and collar - 5-pair corrosion resistant eyelet lace-up with 2 pair ski hooks - Padded collar for enhanced comfort and support - Padded bellows tongue to improve comfort and prevent debris for entering the shoe - Braided dual colour lace from polyester yarn with a central core for additional strength Lining - Tongue and quarter lining are from a non-woven, Industrial Ferabelle material laminated to foam for improved comfort - The vamp lining is from a hi-tech needle-fibre blend with excellent perspiration absorbency and treated with Ultra-Fresh* to impart hygienic and anti-bacterial properties to the material In Sock - The in-sock is from an anti-static non-woven material that is bonded to a layer of EVA and contains Poron Inserts at the heel and ball of the foot for enhanced comfort and support - The Poron/EVA top sock is from a combination of polyester and wool, with excellent perspiration absorbency and bonded to a layer of EVA, with Poron inserts at the ball and heel of the top sock

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Table 6: Minimum requirements for Foot Protection	
	- The Poron inserts at the ball and heel of the top sock offer optimum support where it is needed most, ensuring dynamic impact compression and a gentle rebound with every step - The top sock responds to weight and temperature, moulding itself to the foot, resulting in fewer aches and pains - The top sock has been treated with Ultra-Fresh* to impart hygienic and anti-bacterial properties to the material Top Sock - The in-sock is from an anti-static non-woven material that is bonded to a layer of EVA and contains Poron Inserts at the heel and ball of the foot for enhanced comfort and support - The Poron/EVA top sock is from a combination of polyester and wool, with excellent perspiration absorbency and bonded to a layer of EVA, with Poron inserts at the ball and heel of the top sock - The Poron inserts at the ball and heel of the top sock offer optimum support where it is needed most, ensuring dynamic impact compression and a gentle rebound with every step - The top sock responds to weight and temperature, moulding itself to the foot, resulting in fewer aches and pains - The top sock has been treated with Ultra-Fresh* to impart hygienic and anti-bacterial properties to the material Midsole - Engineered with an EVA insert at the heel for shock absorption - Shank reinforcement for additional arch support Toe Cap - Steel – extra-wide fitting - Can withstand an impact load of 200 joules Sole - The sole is from Dual Density PU/PU with a SRC slip resistance rating - The midsole is from a low-density flexible Polyurethane with a shore hardness of 0,45 – 0,5 - The outer sole is from Polyurethane with a shore hardness of 0,64-0,65 - The shoe is engineered with an EVA insert at the heel for added comfort and shock absorbency - A shank reinforcement is moulded into the midsole for additional arch support. - The shoe can withstand temperatures up to 95°C - The shoe is anti-static
Reflective Snake Gaiters Description	- Snakebite protective gaiters (gumboots) provide protection against snakebites, acid, and oil exposure. These protective gaiters shall comply with SANS 20345 (2023).

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Table 6: Minimum requirements for Foot Protection	
(Refer to Appendix H for pictures)	- The required snake gaiters should be lightweight, flexible and weigh 240 grams each. The - outer shell of the snake gaiters should be made of Authentic 500D Cordura® with double - Acrylic coating, water resistant and calendared for softer handling while the inner shell should - be made of two layers of DuPont™ – Kevlar® micro filament yarn which is very finely woven - material that renders exceptional protection against fragmentation, with an anti-stab capability. - The gaiters are one size fits all with a YKK® zip at the back. Each gaiter is adjustable at the - back and has a loop for a shoelace to fit through on the underside, and also includes an - adjustable strap that goes underneath the shoe / boot, to keep the gaiters secured in place. - These gaiters include two high visibility reflective strips – perfect for people who work on-site. - The required snake gaiters have been tested against bites from the Puff Adder, Cape Cobra, - Snouted Cobra and Black Mamba with no penetration during testing. - Length: 38 cm - Weight 240 g (each)
Boot spats	- The shoe protection, commonly referred to as boot spats, shall be manufactured from premium-grade leather cowhide. - The design shall incorporate a self-grip back fastener and an under-strap to ensure a secure fit, providing effective protection against workplace hazards. - The dimensions of the boot spats shall be standardized to a length of 320 mm and a height of 250 mm. This protective equipment is intended to meet the requirements for durability, reliability, and comfort in industrial environments. - The specified protective footwear accessory aligns with the requirements outlined in SANS 20344 & 20345 (2023), which detail the safety, durability, and performance criteria for protective footwear.
Gumboots	- In accordance with Eskom Standard 34-232 and SANS 20344 & 20345 (2023), the specifications for gumboots are established to ensure safety, durability, and compliance with industry standards. - The gumboots shall preferably be constructed from solid rubber or a combination of polyurethane (PU) and rubber, and must be black in colour with a protective toe cap. The material used shall possess low abrasion properties, ensuring longevity and resilience against wear and tear.

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Table 6: Minimum requirements for Foot Protection	
	- The sole of the gumboots must be resistant to acids and oils, with a minimum resistance level of 4, and feature a non-slip design to enhance traction and minimize slip hazards. The footwear shall be fully waterproof to provide protection against moisture and wet conditions. Compliance with SANS 20345 is mandatory to ensure the highest standards of safety and quality
Pilot flying Boots	- Premium full grain-leather upper. - Abrasion resistant. - Comfort footbed insert / padded insole / Ortho lite or similar. - Natural leather or material lining. - Elastic ankle entry. - Re-enforced heel. - Non-marking, non-slip and oil-resistant sole. - Leather heel tab for easy on and off. - Colour: Black
Socks	- Non-conductive, anti-static and Anti-Bacterial socks shall be made from between 72%-75% Cotton, 20%-26% Poly, 2-5%% Silver Fibre. - The socks must be available in three different sizes, namely: small/medium, large/x-large and xx-large/xxx-large

Note: Appendix B provide guidance on of the boots that meets the requirements of this specification.

3.2.7 Hand and Arm Protection

Use

Hand protection shall be worn:

- By all persons working on or with equipment where a risk of injury/infection to the hand or forearm exists, for example, welding, handling chemicals, etc.
- In an area where the international symbolic sign is displayed (designated hand protection area); and
- Where a risk assessment has identified the need for hand protection.

Care and Maintenance by the Employee

- All hand protection shall be cared for in accordance with the manufacturer's recommendations.
- All hand protection shall be kept clean and maintained in good condition.
- When wearing hand protection, the employee shall ensure that it fits properly.
- The correct hand or forearm protection must be worn for the specific task being performed, that is, to protect the individual against physical damage and against cuts, scratches, skin diseases, etc.

The table below provide guidance on the minimum requirements for Hand and Arm Protection

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Table 7: Minimum requirements for Hand and Arm Protection	
Type	Specifications
Welding Gloves	When purchasing the protective equipment, every effort must be made to purchase equipment that bears the British Safety Standard Mark (BS) or the European Norm Standard (EN). - PIMGLOVE: Lined welders heat resistant glove 30cm and must be Red, all cow leather gloves with double apron, cotton and foam lining and Kevlar yarn. Glove must withstand heat up to 500 degrees Celsius. - General Purpose Welding Gloves: Lined green welders' glove, 20cm cuff, all cow leather glove with full cotton lining that can withstand heat between 140-175 degrees Celsius. - TIG welding glove: Pigskin or Sheepskin garment closing method: elasticated; colour: beige; cuff type: plain; type: TIG; mechanical abrasion EN level 1; cut EN level 1; tear EN level 2; puncture EN level 1; heat suitable for minimal application; cold suitable for minimal application; to be used as a general handling glove for rigging, TIG welding and electrical.
General Purpose Gloves	- General Purpose Cut Resistant Gloves: Lightweight, cut-resistant, micro-foam nitrile coated glove. EN 388 minimum level 3 cut resistance. This glove shall be used in activities where the risk of being cut high. - General Purpose Gloves: preferably dark grey or black. Shall be rated EN 388-4131; Shall have full coating colour: black or grey; palm: 1 mm; This is a general-purpose glove used for these application's: maintenance; logistics and warehousing; using tools and instruments.
Chemical Gloves	- The chemical protective glove shall be type 5 and be aqueous solutions of acids, acid salts, alkalis, alkaline salts, aromatic hydrocarbons, alcohols, ethers, ketones, and organic acids resistant; material shall be butyl rubber II R coated; colour: preferably black; cuff type: rolled end; cuff length: 150 mm; and comply with the specifications of EN 388 / EN 374: 2003.

Note: All hand protection used shall be subject to a risk assessment (fit for purpose). Colours may vary according to availability of stock.

3.2.8 Skin Protection

Use of Skin Protection

- Skin protection products, including barrier cream, sunscreen, foot cream, and insect repellent shall be used by employees exposed to ultraviolet (UV) radiation, hazardous chemicals, biting insects, or who require foot care, as identified through a relevant risk assessment.
- All skin protection products shall be applied and used strictly in accordance with the manufacturer's instructions to ensure effectiveness and safety.

Care and Maintenance

- Skin protection products shall be stored as per the manufacturer's guidelines, in a cool, dry place away from direct sunlight or contaminants.

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- Employees must check the expiry date of products before use and ensure expired items are disposed of appropriately and replaced without delay.
- The table below provide guidance on the minimum requirements for Hand and Arm Protection

Table 8: Minimum requirements for Skin Protection	
Type	Specifications
Sunscreen Products – Protective Creams	Sunscreen products shall be in accordance with SANS 1557. This code specifies requirements for sunscreen products suitable for tropical use for the protection of human skin against the adverse effects of solar UV rays. Product Requirements - Water resistant with moistening effect - The product shall be free from palpable particles. - The product shall not contain any substances prohibited in terms of the current Foodstuff, Cosmetics, and Disinfectant Act. - The maximum concentration of the UV filters in the sunscreen product shall not exceed that approved by the Department of Health. - The sunblock shall have a minimum SPF of 40+ rubbed on types; supplied in 150ml tubes.
Skin Barrier Cream against Acids and Alkalis	- Skin cream with protective blocking agent; Whitish water-in-oil emulsion slightly greasy feel, odourless. Must Contains a high proportion cosmetic oil, titanium dioxide, talcum, Vaseline and skin care agents, silicone free. Skin care agents include Allantoin & Hydro MF moisturising agent. Highly effective barrier coating against all water borne substances (e.g., acids, alkalis) + dust and powders. - Miscibility in water: Not miscible in water; Biodegradable: All the individual organic components of the product must be biodegradable and anticipated that when used at the recommended dilution the product must not be harmful to the environment; Packaged 500 ml Tubs without dispensing pump.
Insect Repellent	- Form gel stick: odour perfumed; colour opaque, translucent light green; PH 8.9 to 9.0; solubility miscible in water; storage below 25°C; and away from sunlight, conforms to Medicines Control Counsel (MCC) of South Africa – Act 101 of 1965 Registration no: I686. (mosquito insects). - Bayticol Aerosol Spray; Insecticide fabric spray that kills ticks and prevent tick bites on humans; composition Flumenthrin (pyrethroid) 2g/kg; Net Contents 240ml; Used as a fabric spray to prevent tick bites; flammable; Supply with Safety Data Sheet (SDS).

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Table 8: Minimum requirements for Skin Protection

Type	Specifications
Barrier Cream	- The barrier creams shall meet the relevant requirements for barrier creams suitable for protection of the skin against acids, alkalis, oils, and solvents. It also lays down requirements for homogeneity, wash ability, odour, stability, application, pH value, and penetrability to challenging solutions and occurrence of fungal and bacterial growth. Chemical and Physical Requirements - All types of cream shall be homogeneous and soft in texture, free from grit and substances known to be harmful to the skin during long exposure. All types of creams shall be readily removed from the skin with detergent and water. - Barrier creams complying with the requirements of this specification shall be free from objectionable odours during and after application to the skin. - The barrier cream shall show no separation of liquid from the cream/paste at 15°C and 30°C after standing for 48 hrs. - When applied to the skin the barrier cream shall form a flexible adhering film at temperatures of 15°C to 30°C. - The pH value of a water extract of the barrier cream shall not be less than 5,0 and not more than 8,5. - The barrier cream shall leave no stains on a cotton duct. - When tested in accordance the barrier cream shall show no fungal or bacterial growth.
Skin Protect Cream	- White smooth, non-greasy oil-in-water emulsion with a light fragrance. - High quality cosmetic grade, oil-in-water silicone free emulsion including Collagen Allantoin & MF moisturising agents as skin care agents; Physical State Cream; Miscibility in water Complete; All the individual organic components of the product must be biodegradable and anticipated that when used at the recommended dilution the product must not be harmful to the environment; Packaging: 500 ml Tubs preferably with dispensing pump.
Solvgard Barrier Cream Against Solvents	- Solvgard White oil-in-water emulsion, odourless; Containing waxes, oils, zinc oxide and skin care agents, silicone free; Skin care agents include Allantoin & Hydro MF moisturising agent. - Highly effective barrier coating against petrol, diesel, thinners, paraffin turps, dust and powders; Miscibility in water Complete; Biodegradable - All the individual organic components of the product must be biodegradable and anticipated that when used at the recommended dilution the product must not be harmful to the environment. Packaging: 500 ml Tubs preferably with dispensing pump.
Foot Care Cream	- Cosmetic grade ingredients blended to refresh tired feet, reduce excessive perspiration, and prevent unpleasant foot odours. - Reduce common irritation of athlete's foot and similar foot afflictions. Inclusion of witch hazel for soothing action. Chlorhexidine component to offers a broad antibacterial spectrum.

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Table 8: Minimum requirements for Skin Protection

Type	Specifications
	- Composition oil-in-water emulsion, off white in colour, silicone free, mixture of oils and waxes, with hazel Chlorhexidine and camphor; All the individual organic components of the product must be biodegradable and anticipated that when used at the recommended dilution the product must not be harmful to the environment; Storage 1 year stored at room temperature. Keep lid closed. - Packaging 500 ml tubs preferably with dispensing pump.

3.2.9 Respirators

Use of *Respirators* and Dust Masks

- Respirators shall be worn by employees exposed to harmful airborne contaminants such as dust, fibres, gases, smoke, vapours, fumes, or in environments with insufficient oxygen such as confined spaces as identified by a formal risk assessment.
- The risk assessment shall determine the appropriate type of respirator or dust mask required for the specific hazard and working conditions.
- The selection of respiratory protection shall be based on the nature of the toxic substance, level and duration of exposure, environmental conditions, individual user factors (e.g., health and fit), and compatibility with other PPE.
- The wearer shall ensure that the correct type of filter or canister is fitted to the respirator, appropriate to the chemical or substance being encountered.

Care and *Maintenance* (Employee Responsibility)

- Employees must be trained in the correct use, limitations, care, and maintenance of respiratory protective equipment.
- A thorough inspection of the respirator shall be conducted daily before use to ensure integrity and functionality.
- All respiratory protective equipment must be stored and maintained in accordance with the manufacturer's instructions and company procedures.
- Respirators shall be kept clean, dry, and in good working condition. They must not be defaced, altered, or modified in any way that could impair their function.
- The responsibility for cleaning reusable respirators rests with the assigned employee.
- Disposable dust masks are for single use only and must not be shared. They shall be properly disposed of after use.
- Employees must check the expiry dates on filters and canisters prior to use and ensure they are replaced when expired or compromised.

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Table 9: Minimum Standard Specifications for Respirators	
Type	Specifications
Dust Mask FFP2 without Valve	- Disposable particulate mask for protection against solid and non-volatile liquid particles only; EN 149:2001 +A1 2009 FFP2 NR D CE 0086. - Can be supplied plain or carbon coated (welding). - Protection factor 10 X WEL material that has low breathing resistance with effective protection against: sub-micron particles, fine dusts, non-volatile liquid mists, and biological agents.
Dust Mask FFP3 with Valve	- Disposable particulate mask for protection against solid and non-volatile liquid particles only; EN 149:2001 +A1 2009 FFP3 NR D CE 0086. - Can be supplied plain or carbon coated (welding). - Protection factor 20 X WEL material that has low breathing resistance with effective protection against: sub-micron particles, fine dusts, non-volatile liquid mists, and biological agents. - Valve provides effective removal of heat and moisture for a cooler and more comfortable wear whilst also minimising the risk of misting eyewear.
Full Face Mask Reusable Air-Purifying Respirator	- Tight Fitting; 5 Point; EN 136 CL 2. CE 0158. CLASSES 1, 2, OR 3 (MASK). - Highest standard of face seal to protect the eyes. - These respirators for use with chemical cartridges in emergencies.
Canister Filter Gas and Combination Filter	- Canister filter gas and combination filter for solids and vapours according to EN 14387 ABEK HG-P3 - The user and/or buyer shall ensure that the canister is compatible to the mask if the different for the mask specified in paragraph 3.18.5 bullet 1. - Protective respirator filter to be suitable for use in full face mask filter housing fitted with round thread in accordance with EN148-1 (RD 40 X 1/7"). - Chemical cartridges should be replaced when saturated or expired.
Canister Filter Organic Gasses and Vapour	- Canister filter organic gasses and vapour; combination filter ABEK. - The user and/or buyer shall ensure that the canister is compatible to the mask if the different for the mask specified in paragraph 3.18.6 bullet 1. - Filter to be suitable for use in full face mask filter housing fitted with round thread in accordance with EN148-1 (RD 40 X 1/7").

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4. Acceptance

This document has been seen and accepted by:

1. NTCSA Occupational Health and Safety Management Forum.
2. Senior Manager SHREQ - Rochelle Chetty.
3. NTCSA OCE Safety Risk Management Department.
4. NTCSA OCE Communications & Stakeholder Management (Corporate Identity Department).
5. Senior Advisor Content Graphic Design-Lyndon Collins.
6. Chief Advisor Functional Strategy - Mxolisi Thanjekwayo.

5. Revisions

Date	Revision	Complier	Remarks
August 2025	1	Pheladi Maribe	New document

6. Development Team

The following people were involved in the development of this document:

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7. Acknowledgements

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2. NTCSA OCE Communications and Stakeholder Management Department.
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Appendix A - Minimum Required PPE Per Work Area

The basic supply of PPE will be divided into four main categories to ensure comprehensive protection tailored to specific environments. By categorizing PPE in this manner, the specification ensures that workers in different environments have access to the appropriate protective equipment tailored to their specific needs.

Category A (Support Services or Office Personnel) – General PPE

This category includes the essential protective equipment needed for office environments.

Category B (Non-Office Personnel, excluding Live Line and Aviation)

This category is for personnel who do not work in the office and perform tasks in operational areas.

Category C – Live Line

Designed specifically for electrical work, this category includes specialized PPE to protect against electrical hazards. These items are crucial for workers handling live electrical lines, ensuring their safety from electrical shocks and arc flashes.

Category D – Aviation

This category addresses the unique safety needs of the aviation industry. These items protect aviation personnel from high noise levels, wind, debris, and falls, while also providing comfort and functionality during flights and maintenance tasks.

Note: The provision of minimum PPE shall not be limited to PPE mentioned below. The BUs have the responsibility to follow risk-based approach where specialised PPE is required and develop BU specific PPE process.

Minimum PPE required for each work area				
PPE	Category A Office General PPE	Category B Non-Office Personnel	Category C (Live Line)	Category D Aviation
Head Protection				
Hard hat for Working from Height Including 3-point Chin Strap - Helmet, Safety adjust Chin	X	X	X	
Visor, Sun Brim Safety Hat		X	X	
Soft Hat (Bush Hat)	X	X	X	
Winter beanies	X	X	X	
Eye Protection				
Spectacle Goggle/ Safety Goggles/Glasses		X	X	
PPE Sunglasses		X	X	
Hearing Protection				
Protector, Hearing Earplug/Earmuffs	(As per risk assessment)			
Overalls				
One Piece overall	X	X	X	X
Trousers, Men's Long Pants	X	X	X	X
Trousers, Ladies Long Pants	X	X	X	X
Jackets				
Jacket,	X	X	X	X

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Minimum PPE required for each work area				
PPE	Category A Office General PPE	Category B Non-Office Personnel	Category C (Live Line)	Category D Aviation
Operating Overall, art 1-piece Acids & Alkali D59 (As per risk assessment)	(As per risk assessment)			
Jacket, Acids & Alkali (As per risk assessment)	(As per risk assessment)			
Pants, Acids & Alkali (As per risk assessment)	(As per risk assessment)			
Thermal Jackets				
Jacket, Thermal	X	X	X	X
Thermal underwear				
Thermal underwear	X	X	X	X
Shirts				
Shirt, Men's Long Sleeve Shirts T006	X	X	X	X
Shirt, Men's Short Sleeve T006	X	X	X	X
Shirt, Ladies Long Sleeve T006	X	X	X	X
Shirt, Ladies Short Sleeve T006	X	X	X	X
Rain Protection Suit				
Rain Suit, Navy Blue	(As per risk assessment)			
Foot Protection				
Safety Boots Standard Size	X	X	X	X
Safety shoes Hiking (lines)			X	
Boots Electrical Safety			X	
Snake gaiters	(As per risk assessment)			
Shoe Protect				
Protector: Shoe; Lg 320 X Ht 250mm	(As per risk assessment)			
Gumboots				
Gumboot, Knee Height; Black	(As per risk assessment)			
Socks				
Socks, Cotton A/length Navy Blue	X	X	X	X
Socks, C/Length Navy/Blue	X	X		X
Hand and Arm Protection				
Gloves	(As per risk assessment)			
Category C (Live Line)				
Socks, (Conductive)_Live line			X	
Live Line Suits			X	
Airmobile Helmet			X	
Live Line helmet			X	
Live Line Safety Harness Kit D12700			X	
Live line gloves			X	

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<i>Minimum PPE required for each work area</i>				
PPE	Category A Office General PPE	Category B Non- Office Personnel	Category C (Live Line)	Category D Aviation
Category D (Aviation)				
Pilot Jacket				X
Flying Boots				X
Pilot Overalls				X
Flying Gloves				X
Pilot Vest Body warmers				X

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Appendix B - Safety Boots Catalogue

The Catalogue below provide details of the safety shoes that meet the requirements of this Specification

SAFETY BOOTS CATALOGUE

Item Name	Picture
Lemaitre Zeus Chelsea Boot STC – Gladius Unit	
Lemaitre Parabolic Range Comfort and Anti-Fatigue Support – Nomad Industrial Safety Boots	

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SAFETY BOOTS CATALOGUE

Item Name	Picture
-----------	---------

**B-43602 Drogue
leather safety boot**



**Bova Leather
Neoflex safety
boot**



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SAFETY BOOTS CATALOGUE

Item Name	Picture
-----------	---------

Rebel R-652 Crazy Horse Safety boot



HI-TEC CHELSEA Safety Boots Black/Brown



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SAFETY BOOTS CATALOGUE

Item Name	Picture
Bova Hiker 2.0 Safety Boots	
Bova Chelsea Safety Boots Black/Brown	

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SAFETY BOOTS CATALOGUE

Item Name	Picture
Bova Leather Neoflex safety boot	
BOVA Columbia Black	

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SAFETY BOOTS CATALOGUE

Item Name	Picture
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JIMGREENS
Razorback – Steel
Toe Cap



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Appendix C- Size Charts

Each garment shall be of one of the size designations given in column 1 of the relevant of tables 1 to 7, as required and their measurements, determined in accordance with 6.2, shall conform to the appropriate values given in the relevant columns of the appropriate table. The method of measuring a garment shall comply with SANS 18890.

Table 1 — Size range for boiler suits

1	2	3	4	5	6	7	8	9	10	11	12
Size designation ^a	Nominal measurements of finished garment										
	cm										
	Circumference of					Length of					Back width ^d
	Chest	Waist (extended) ^b	Seat	Plain and ruched cuff (extended) ^b	Bottoms	Back neck to waist	Outside leg	Inside leg	Set-in sleeves and raglan sleeves		
Long ^c									Short ^c		
77	94	80	92	27	42	48	102	78	47	13	36
82	99	85	97	27	44	49	104	79	47	13	38
87	104	90	102	27	46	50	106	80	48	13	40
92	109	95	107	28	48	51	108	81	48	14	42
97	114	100	112	28	50	52	110	82	49	14	44
102	119	105	117	28	50	53	110	82	49	14	46
107	124	110	122	29	50	54	111	82	50	15	48
112	129	115	127	29	50	55	111	82	50	15	50
117	134	120	132	29	51	56	111	81	51	15	52
122	139	125	137	30	51	57	111	81	51	16	54
127	144	130	142	30	51	57	111	80	52	16	56
132	149	135	147	30	51	57	111	80	52	16	58
137	154	140	152	31	52	57	112	80	53	17	60
142	159	145	157	31	52	58	112	80	53	17	62
147	164	150	162	31	52	58	113	80	54	17	64
152	169	155	167	32	52	58	113	80	54	18	66
157	174	160	172	32	52	58	113	80	54	18	68
162	179	165	177	33	52	59	114	80	54	18	69,5
167	184	170	182	33	52	59	114	80	54	18	71

^a Based, in accordance with SANS 8559-2, on the chest girth, in centimetres, of the intended wearer.

^b The relaxed measurement of ruched cuffs and waists shall be such that they are suitably ruched for comfort and safety.

^c Measured at the underarm seam.

^d Not applicable to raglan sleeves.

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Table 2 — Size range for workwear suits — Jackets (Men)

1	2	3	4	5	6	7
Size designation ^a	Nominal measurements of finished garment					
	cm					
	Chest circumference	Back length ^b	Back width	Short sleeves	Long sleeves ^c	Cuff circumference, plain and ruched (extended) ^d
77	94	70	36	13	47	27
82	99	71	38	13	47	27
87	104	72	40	13	48	27
92	109	73	42	14	48	28
97	114	74	44	14	49	28
102	119	74,5	46	14	49	28
107	124	75	48	15	50	29
112	129	75,5	50	15	50	29
117	134	76	52	15	51	29
122	139	76,5	54	16	51	30
127	144	77	56	16	52	30
132	149	77,5	58	16	52	30
137	154	78	60	17	53	31
142	159	78,5	62	17	53	31
147	164	79	64	17	54	31
152	169	79,5	66	18	54	32
157	174	80	68	18	54	32
162	179	80	69,5	18	54	32
167	184	80	71	18	54	32

^a Based, in accordance with SANS 8559-2, on the chest girth, in centimetres, of the intended wearer.

^b Jackets that have a band at the bottom shall be shortened by 10 cm.

^c Measured at the underarm.

^d The relaxed measurement.

Table 3 — Size range for workwear suits — Trousers (Men)

1		2	3	4	5	6	7	8
Size designation ^a		Nominal measurements of finished garment cm						
Chest	Waist	Outside leg length	Inside leg length	Waist (extended) ^b	Seat circumference	Bottom circumference	Front rise ^c (excluding waistband)	Back rise ^c (excluding waistband)
77	67	102	78	80	92	42	26	35
82	72	104	79	85	97	44	27	36
87	77	106	80	90	102	46	28	37
92	82	108	81	95	107	48	29	38
97	87	110	82	100	112	50	30	39
102	92	110	82	105	117	50	30	39
107	97	111	82	110	122	50	31	40
112	102	111	82	115	127	50	31	40
117	107	111	81	120	132	51	32	41
122	112	111	81	125	137	51	32	41
127	117	111	80	130	142	51	33	42
132	122	111	80	135	147	51	33	42
137	127	112	80	140	152	52	34	43
142	132	112	80	145	157	52	34	43
147	137	113	80	150	162	52	35	44
152	142	113	80	155	167	52	35	44
157	147	113	80	160	172	52	36	45
162	152	113	80	165	177	52	36	45
167	157	113	80	170	182	52	37	46

^a Based, in accordance with SANS 8559-2, on the chest girth and waist girth, in centimetres, of the intended wearer for example, 102/92 to fit chest 102 cm and waist 92 cm.

^b The relaxed measurement of ruched waists shall be such that they are suitably ruched for comfort and safety.

^c Minimum measurement and for guideline only.

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Table 4 — Size range for workwear suits — Jackets (Women)

1	2	3	4	5	6	7	8	9
Size designation ^a	Nominal measurements of finished garment							
	cm							
	Bust circumference	Hem circumference	Back length	Back width	Sleeve length	Shoulder	Cuff circumference relaxed	Cuff circumference stretched
72	92	92	72	37,5	48	16	16	26
77	97	97	73	39	49	16,5	17	27
82	102	102	73	40,5	49	16,5	17	27
87	107	107	74	42	50	17	17	27
92	112	112	74	43,5	50	17	18	28
97	117	117	75	45	51	17,5	18	28
102	122	122	75	46,5	51	17,5	18	28
107	127	127	76	48	52	18	19	29
112	132	132	76	49,5	52	18	19	29
117	137	137	76	51	53	18,5	19	29
122	142	142	77	52,5	53	18,5	20	30
127	147	147	77	54	54	19	20	30
132	152	152	77	55,5	54	19	20	30

NOTE This information is for guidance only.

^a Based, in accordance with SANS 8559-2, on the bust girth, in centimetres, of the intended wearer.

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Table 5 — Size range for workwear suits — Trousers (Women)

1	2	3	4	5	6	7	8	9
Size designation ^a	Nominal measurements of finished garment							
	cm							
	Waist		Hip circumference	Back rise (excluding waistband)	Front rise (excluding waistband)	Outleg	Inleg	Bottom circumference
	Relaxed (min.)	Extended						
67/92	63	77	100	40	29	109	79	42
72/97	68	82	105	40,5	29,5	109,5	79	42
77/102	73	87	110	41	30	110	79	44
82/107	78	92	115	41,5	30,5	110,5	79	46
87/112	83	97	120	42	31	110	79	46
92/117	88	102	125	42,5	31,5	111,5	79	48
97/122	93	107	130	43	32	112	79	48
102/127	98	112	135	43,5	32,5	112,5	79	49
107/132	103	117	140	44	33	113	79	49
112/137	108	122	145	44,5	33,5	113,5	79	49
117/142	113	127	150	45	34	114	79	50
122/147	118	132	155	45,5	34,5	114,5	79	50
127/152	123	137	160	46	35	115	79	50
132/157	128	142	165	46,5	35,5	115,5	79	50

NOTE This information is for guidance only.

^a Based, in accordance with SANS 8559-2, on the waist girth and hip girth, in centimetres, of the intended wearer for example, 87/112 to fit waist 87 cm and hip 112 cm.

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Table 5: Size range for jackets and three-quarter length and full-length coats

1	2	3	4	5	6	7	8	9	10	11
Size designation	Finished garment measurements									
	cm									
	Chest	Back length			Back width	Sleeve length ^a	Cuff circumference	Vent length		
		Jackets	Three-quarter length coats	Full length coats				Three-quarter length coats	Full length coats	Jackets ^b
82	99	72	87	104	36	47	27	21	40	20
87	104	74	89	106	38	48	27	21	40	20
92	109	74	89	106	40	48	28	21	40	20
97	114	76	91	108	42	49	28	23	42	20
102	119	76	91	110	44	49	28	23	42	20
107	124	78	93	112	46	50	29	23	44	20
112	129	78	93	112	48	50	29	25	44	20
117	134	78	93	112	50	51	29	25	44	20
122	139	78	93	112	52	51	30	25	44	20
127	144	78	93	112	54	52	30	25	44	20
^a Measured at the underarm.										
^b Applicable only to jackets with a centre-back seam.										

Table 6: Size Charts for T006 Shirts

LADIES LONG SLEEVED SHIRTS SIZE CHART															
Sizes	77	82	87	92	97	102	107	112	117	122	127	132	137	142	147
Bust @ Base of Armhole	92	97	102	107	112	117	122	127	132	137	142	147	152	157	162
Back Length	64	65	65	66	66	67	67	68	68	69	69	70	70	71	71
Back Width	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64
Sleeve Length*	41	41	41	42	42	42	43	43	43	44	44	44	45	45	45
Hip	102	107	112	117	122	127	132	137	142	147	152	157	162	167	172
Cuff	21	21	21	22	22	22	23	23	23	24	24	24	25	25	25

* All measurements subject to a tolerance of 2%

* Measurements in centimetres

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MEN'S LONG SLEEVE SHIRTS						
Collar Size	Size	Chest	Back Length	Back Width	Long Sleeve U/Arm	Cuff Button
34/35	XS	112	79.5	43	50.5	20
36/37	S	116	80	45	51	21
38/39	M	120	80.5	47	51.5	22
40/41	L	124	81	49	52	23
42/43	XL	128	81.5	51	52.5	24
44/45	2XL	132	82	53	53	25
46/47	3-XL	136	82.5	55	53.5	26
48/49	4-XL	140	83	57	54	27
50/51	5-XL	144	83.5	59	54.5	28
52/53	6-XL	148	84	61	55	29
54/55	7-XL	152	84.5	63	55.5	30
56/57	8-XL	156	85	65	56	31

* All measurements subject to a tolerance of 2%

* Measurements in centimetres

Table 7: Size Charts for Thermal JACKETS; SOFT BUSH HATS; GUMBOOTS AND SAFETY BOOTS AND SOCKS:

Thermal Jackets	S	M	L	XL	2XL	3XL	4XL	5XL	6XL	
	87	97	107	117	122	132	137	147	157	
Soft Bush Hats(Size Chart)	56CM S	57CM M	58 CM L	59CM XL	60CM 2XL	62 3XL				
Shoes gumboots and boots	Ladies	210 2	220 3	230 4	240 5	250 6	255 7	262 8		
	Men	5	247 6	255 7	262 8	270 9	277 10	285 11	292 12	300 13

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Table 8 - For Rain Wear Sizes

Rain Wear Size Chart				
Jackets				
Sizes	Chest	Back Len.	Sleeve Len.	Cuff Circumference
Small	115	75	75	33
Medium	125	76	78	34
Large	135	77	81	35
X-Large	140	80	84	36
2X-Large	145	85	86	37
3X-Large	150	85	87	38
4X-Large	155	85	88	39
Pants				
Sizes	Waist	In-Leg	Outer-Leg	Hem Circumference
Small	103	70	100	46
Medium	107	72	103	48
Large	111	74	106	50
X-Large	115	76	109	52
2X-Large	121	80	115	56
3X-Large	127	84	121	60
4X-Large	140	88	125	64
Overalls				
Sizes	Chest	Sleeve Len.	Cuff Circ.	Waist
Small	109	48	28	95
Medium	119	49	28	105
Large	129	50	29	115
X-Large	139	51	30	125
2X-Large	149	52	30	135
3X-Large	159	53	31	145
4X-Large	169	54	32	155

Table 9: Soft Shell Wind Resistance Jacket Size Chart

Men's Size Chart (in centimetres)				
Size	Chest	Collar	Waist	Hip
S	102	46.5	96	99
M	108	48	102	105
L	114	49.5	108	111
XL	120	51	114	117
2XL	126	52.5	120	123
3XL	132	54	126	129

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Men's Size Chart (in centimetres)				
4XL	138	55.5	132	135
5XL	144	57	138	141
Women's Size Chart (in centimetres)				
Size (AU)	Chest	Waist	-	Hip
XS (8)	91	85	-	95
S (10)	96	90	-	100
M (12)	101	95	-	105
L (14)	105	100	-	110
XL (16)	110	105	-	115
2XL (18)	115	110	-	120
3XL (20)	120	115	-	124

Table 10: Safety Vest Size Chart

Size	Body Length (cm)	Chest Width (cm)	Sleeve Length (cm) (Class 3 only)
XS	67.3	59.1	29.2
S	66	62.9	29.8
M	66	63.5	31.1
L	69.2	67.3	31.8
XL	69.9	71.1	33
2XL	71.1	76.2	34.3
3XL	73	78.1	35
4XL	75	80	36.2
5XL	76.8	81.9	36.8
6XL	80	84.5	38.1
7XL	80	87	38.7

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Appendix D - Standard Nomenclature for Stitches, Seams, and Stitching

(INFORMATIVE)

D.1 Stitches, seams, and stitches

D1.1 General

All sewing shall be in accordance with SANS 10101

D.2 Stitches

- Main seaming and ruching. Stitch type 401.
- Over locking. Stitch type 402-505.
- other sewing. Stitch type 301.

D.3 Seams

Seams shall be at least 8 mm wide. They shall be as follows:

- Main seams. Seam type Ssa – 2, Lsc – 2 or Lsc – 3.
- Breast pocket flaps to blouse. Seam type Lsc – 2, Lsba – 2 or sewn in with yoke seam.
- Leaf edge of collar and flaps. Seam type – 4.
- Breast waist seam. Seam type Ssag – 3 or similar acceptable seam type.
- Side wing-pocket bags. Seam type Sse – 2, Bsc – 2, Bse – 4.
- Side patch-pocket bags. Seam type Lsd – 4.
- other seams. Seam type Ssa – 1.

D.4 Number of stitches

- Seaming and top stitching. 40 + 4 per 1 cm.
- Overclocking. 32 + 2 per 10 cm.
- Buttonholes. 12 + 1 per 1 cm.
- Back-tacks. 18 min per 1 cm.
- Buttons. 18 min per button.

D.5 Sewing threads

The sewing threads shall comply with the relevant requirements of SANS 1362 and shall be compatible with, and the colour shall be an acceptable match to, the material(s) with which they are used and shall be 100 % cotton.

The thread shall be as follows:

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- a) Needle, bobbin and looper threads shall have a breaking strength of at least 12 N.
- b) Over locking threads shall have a breaking strength of at least 8

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Appendix E- Material Specification for T006 (Shirts) And All Garment Labels

FABRIC SPECIFICATIONS

BLEND	100% COTTON
WARP COUNT	30
WEFT COUNT	
WEAVE	4/1 SATIN
<u>FINISHED DETAILS:</u>	
ENDS/CM	46
PICKS/CM	22
O/ALL WIDTH (CMS)	140 to 143
MASS (GSM)	206
<u>TENSILE STRENGTH:</u>	
WARP	900N
WEFT	350N
<u>STABILITY%:</u>	
WARP	3
WEFT	3
<u>COLOUR FASTNESS:</u>	
WASH	5
RUB	4 – 5
LIGHT	5
<u>PILLING:</u>	2
<u>MARTINDALE (RUBS):</u>	10000 – 12000
<u>SEAM SLIPPAGE:</u>	
WARP	117N
WEFT	211N

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Appendix F- Flame Retardant Retro Reflective Material Sewing on Garments

- a) Product: Retro-reflective material referenced WATT – FRIS91 – Silver (50mm)
- b) Product shall comply to EN 471 + A1; 2007 requirements including the following three
- c) EN469, Clause 6.1, Annex B.3.2
- d) EN469, Clause 6.5, Annex B.3.1
- e) BSENISO14116: Limited Flame Spread
- f) Retro-reflective tape shall be fitted mid-way on both sleeves' circumference of the inner leg and U/arm sleeve measurement on one- and two-piece work wear including rainwear long pants and jackets.

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Appendix G- Garments Labels as Per Sans 1309

- a) All garments shall have a cotton or rayon label firmly sewn to the yoke at the back neck on the inside
- b) The label shall provide the following information in legible and indelible marking ink for textiles as per SANS 432
- c) Manufacturer's name or trademark or both
- d) Name of the manufacture of the material and their location
- e) Year of manufacture
- f) VAT registration number of the manufacture
- g) Full washing instructions
- h) Material fabric type Ex (D59 Zero flame) and (T006 Zero flame)
- i) Size
- j) Customer item code / traceability number as per SANS 432 indelible marking ink for textile fabrics
- k) Country of origin

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Appendix H- Reflective Snake Gaiters Photos



Figure 1: Back part

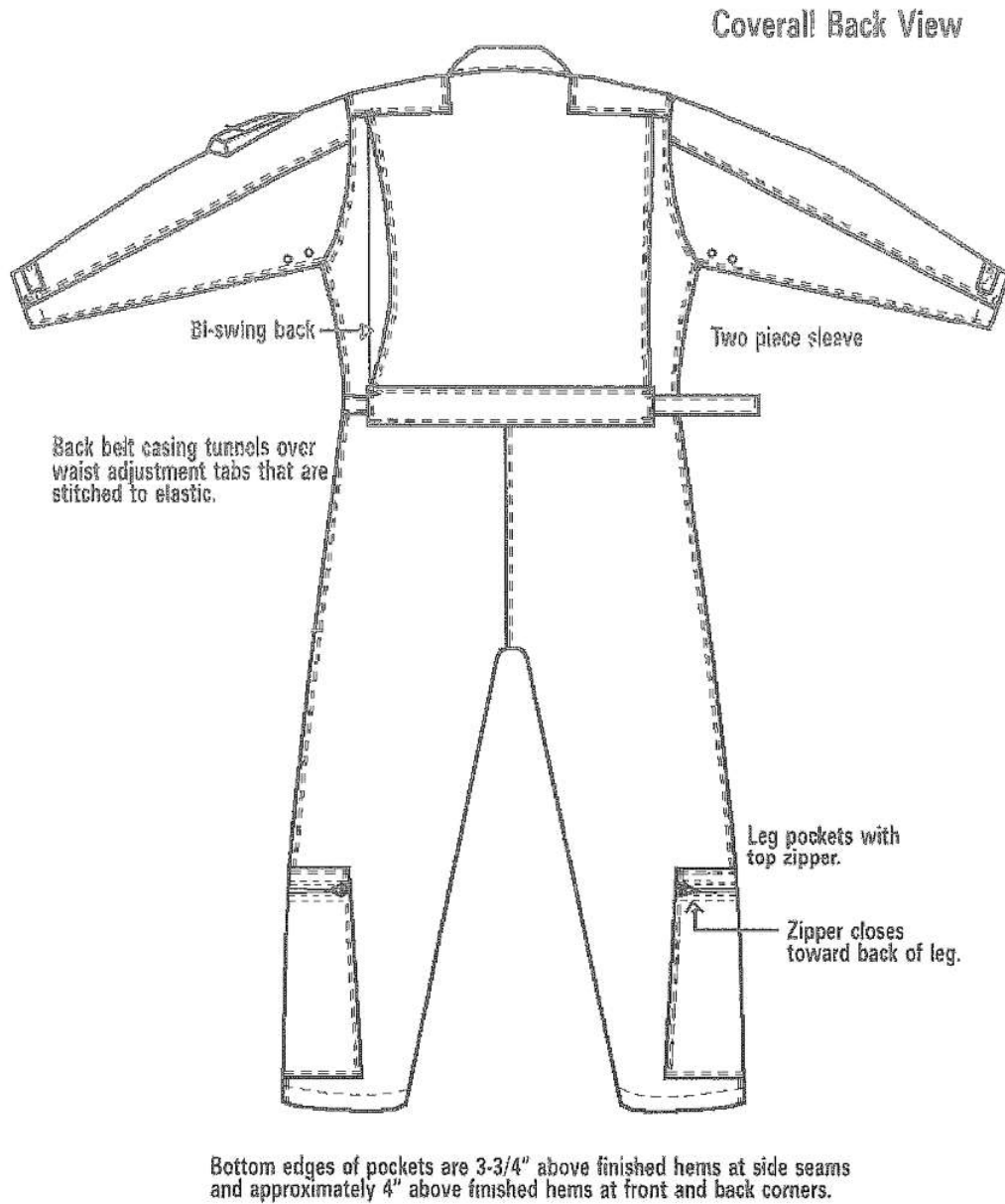


Figure 2: Front part

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Appendix I- Flying Overall Design Specification

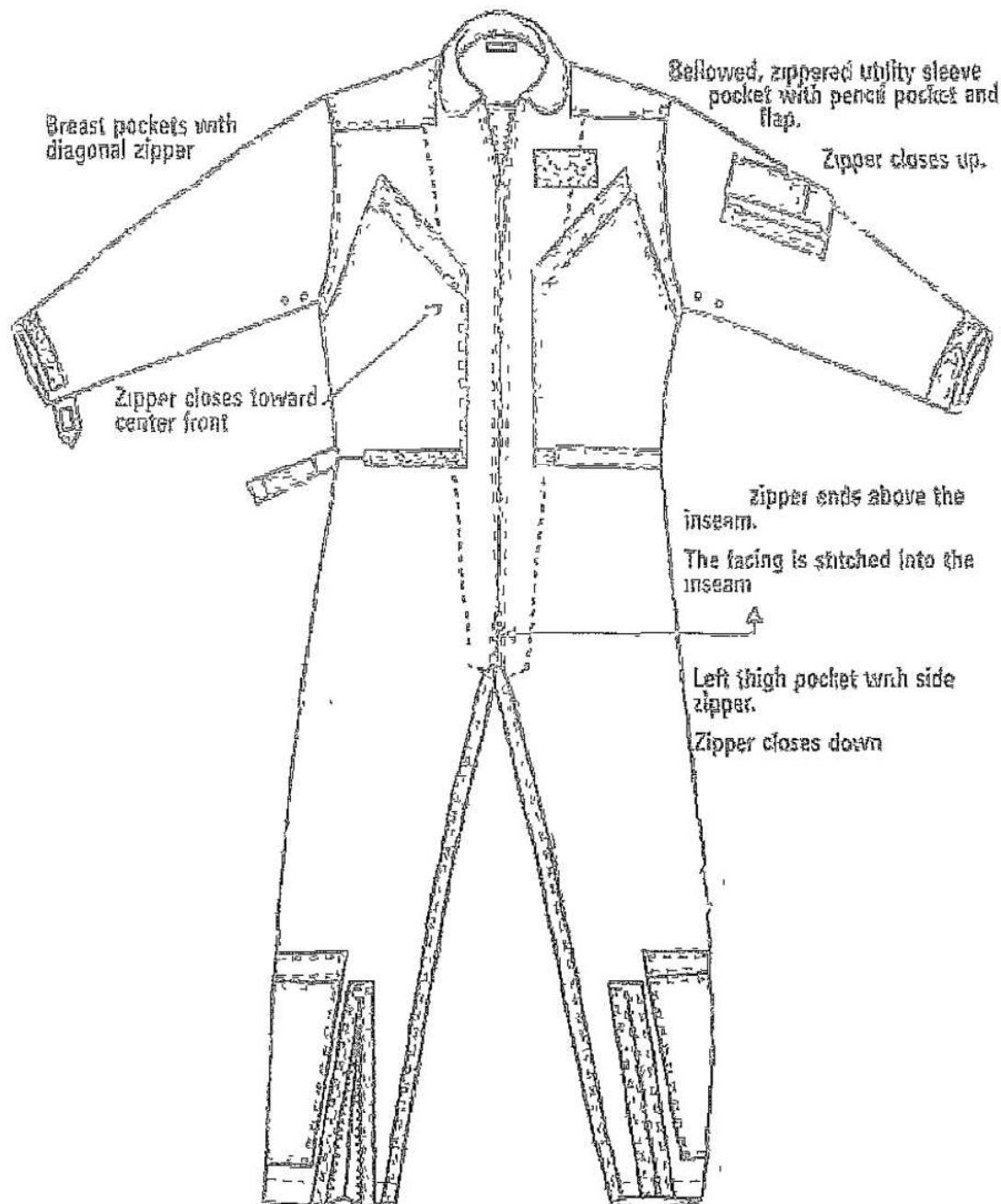


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Coverall Front View

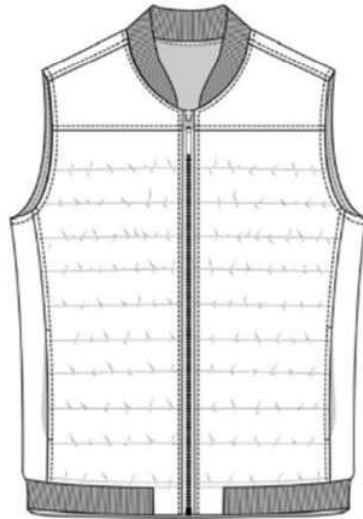


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Appendix J- Design Specification for Down Vests/Gillets



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