



Arc Protection Personal Protective Equipment Specification and Standards

For the procurement of Arc Protection Personal Protective Equipment (PPE) in South Africa, the technical specification should ensure compliance with SANS, IEC, ISO, and Occupational Health and Safety (OHS) requirements from procurement through acceptance (buy-to-handover). The PPE must be suitable for electrical workers performing work on LV and MV systems (400 V to 11 kV and above) where arc flash hazards exist.

Applicable Standards

The PPE supplied shall comply with the latest applicable editions of the following standards:

Standard	Description
SANS/IEC 61482-2	Protective clothing against the thermal hazards of an electric arc – Requirements.
SANS/IEC 61482-1-1	Open Arc Test – Determines ELIM, ATPV and EBT values.
SANS/IEC 61482-1-2	Box Test – Arc Protection Class (APC Class 1 or Class 2).
ISO 9001	Quality Management System
ISO 45001	Occupational Health & Safety
OHS Act 85 of 1993	Personal Protective Equipment requirements

Supplier Documentation Required

Each supplier shall submit:

- Type Test Certificates
- Arc Test Reports
- ATPV / ELIM / EBT values
- IEC 61482 Compliance Certificate
- ISO 9001 Certificate
- Material Data Sheet
- User Manual

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Western Precinct, Aviation Park, O.R. Tambo International Airport, 1 Jones Road, Kempton Park, Gauteng, South Africa, 1632

P O Box 75480, Gardenvue, Gauteng, South Africa, 2047

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Airports Company South Africa SOC Ltd Reg No 1993/004149/30 VAT no 4930138393 Board of Directors: Mr Irvin Phenyane (Chairperson), Dr Kgabo Badimo, Ms Dudu Hlatshwayo, Mr Andile Khumalo, Ms Lwazikazi Nopece, Mr Roy Mnisi, Mr Surendra Sooklal, Ms Xoliswa Daku, Ms Keitumetse Mahlangu, Mr Charles Shilowa (Acting Chief Executive Officer), Mr Luzuko Mbotya (Chief Financial Officer), Ms Fefekazi Sefara (Company Secretary)



- Cleaning Instructions
- Warranty Certificate
- Certificate of Conformity
- Batch Traceability Certificate

Factory Acceptance Tests (Before Delivery)

Each batch shall be supported by evidence of:

- Arc Rating Test
- Flame Resistance Test
- Fabric Tensile Strength
- Seam Strength
- Shrinkage Test
- Heat Resistance Test
- Wash Durability Test
- Colour Fastness Test
- UV Resistance (if specified)
- Visual Inspection

Inspection on Delivery

Verify:

- Correct quantity
- Correct sizes
- Manufacturing date
- No defects
- Correct labels
- Arc Rating labels attached

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- Certification labels attached
- Serial numbers (if applicable)

Handover Requirements

Before acceptance, the supplier shall provide:

- Delivery Note
- Certificate of Conformity
- Test Certificates
- Warranty (minimum 12 months, or as specified)
- Inspection Report
- Training on use, inspection and storage
- Maintenance Manual
- Cleaning Procedure
- PPE Register
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Recommended Technical Specification: Arc Flash Protective Clothing and PPE

Supply, deliver and commission complete Arc Flash PPE suitable for work on low- and medium-voltage electrical systems. All PPE shall comply with the latest editions of SANS/IEC 61482-1-1, SANS/IEC 61482-1-2, SANS/IEC 61482-2, SANS 20345, SANS 50352, the Occupational Health and Safety Act 85 of 1993, and applicable Electrical Machinery Regulations. PPE shall be arc-rated in accordance with the Employer's Arc Flash Hazard Assessment, with certified ELIM, ATPV and/or EBT values. The supplier shall provide full type-test certificates, certificates of conformity, quality documentation, warranties, user manuals, and training. Acceptance shall be subject to verification of compliance, inspection, and successful submission of all required documentation.

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For an airport medium-voltage environment such as 11 kV switchgear, transformers, and substations, the bidder might provide an Arc Flash Hazard Assessment, PPE matrix linked to incident energy levels, and a PPE inspection and replacement schedule as part of the deliverables, ensuring alignment between the selected PPE and the calculated electrical hazards.

NOTE: THE BIDDER MAY NOT PROCEED WITH THE PURCHASE AFTER DISCUSSING WITH AN END USER. PPE SHOULD BE FITTED FOR THE PURPOSE OF ENSURING THAT WORKERS RECEIVE THE CORRECT SIZES FROM THE SUPPLY STORE OR SHOP FOR PROCUREMENT.

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