



PROTECTIVE CLOTHING MANUFACTURER



WHAT IS ELECTRIC ARC FLASH?

- ✓ The National Fire Protection Association (NFPA) describes an Arc Flash Hazard as "A dangerous condition associated with the release of energy caused by an electric arc."
- ✓ An arc flash happens when an electric current passes through air between ungrounded conductors, or between ungrounded conductors and grounded conductors (NFPA).
- ✓ An arc flash can result from inserting a tool in the wrong place or dropping a tool into a circuit breaker, where conductive dust or humidity are present, or a failure of equipment.
- ✓ Forces may exceed 100kPa (KiloPascal), and debris is spread up to 300 metres/second with temperatures of up to 20 000°C.
- ✓ This energy is in the form of a blinding flash of light and a deafening noise. In this explosion, a gigantic amount of concentrated energy is forced outward from the electrical equipment toward the electrical worker, spreading super hot gases and a shower of molten metal.



ELECTRIC ARC FLASH PROTECTIVE WEAR

WHY YOU SHOULD CHOOSE SURVIVE-ARC®

- ✓ SURVIVE-ARC® protective wear is intended to provide protection against the thermal effects of an electric arc flash. These products must be used as part of an appropriate set to protect against the hazards of an electric arc flash.
- ✓ SURVIVE-ARC® protective wear ranges from low to high levels of protection in order to provide solutions for all types of work environments. It is the responsibility of the end user to ensure that the appropriate items are selected in accordance with the level of protection needed.
- ✓ SURVIVE-ARC® protective wear is triple (NFPA 70E, IEC 61482-2 and SANS 724) certified and made from comfortable-to-wear, permanently flame-resistant (FR) and arc rated (AR) material to protect the worker against the thermal effects of an electric arc flash.
- ✓ SURVIVE-ARC® garments have been CE certified to the international performance standards by BTTG Testing and Certification with notified body number 0339.



SURVIVE-ARC® MEETS THE FOLLOWING REQUIREMENTS:

NFPA 70E IEC 61482-2
SANS 724 ASTM F2178
ASTM F2621

FEATURES OF SURVIVE-ARC®

- Made from permanently flame-resistant fabric
- Guaranteed flame-resistant for the life of the garment
- Excellent breath ability, absorbs sweat and moisture
- Cotton comfort: cool in summer and warm in winter
- Water washable

ARC FLASH SWITCHING SUITS

Arc flash switching suits are available in a kit: jacket, trousers, hood, gloves and carry bag. (Items can also be ordered individually. Ventilation and a light on hoods is optional).

Arc flash switching suits CAT 4

- ① 40 cal/cm² switching suit (ultra light weight)
- ② 51.5 cal/cm² switching suit
- ③ 60 cal/cm² switching suit (liquid and oil resistant)
- ④ 100 cal/cm² switching suit
- ⑤ Optional ventilation on hoods



SURVIVE-ARC® DAILY WORK WEAR

Shirts CAT 2

- ⑥ Button-up shirts
(8.7 - 12,4 cal/cm², available in various colours with an anti-static option at 9.5 & 12.4 cal/cm²)
- ⑦ Polo shirt
(10.9 cal/cm²)
- ⑧ Long sleeve T-shirt
(10.9 cal/cm²)
- ⑨ Jersey
(Ebt 21.8 cal/cm², available with V-neck, round neck or Henley)

Jacket CAT 4

- ⑩ Winter jacket
(40 cal/cm²)

Rainwear CAT 2

- ⑪ Rainwear jacket and trousers
(8 – 16.3 cal/cm², available in various colours)

Trousers CAT 2

- ⑫ Chino trousers
(8.7 - 21 cal/cm², available in various colours with an anti-static option at 9.5 & 12.4 cal/cm²)
- ⑬ Denim trousers
(18.3 cal/cm², available in male or female design)

Coveralls CAT 2

- ⑭ Two piece coverall
(8.7 - 12,4 cal/cm², available in various colours with an anti-static option at 9.5 & 12.4 cal/cm²)

Coveralls CAT 3

- ⑮ One piece coverall
(8.7 - 34 cal/cm², available in various colours with an anti-static option at 9.5 & 12.4 cal/cm²)

Survive-Arc® protective wear is arc rated from 8 cal/cm² to 100 cal/cm² and sizes range from XS to 5XL. It is the responsibility of the buyer to ensure that the appropriate protection is selected in accordance with the level of danger.



SURVIVE-ARC® ACCESSORIES

Warning: Accessories not considered arc rated when worn alone.

Hand protection

- ⑩ Activa gloves CAT 2 (51 cal/cm²)
- ⑪ Powerflex knitted gloves CAT 2 (12 cal/cm² flame-resistant coating on palm of hand and fingers)
- ⑫ Rubber insulating gloves (Voltage rated: class 00 - 4)
- ⑬ Rubber insulating gloves CAT 4 (Arc rated: 40- 90 cal/cm² and Voltage rated: class 00 - 4)
- ⑭ Arc flash fabric gloves CAT 2-4 (8.7 – 100cal/cm²)
- ⑮ Knitted gloves CAT 2-3 (12.1 or 28.2 cal/cm²)
- ⑯ Leather over gloves (250mm or 310mm)

Body protection

- ⑰ Reflective braces CAT 2 (12.4 cal/cm²)
- ⑱ Reflective waistcoat CAT 2 (12.4 cal/cm²)
- ⑲ Short sleeve T-shirt CAT 2 (10.9 cal/cm²)
- ⑳ Long johns CAT 2 (10.9 cal/cm²)
- ㉑ Boxer underpants CAT 2 (10.9 cal/cm²)



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SURVIVE-ARC® ACCESSORIES

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Head protection

- ⑳ Goggle and balaclava kit CAT 2-4
(12 – 45.8 cal/cm²)
- ㉑ Headgear kit CAT 2-3
(10.2 – 25 cal/cm², consist of ArcShield® face shield, cap bracket and chin cup, dielectric hard hat optional)
- ㉒ Electrician's helmet CAT 3
(20 cal/cm² retractable integrated face shield)
- ㉓ Hard hat
Dielectric hard hat (class E; type I EN or ANSI)
- ㉔ Balaclava CAT 2-4
(12.1 - 45.8 cal/cm²)
- ㉕ Beanie CAT 2
(14 cal/cm²)
- ㉖ Headscarf CAT 2
(10.9 cal/cm²)



Bags

- ㉗ Carry bag
- ㉘ Rucksack

Foot protection

- ㉙ Thermal socks
 - Double-layer shank, knitted in an elastomeric "skeleton" that hugs the entire foot
 - Inherently flame-resistant for the life of the sock
 - Highly moisture-absorbent, double that of cotton
 - Outstanding resistance to molten-metal splash
 - Comply with the relevant international standards:
EN 531: 1995 A, B3, C1, D1; EN ISO 14116:2008 (3/5H/40) and CE 0339
- ㉚ E20300 work boot
 - Electrical hazard (EH): sole electrical shock resistant up to 20kv (dry conditions)
 - Sole system heat resistant up to 300°C
 - Puncture resistant textile mid sole
 - Non-metallic
 - Comply with the relevant international standards:
EN ISO 20345:2007
CE 0465



- ㉛ Dielectric work boot
 - Class 0 Vulcanised dielectric rubber boot
 - Steel toe cap protection
 - Boot 5000 Volts tested, 1000 Volts working.
 - Heat and oil resistant anti-slip sole
 - Ozone & UV resistant upper

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CHARNAUD'S COMPLETE PRODUCT RANGE



ELECTRIC ARC FLASH PROTECTIVE WEAR

SURVIVE-ARC® protective wear is made from certified, comfortable-to-wear, permanently flame-resistant and arc-rated material to protect the worker against the thermal effects of an electric arc flash. SURVIVE-ARC® comprises a head-to-foot range of protective wear designed for the electrical worker. SURVIVE-ARC® garments are guaranteed permanently flame resistant for the life of the garment. Fabrics, garments and accessories are certified to international standards.



ALUMINIUM SPLASH PROTECTIVE WEAR

ALU-SAFE® is an internationally certified unique high-performance workwear fabric and garment system to protect workers against the hazards of molten aluminium and cryolite (reduction cell flux) splash in primary aluminium smelters and downstream operations. In addition to its unique molten-metal shedding ability (aluminium and cryolite stick to all other known types of material), ALU-SAFE® is inherently flame resistant for the life of the garment and the brand comprises a head-to-foot range of protective wear. The comfortable-to-wear natural-fibre ALU-SAFE® protective wear is water washable in industrial laundries. Fabrics, garments and accessories are certified to international standards.



HOT METAL PROTECTIVE WEAR

The METAL-SAFE® head-to-foot range of protective wear is designed to offer protection against "red metal" molten metal splash, radiant heat, flames and welding. This range is ideal for smelters, cast houses, furnaces, severe hot-metal applications and metal construction work. The range offers various workwear garments such as casting suits, smelter garments, casual flame-resistant workwear, undergarments, as well as accessories such as face protection, gloves, socks and boots. Fabrics, garments and accessories are certified to international standards.



FIRE PROTECTIVE WEAR

FIRE-SAFE® comprises a full range of permanently flame-resistant workwear garments for protection against flames or fires. Widely used in the following following industries: petrochemical, oil & gas, explosives, ferrous and non-ferrous metal, fire-fighting, motor, emergency services and welding. Full head-to-foot protection is available via a range of accessories including high-heat resistant furnace boots, work boots, helmets, face shields and gloves. Fabrics, garments and accessories are certified to international standards.



MINING PROTECTIVE WEAR

SHAFT-TECH® shaft sinker garments are manufactured from specially formulated PVC coated onto a heavy-duty fabric. The garments are designed to withstand various fuels and protect workers in high-abrasion work areas typically found within the mining industry. These garments are complemented by a head-to-foot range of protective wear designed to withstand various hazards in the mining industry including flames, arc flash, welding, acid, and cold and wet conditions. Fabrics, garments and accessories are certified to international standards.



ACID SPLASH PROTECTIVE WEAR

ACI-FLAM® are unique and highly specialised workwear garments which offer protection against highly concentrated and dangerous acids such as 98% sulphuric acid, and have the additional benefit of being inherently flame resistant. No other fabric on the market has the same built-in guaranteed dual protection. Fabrics and garments are certified to international standards.



GARMENTS FOR COLD CONDITIONS

ZERO-TECH® garments protect and enhance a worker's performance in cold conditions. Garments may either be flame resistant or non-flame resistant with a waterproof option available. These garments can be used in a variety of industries ranging from large industrial freezers to security, rescue and maintenance work on mines. Fabrics, garments and accessories are certified to international standards.



INDUSTRIAL RAINWEAR

AQUA-TECH® are industrial waterproof workwear garments made from PVC-coated fabrics available in different weights for light- to heavy-duty industrial use. The PVC is coated onto a strong woven polyester base fabric, which protects in hazardous environments and lasts much longer than other unsupported fabrics. These garments are ideal for use in industrial, agricultural and mining applications.

SOUTH AFRICA
AJ Charnaud & Co (Pty) Ltd.

tel: +27 (0) 11 794 6040
email: sales@charnaud.co.za

WWW.CHARNAUD.CO.ZA

EUROPE
AJ Charnaud (UK) Ltd.

tel: +44 (0) 113 3507 651
email: sales@charnaud.eu

WWW.CHARNAUD.EU



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