



PROTECTIVE CLOTHING MANUFACTURER





METAL-SAFE® FURNACE WORK WEAR

The unique range of Metal-Safe® Aluminised garments are designed to protect workers against extreme radiant heat, molten-metal splash, fire and flames.

The garments can be manufactured in either ALPAN or ALFAB material depending on the hazard and customer requirements.

Hoods and visors

- Alfab hood with hard hat and clear, gold on clear or gold on green visor
- Alpan hood with hard hat, and clear, gold on clear or gold on green visor
- Individual visors available for various applications

Jackets

- Alfab 88 cm jacket with Velcro® front closure

Coats

- Alfab 125 or 145 cm coat with snap-and-dee closure (optional gusset on 145 cm Coat)
- Alpan 104 or 125 cm coat with Velcro® closure
- Alpan 145 cm coat with snap-and-dee closure

Trousers

- Alfab trousers
- Alpan trousers, bunker style with braces

Aprons

- Alfab apron 1300 mm x 750 mm (optional thermal or wool liner)
- Ankle-, calf- or knee-length bolero apron (available in Alfab and Alpan)

Hand protection

- Alfab furnace/-lancing mitts
- Alpan sleeve protectors
- Alpan elbow-length mitts
- Alpan five-finger glove, wool liner optional

Foot protection

- Spats with skirt (available in Alfab and Alpan)



RADIANT HEAT FURNACE GARMENTS

FEATURES AND QUALITIES OF ALPAN

- ✓ ALPAN material consists of a five-layered coating of aluminium foil, vacuum-laminated onto a non-combustible and ultra-high-heat-resistant textile substrate.
- ✓ Exposed to impulse thermal energy like molten-metal splash, ALPAN becomes an extremely strong and highly protective carbon fibre.
- ✓ The material has a high moisture regain factor, acting as a thermal barrier.
- ✓ The lightweight, durable and flexible space-age fibre cannot burn or melt.
- ✓ ALPAN reflects 95% of radiant heat while the fibres remain strong in the presence of ultra-high temperatures, even up to 2900°C.
- ✓ The garments display high seam strength, durability, flexibility, and does not delaminate even after extensive and rigorous flexing. The fabric will not burn or melt.
- ✓ Against comparable products, ALPAN garments are cool and light to wear with increased freedom of movement.



FEATURES AND QUALITIES OF ALFAB

- ✓ ALFAB material is a tightly woven, extremely strong and robust fibreglass material that reflects 95% of radiant heat.
- ✓ The garment has exceptionally high abrasion resistance and will remain reflective with care and cleaning.
- ✓ The garments display high seam strength, durability, flexibility, and does not delaminate even after extensive and rigorous flexing. The fabric will not burn or melt.
- ✓ ALFAB work wear comes standard with a thermal liner for additional comfort and heat protection.



METAL-SAFE® WOOL FURNACE WORK WEAR

Metal-Safe® Wool furnace garments are designed for use in furnaces to protect workers against flames and heavy molten-metal splash.

The garments are manufactured in various different designs and styles to suit customer requirements:

Garments

- Furnace jumpsuit (single or double-layer sleeve)
- Coats (knee or ankle length)
- Jacket, 88cm long
- Trousers
- Full beehive hood with double layer visor
- Blanket 2m x 3m with brass eyelets (10mm Ø)



FEATURES AND QUALITIES OF METAL-SAFE® WOOL FURNACE WORK WEAR

- ✓ Metal-Safe® wool garments are made from 100% pure wool 700 g/m² Zirpro® treated melton wool.
- ✓ Wool garments insulate: wool fibres trap large quantities of air, which reduces the conduction of heat in the material and insulates against both heat and cold.
- ✓ Wool cleans itself: wool does not easily hold odours as it breaks down bad-smelling bacteria from the skin.
- ✓ Wool only ignites at very high temperatures of 570 to 600°C and is self-extinguishing. It forms a self-insulating char that prevents further flame spread.





METAL-SAFE® WELDING WORK WEAR

The multi-functional jacket and trousers were created as work wear for the hot red-metal industries. They protect against: thermal effects, molten-metal droplets and splatter associated with welding and flames. The 260gsm weight protects against light hot-metal splash in furnaces. The 425gsm weighted version offers exceptional protection against: heavy molten metal splash, heavy welding and cutting. Weight versus protection is unrivalled in the industry.

Features

- Inherently flame-resistant for the life of the garment
- Exceptional protection against molten red-metal splash
- Exceptional resistance and protection from molten-metal splatter and droplets from welding and metal cutting
- Outstanding insulation from heat and flames
- Excellent moisture management performance
- Superior climate control
- Softness and a cooling effect on the skin

METAL-SAFE® work wear is available in one and two-piece garments.



FOOT PROTECTION

① Thermal socks

- Double-layer shank, knitted in an elastomeric “skeleton” that hugs the entire foot
- Inherently flame-resistant for the life of the sock
- High moisture-absorbency, double that of cotton
- Outstanding resistance to molten-metal splash
- Complies with the relevant international standards:

EN 531: 1995 A, B3, C1, D1; EN ISO 14116:2008 (3/5H/40) and CE 0339



② Charnaud Hot Metal Boot

- Molten-metal splash, heat and flame resistant
- Molten-metal single-dip exposure up to 1000°C
- Light and highly flexible textile puncture-resistant midsole
- Electrical shock resistant (EH): Sole system electrical shock resistant to 18kV (dry conditions)
- Non-magnetic
- External metatarsal guard protection
- Complies with the relevant international standards:

EN ISO 20349:2010
ASTM F2412-11:2011 EH sole system (18kV dry conditions)
CE 0465



③ E20300 Work boot

- Sole system heat resistant up to 300°C
- Electrical shock resistant; sole system electric shock resistant to 20kV (dry conditions)
- Puncture resistant textile mid sole
- Non-metallic
- Comply with the relevant international standards:

EN ISO 20345:2007
CE 0465



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.

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