

Protective Clothing Guide

Our comprehensive range

Our protective clothing includes base layers, high visibility, specialist garments, and industry specific products. We stock popular sizes and colours, with major brands, our signature brands, and female tailored workwear. We help people be at their best and stay safe in some of the most dangerous working environments in the world.

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FR & arc flash PPE



Workplace risks

Flame retardant (FR) & arc flash PPE is a crucial type of protective clothing. And it can mean the difference between life and death for those working with fire and electrical hazards. As a complex type of PPE, understanding the different standards and terms is as important as it is challenging.

Is FR the same as arc flash?

Not all FR clothing gives you arc flash protection. But all arc flash clothing IS flame retardant. This is because FR clothing is only arc flash rated if it has been tested and certified according to arc flash suit standards. It is crucial that you read the labels of garments and equipment. If an arc flash hazard is apparent, check your PPE for the 'AR' label. A garment labelled 'FR' will NOT be sufficient.

What is FR PPE?

Employees wearing FR clothes are protected from fire-related dangers such as embers, flames, and flash fires. Despite its name, FR clothing is NOT fireproof. It can and will catch fire. But FR is made to self-extinguish, so once lit, it will not keep burning. This means that wearing FR clothes can lessen the severity of a user's burn damage. FR also protects against clothes melting onto the skin and provides thermal insulation.

What is arc flash PPE?

Wearing arc flash and arc rated clothing is vital to protect against arc flash threats. Additional testing is necessary for arc flash and arc rated clothing is put through a series of arc flashes to see how much energy it can withstand before causing 2nd-degree burns on the wearer. Arc flash has been developed to make it simpler for employers and customers to determine whether the apparel a person is wearing provides enough protection against arc flash.

Introducing FireBear PPE

FireBear is our signature range of specialist anti-static, flame retardant and arc flash rated protective workwear. FireBear was developed with wearers over extensive trial periods to achieve record levels of user acceptance and satisfaction, whilst enduring the toughest environments.

FireBear guide to arc flash

FireBear's layer concept means (when combined correctly) it's possible to achieve EN 61482 Electric Arc Class 2, while maintaining comfort. Read or download our FireBear guide below. Read and download our FireBear guide to arc flash PPE below.



Scan Me



Chemical PPE

Workplace risks

PPE and chemical-resistant clothing protect workers against chemicals that cause an adverse effect on skin or when inhaled could cause internal damage. To protect against the risk of direct skin contact with chemicals, it's vital the correct PPE and chemical-resistant clothing is worn.

What's the purpose of chemical PPE?

PPE is a vital part of working with chemicals where there is a high risk of harm involved. Many cleaning, developing, and etching procedures include the substantial use of harmful and dangerous acids, bases, and solvents that can cause serious harm or even death when exposed to them.

But before using PPE, it's important to use the National Institute for Occupational Safety and Health (NIOSH) hierarchy of controls to avoid any contact with chemicals in the workplace. The hierarchy of controls has five levels of actions to reduce or remove hazards. This is the preferred order..

- Elimination – Physically remove the hazard.
- Substitution – Replace the hazard.
- Engineering controls – Isolate people from the hazard.
- Administrative controls – Change the way people work.
- Personal protective equipment (PPE) – Protect the worker with PPE.



What are hazmat suits used for?

A Hazmat suit (short for hazardous material suit) is a full body garment designed to protect the wearer against dangerous materials or substances. These are used by workers operating in toxic or infectious environments. This level of chemical protection is used with respiratory PPE support and often combined with self-contained breathing apparatus (SCBA) to ensure a supply of breathable air.

Most suits used in Europe are covered by EU Norms, divided into six types (levels) of protection..



- Type 1: Protects against liquid and gaseous chemicals. Gas tight. (EN 943 part 1).
- Type 2: Protects against liquid and gaseous chemicals. Non gas tight. (EN 943 part 1).
- Type 3: Protects against liquid chemicals for a limited period. Liquid jet tight. (EN 14605).
- Type 4: Protects against liquid chemicals for a limited period. Liquid saturation tight. (EN 14605).
- Type 5: Protects against airborne dry particulates for a limited period. (EN ISO 13982-1).
- Type 6: Protects against a light spray of liquid chemicals (EN 13034).

What's included in chemical PPE?

After following the hierarchy of controls to ensure PPE is necessary, there are several types of PPE that need to be considered. We can help you understand what they do and how they protect you...

- Overalls and aprons protect the body from chemical or acid spills and splashes.
- Gloves protect the hands from absorbing substances, cuts, abrasions, and chemical burns.
- Safety goggles and face shields protect the eyes and face from liquid chemicals or acids, light radiation, and flying particles.
- Respirators are used for protection against chemical fumes, other acids, and vapours.
- Special footwear protects the feet against possible chemical spills.

Forestry PPE



Workplace risks

The importance of using the proper PPE & protective clothing in the forestry industry cannot be overstated. PPE is of course the last line of defence after first eliminating, substituting, and controlling risk, according to the hierarchy of controls.

But once it's worn, it becomes the forestry worker's last line of defence in the event of an accident. If the right PPE is used, it can prevent or greatly reduce the risk of serious injury. This is especially important for those operating chainsaws or other dangerous cutting and sawing equipment.

What forestry PPE is essential?

- There are several types of PPE that is vital when working with tree cutting and carrying equipment. And due to the importance of forestry PPE, all equipment must meet its required safety standard.
- Head protection is designed for overhead hazards present in the forestry environment. Helmets must be always fitted securely and should be a highly visible colour.
- Eye and face protection must be worn when there is a risk of eye or face injuries. This is especially true for chainsaw operators who can face consistent debris when sawing.
- Hearing protection is required for when working with or near high noise machinery and is now the highest classification level of PPE because of the risks involved.
- Hand and arm injuries are common in the forestry industry. That's why workers must wear gloves when handling sharp objects and materials and operating dangerous machinery.
- Leg protection must be worn when operating a chainsaw. The leg protection must also cover the entire leg, from the upper thigh down to the top of the user's boot.
- Foot protection needs to be waterproof or water resistant, with ankle support and toe protection. Employees using chainsaws must wear boots with cut resistant material.

Why is forestry PPE so important?

Forestry is a dangerous working environment. That's why PPE must be strongly considered to ensure the safety of employees. Each working day includes jobs and tasks that put people at risk of serious injury or even death. Businesses are breaking the law if they neglect their staff's health and safety.



Extreme Temperature PPE

Workplace risks

For those who face extreme temperatures in their working environment, it's vital to understand how to stay protected and comfortable. Layering PPE & protective clothing correctly, should result in the worker being both safe, and able to fulfil their task and perform on the job at the same time.



How do you keep warm and safe?

Wearing multiple layers, especially heavy ones, will keep workers warm whilst sitting still. But most jobs require workers to move around and often sweat. We recommend avoiding heavy layers that might restrict movement, with a base layer of clothing that moves moisture to the clothing surface.

It can be tempting to wear nylon or polyester as materials for keeping sweat away. But they can be a disaster in an electrical accident. Even when worn underneath arc-flash clothing, synthetic fabrics can melt to the wearer's skin in an arc-flash incident, causing potentially life-threatening burns.

How do you keep cool and safe?

Overheating can lead to a loss in concentration, which needs to be avoided in dangerous environments. Or even worse, it could lead to heat stress or death. This means for PPE in extremely hot environments, it's vital you choose breathable garment options that keep workers cool.

Intense heat requires heavier protection. But this doesn't mean that workers need to be surrounded by a full-body shield. It's important to choose PPE and clothing that keeps them safe for single-sided hazards like sparks or radiant heat but helps them stay cooler with coverage only where it's needed.



What PPE is needed for welding?

Welders need to wear heavyweight, closely woven, 100% wool or cotton garments to shield themselves from UV rays, hot metal, sparks, and open flames. But it's important to look after PPE, because after each wash, flame retardant coatings lose some of their effectiveness.

For welders to protect their wrists and forearms, they need to wear leather gloves with gauntlet-style cuffs or protective sleeves made of a similar material. Dark coloured protective clothing is also needed when welding as it prevents light reflection that can cause damage to eyes.

Leather aprons are a useful form of protection from sparks, as leather is a good electrical insulator. It's important for welders to not wear jewellery, or any synthetic items of clothing as this type of fabric is an aggressive burner, which easily causes bad skin burns.

What PPE is needed for freezing environments?

PPE is essential for those working in cold storage and other freezing environments, as they run the risk of frostbite, hypothermia, and death. Lower temperatures and exposure increase the rate of these risks occurring. Cold, high winds, and cold water, also contribute to cold stress on the body.

Clothing such as jackets, salopettes and coveralls should be well fitted, although not too tight as this will restrict blood flow. It needs to be well insulated, water resistant and durable. It's also important clothing suits the work and activity, not just the temperature and environment.

Cold store gloves need thermal liners but also need to be well fitted so users can still perform tasks to a high standard. Boots must be insulated, water resistant and well ventilated. They must also be well fitted, whilst allowing enough room for thick thermal socks.





Scan QR code to find out more.
Contact us at hello@towersupplies.com
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