

Personal Protective Equipment

Comfortable 70E FR-Rated Clothing: Triple Vented Arc Flash Protection

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Electrical workers and utility linemen everywhere know the *importance of flame-resistant (FR) clothing*. Injuries from arc flashes and arc blasts are all too common, which is why electrical contractors and utility linemen must always wear FR-rated clothing. Everyday clothing will continue to burn, resulting in catastrophic and unrecoverable injuries. That's why MCR Safety has been expanding their FR lineup to include the new 70E clothing line, offering styles that workers want to wear while presenting unbeatable protection.

MCR Safety began manufacturing Personal Protection Equipment (PPE) back in 1976. For over 40 years now, they've been expanding their footprint into multiple PPE categories, ensuring they're protecting workers from head to toe. They started offering FR protection back in 2014, providing even more of the PPE solutions users demand. Since then, they've continued elevating their FR product offerings, applying unmatched patented technology.

In this article, MCR highlights some important facets of FR protection and explains how it can protect the linemen and electricians who rely on it. They would also like to introduce these workers to their triple-vented arc flash protection gear.

NFPA 70E and Electric Arc Protection

When an electric current passes through the air between ungrounded and grounded conductors, an *electric arc flash is the result*. The heat from an arc flash can reach 35,000°F! The last thing any electrical worker wants is to be exposed to that kind of heat. That is why it is essential that credible and reliable standards guide FR clothing manufacturers and those wearing FR clothing.

The National Fire Protection Association (NFPA) spells out electrical safety requirements for employees in its document NFPA 70E, including how to prevent and reduce the risk of arc flash injuries. One such safety measure directs employees to wear personal protective equipment such as FR clothing. The *latest version of the 70E* gives four hazard risk categories (HRC) of PPE based on the potential for arc flash hazards. This is meant to help electricians know how much PPE they need to stay safe on a job.

Why wear FR clothing?

Potential injuries to electrical workers include electrical shocks, burns, falls, and cuts. Over **2,000 people** are admitted to hospital burn centers each year needing treatment for severe arc flash burns. Most of these burns are not from the arc flash itself but from non-flame-resistant clothing igniting and burning.

While flame-resistant does not mean fireproof, FR clothing is, nevertheless, an important defense against burns. Here are some important reasons why FR clothing is worn:

- Does not ignite, melt, drip, or continue burning once the heat source has been extinguished

- Increases one's probability of surviving arc flashes
- Insulates the wearer from heat
- Maintains a barrier from flames, providing workers with escape time
- Resists breaking apart
- Reduces burn injuries

Watch the following short video as MCR Safety puts its FR gear to the test:

MCR Safety FR Clothing – Triple Vented

MCR Safety is the only manufacturer providing FR clothing with three total FR mesh vent openings, allowing for exceptional airflow. To give linemen and electricians the breathability they need, MCR uses patented **Summit Breeze® technology** in their FR clothing. What's special about this FR technology? Its mesh venting is incorporated onto the back and under the arms, allowing body heat to escape where it builds up the most.

Summit Breeze® technology provides better heat stress management for those working in a hot environment, those who are performing labor-intensive tasks, or a combination of the two. When working in an environment prone to heat stress, vented openings can be a lifesaver.

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