



Flame-Resistant (FR) Clothing

OSHA 1910.269 Mandate

Electric arcs pose some of the most serious safety hazards for electric power industry workers. An arc flash includes high temperatures (hotter than the surface temperature of the sun) over short periods of time (fractions of a second), hot gases, an intense pressure wave from the explosion (like having a hand grenade explode inches away), and shrapnel from vaporized and molten metal particles. Arc-related injuries can range from minor to severe burns, blindness, hearing and memory loss from the pressure wave, broken bones, or death. When a worker is exposed to an arc flash, the clothing they wear plays a large role in the severity of the potential injury.

The "269" standard (1910.269(l)(6)):

- Requires that workers be trained in the potential hazards of electric arcs and the flames they can produce by igniting other materials in the area.
- Prohibits workers from wearing clothing that, in the presence of an arc, can potentially increase the extent of injury; that is, if the clothing would ignite and continue to burn, or if it melts on the skin. Thus, workers are generally prohibited from wearing clothing materials made entirely of, or blended with, synthetic materials such as acetate, nylon, polyester, or rayon.

FR Clothing and the "269" Standard. OSHA issued an interpretation memorandum that provides guidance for complying with the apparel requirements. This memorandum provides information on acceptable types of clothing and on the employer's assessment of the hazards.

Selecting Appropriate FR Clothing: Clothing made from 100% cotton or wool may be acceptable if its weight is appropriate for the flame and electric arc conditions to which a worker could be exposed. As heat levels increase, these materials will not melt, but they can ignite and continue to burn. The amount of heat required to ignite these materials is dependent upon a number of factors, including the weight, texture, weave, and color of the material. This type of clothing does not comply with the "269" standard if it can ignite (and continue to burn) under the electric arc and flame exposure conditions found at the workplace. If they do not choose FR clothing, employers need to make a determination of whether or not the clothing worn by the worker is acceptable under the conditions to which he or she could be exposed. FR clothing is acceptable with respect to the OSHA apparel requirements.

SOURCE: www.osha.gov

3917 Liberty Road | Greensboro, NC 27406 | sales@perftex.com

Phone: (336) 275-5800 | Fax: (336) 275-8866

www.perftex.com