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BULLETIN



Changes in NFPA70E from 2009 to the latest edition for 2012

What strengthens the NFPA standards is that they are being continually updated and improved as new information becomes available. The NFPA70E Standard for 2012 has a few significant changes as it pertains to Personal Protective Equipment (PPE) and for the purpose of this bulletin we will focus on the changes in regards to clothing.

These are just a few of the changes related to arc flash PPE in NFPA70E for 2012 -

- **100 (I) Definitions - Arc Rating-** The committee wanted to differentiate between fabrics that had been FR tested to a standard not related to arc flash protective clothing (e.g. drapery or upholstery). Fabrics meeting these standards are also called flame-resistant but are not suitable for arc flash protection. The terms Arc Rated & AR have replaced Flame-Resistant & FR. This is a clarification to prevent the use of garments/fabrics that have not been tested to establish an arc rating. The change does not require a garment to be labeled as AR versus FR but does require the garment to have been arc tested and adhere to ASTM F1506 which requires it to be labeled with the arc rating (ATPV or Ebt.)
- **130.7(C)10 Arc Flash Protection Equipment** - Full head protection was determined to be needed since the back of the head can be inside the flash protection boundary and can be subject to exposure to the arc flash. The balaclava & face shield option was added as a more comfortable alternative to the hood. The consolidation of Hazard Risk Categories 2 and 2*. HRC 2 now requires the use of either an arc rated wrap-around face shield and arc rated balaclava, or an arc rated flash suit hood. Previously only an arc rated face

shield was required. This was implemented to provide full head protection, with the face shield along the sides and back of the head were not protected.

- **130.7(C)11 Clothing Material Characteristics** - The standard now states that flammable synthetic fabrics, zipper tape and findings shall not be used. Previously it only referred to synthetic fabrics, not the findings. This was implemented to specifically address the use of non FR zipper tape and other findings that could fail in an arc flash event.

There may be questions or confusion about whether or not an FR garment is suitable since NFPA 70E now uses the term AR. The bottom line is a garment labeled FR, made from a fabric that has been arc tested and is labeled with an arc rating (ATPV or Ebt), is considered an arc rated/AR garment. Bottom line: garments that have not been arc tested will not have an arc rating and are therefore not AR.

Additional changes of note:

110.2(D)(3) Retraining and 110.3(H)(1) Electrical Safety Program Employee - retraining is now required to be performed at intervals not to exceed 3 years and Safety program audits are now required to be performed at intervals not to exceed 3 years. Adding a time period was done to make sure safety programs keep up with changes to the standard.

130.7(C)(5) Hearing Protection - The requirement to wear hearing protection within the arc flash boundary was added. It was felt hearing protection was also needed.

130.7(C)(9)(a) Layering - Garments that are not arc rated shall not be permitted to be used to increase the arc rating of a garment or of a clothing system.

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