

## The “Other” things to consider

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After your Arc Flash hazard analysis and labeling of your equipment, the purchasing of your personal protective equipment (PPE) can be the most difficult (and expensive) part of your electrical safety program. There are a few “other” items besides price to consider when purchasing your Arc Flash PPE.

Let’s start with the basics. All arc flash related equipment have minimum requirements they must meet. The NFPA 70E 2009 edition Table 130.7(C) (8) Standards on Protective Equipment list all of the applicable ANSI and ASTM requirements for PPE from head to toe. These requirements are for ensuring that the equipment is going to protect you as intended. Assuming you start with those standards as a bare minimum when purchasing, I have included several things that can not only help get the most value for the money you are spending, but also give your employees more comfort when wearing the necessary equipment.

### Fit:

Here we are talking about adjusting to girth more so than height. Being able to accommodate both the husky and more slender employees with fewer garments can create more cost savings when trying to implement your electrical safety program. Several garment products have Velcro portions with expanding pieces at the waist as well as similar Velcro expanders on the bottom of the pant legs to allow a more comforted fit for both larger and smaller users.

### Zippers VS Velcro

Aside from the obvious concern of metal items on you electrical safety apparel with zippers, the Velcro seems to be less of a hassle when putting on and taking off (Although ensuring you have Velcro completely sealed takes some extra attention).

### FR Fabrics

Is the garment made with fabric that has FR qualities in the fabric fibers or non FR fabrics chemically treated to become FR. This can be a huge difference not only in price but in the quality and life of the garment. Products such as Indura Ultrasoft made by Westex or Nomex made by DuPont are a few of the more well known and respected FR fabrics. These fabrics can be washed repeatedly and the FR characteristics will remain intact. If you are looking solely at price – BUYER BEWARE, you need to be careful with only chemically treated materials; they may have more requirements for upkeep to maintain the FR qualities. This could be less number of washings in the life of the garment or more restrictions with the types of chemicals that can be used to clean them. If you are looking for quality of material it will be an easy choice. The Indura Ultrasoft fabric not only can withstand more than a year of laundering without damage, it is also one of the softest FR fabrics you will find. I like to compare FR garment shopping to regular clothes shopping. If you are looking for a sweat shirt, you can really tell if the material is a sturdy, quality product that will hold up, or if it is a discount store “El Cheapo”. Just as with other consumer goods; most of the time you get what you pay for. Now don’t forget that if the PPE is worn as it is intended, you will be looking to budget

for replacement as often as annually for the arc flash suits and the like. It doesn't matter how good the product is, if it gets used when it should – it will get worn and frayed. The difference between a quality product and a lesser one is that you may see more frequent replacement costs or worse, you may not replace them and find out only after an incident occurs and the material didn't do its job because it's FR capabilities had been diminished and you weren't aware until after the fact.

### Ease of use

One of the most complained about features is the snap in connectors for the arc flash hoods to fasten to hard hats. These are usually difficult to get in and to get out and certain brands have had very short life spans for the hard hats once they have been connected then removed even just one time. This is due to the slot in the hard hat where the clip fits being widened from the clip and then it becomes even more difficult to keep the clip in the slot. This may seem a trifle issue, but the reality is a piece of safety equipment that I have seen time and time again be improperly used (wearing hood and hard hat without it fastened), or worse – a piece of equipment that no longer gets used because of the difficulties to use it properly. I have found over the years that most individuals I have come in contact with prefer the hoods that use rubber tubing straps that stretches over the top of the hardhat to secure it into place. It is a snug fit and very easy to get in the hood and out when needed without damaging the hard hat or its life expectancy.

These are just a few items to consider, but the best resource for these and other considerations is to simply ask the people who are wearing or are going to wear this equipment day in and day out. They are the ones that have first hand knowledge what items will withstand the environment that it will be subjected to. They will be able to tell you what is comfortable and what is not, what causes difficulty with its use as well as what features they like best in certain products. Bring vendors in to allow your employees to try on the products and comment on them before purchasing – this way they also have a feeling of ownership in the decision, which is one less reason/excuse for not using the equipment as intended.

*Stark Safety Consultants specializes in Arc flash hazard analysis and electrical safe work practices training as well as related consulting services to aid in the creation and updating of electrical safety policies. Stark Safety Consultants is a proud National Training Partner of the National Joint Apprenticeship Committee (NJATC).*

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