11/12/2019

**FRC/NOMEX**

YOUR PPE IS NOT COMPLETE

WITHOUT FRC TO TAKE THE HEAT

Why should FRC/NOMEX be worn as the outermost layer of clothing?

Flame resistant clothing (FRC) or Nomex can significantly reduce injury from a burn in the event of a flash fire or an arc flash. The FRC/NOMEX fabric is made to withstand the effects of momentary heat and it is resistant to igniting. However, if it does ignite under extreme conditions, it has the ability to self-extinguish once the ignition source is removed (which should be immediate in a flash fire or arc flash).

However, FRC/NOMEX can only provide protection where it adequately provides a barrier between the wearer and the heat source. For example, if the sleeves are rolled up, if shirts are unbuttoned or shirt tails are not tucked in, or if coveralls are not zipped up, then the wearer will not have the full benefit of the FRC/NOMEX.

FRC/NOMEX must be worn as the outermost layer of clothing, except when the nature of the job or work conditions requires other exterior PPE. Examples include rain gear, personal flotation devices, and acid suits. However, in each of these cases, FRC/NOMEX still needs to be worn as the next layer immediately beneath this other PPE.

There are several problems with wearing non-FRC/NOMEX clothing as the outermost layer. For one, non-FRC/NOMEX fabrics can ignite creating a sustained fire hazard (it will not self-extinguish like FRC/NOMEX does). Also, synthetic fabrics such as nylon will melt and remain in close contact with skin where it can burn the wearer through heat transfer.

The best clothing to wear under FRC/NOMEX is a non-melting fabric such as 100% cotton. This reduces the risk of additional burn injury because it is less likely to retain heat. It also creates air gaps that provide additional thermal insulation (similar to the way air gaps in layers of clothing insulate during the cold months).

Another consideration with FRC/NOMEX is that it should only be repaired by an approved FRC/NOMEX vendor to ensure materials consistent with the original fabrics are used for the repair. Non-FR thread will compromise the garment's thermal protection exposing the wearer to potential injury.

When wearing your FRC/NOMEX, make it your outermost layer, and be sure to button-up and/or zip up to get the maximum protection.