

National Electrical Safety Code Committee, Accredited Standards Committee C2

National Electrical Safety Code®

Interpretation

Section 41.

Supply and communication systems—Rules for employers

Rule 410A3 General requirements—General (2007 Edition, page 246) (24 January 2007) IR544

Is cotton that is blended with nylon, rayon, or the like acceptable as long as it is treated? Or does the ruling apply to any percentage of these man-made materials?

Discussion: A recent article reports that this new rule states: “clothing made of rayon, nylon, polyester, and acetate shall not be worn at any time.” How does this rule apply to a laundry service that wants to provide people with shirts that have the proper FR rating but are dealing with a material that contains 12% nylon, 88% cotton? Is it true that this new ruling would not apply to the shirts of this particular material if the nylon is on the outside of the shirts, which are also specially treated to bring the FR rating up? The shirts do not appear to be “lined” and are probably a blend but the way this rule can be interpreted, neither would be acceptable. Further clarification of this rule is requested. The goal is for people wearing the shirts to be as safe as possible and, to this end, interpretation of the rule is required. Any help in addressing this issue is certainly appreciated.

Interpretation

The Interpretations Subcommittee has considered the subject Interpretation Request for Rule 410A3 and has developed a consensus report as follows:

“Rule 410A3 does not prohibit blended flame resistant (FR) clothing that otherwise meets the requirements of this rule. The current FR clothing market provides several blended materials that are fully acceptable, including some that are not considered to be traditional FR materials. The intent of this rule, as stated in the first paragraph, is to require “...clothing or a clothing system that has an effective arc rating...” Blended clothing may be used if it has an acceptable effective arc rating or arc thermal performance value.”

The following comments provide additional information and are not part of the official interpretation:

1. While Rule 410A3 is intended to harmonize with current OSHA requirements, this rule also covers performance requirements for clothing exposed to electric arcs.
2. OSHA explains its intent to prohibit certain fabrics in 29 CFR 1910.269, paragraph (1) (6) (3) NOTE. The listed fabrics are not acceptable unless they are treated to withstand encountered conditions, or unless the user can demonstrate that garments made of the fabric are worn in such a manner to eliminate the flame and electric arc hazards. While rayon is included in the list of prohibited materials, OSHA recently proposed a revision to the regulation that would remove rayon because of its current widespread use in FR fabrics.
3. The procedures governing NESC Interpretations do not allow the subcommittee to comment on whether specific fabric blends meet the intended requirements.