

Establishing an Electrical Safety Work Program

OSHA 29 CFR 1910.333(a) states that employers must employ safety-related work practices to prevent electrical shock or other injuries resulting from either direct or indirect electrical contact. The **NFPA 70E Standard for Electrical Safety in the Workplace** requires employers to perform an **Electrical Arc Hazard Assessment** for each situation.

The **Grainger Online SafetyManager® System** offers NFPA 70E Electrical Safety Training - 2015 Series to help you keep your workplace in compliance with the NFPA 70E Electrical Safety standard. Access our library of **easy-to-follow training courses** (subscription required), including Training Module 4: Personal Protective Equipment and Clothing requirements, as well as **helpful technical articles** at grainger.com/safetymanager

A hazard assessment must be performed using 1 of the following 2 methods:
 1. Incident Energy Analysis 2. Arc Flash PPE Category

Protective Clothing and Personal Protective Equipment Table 130.7(C)(16)

Arc Flash Category*	Minimum ATPV Rating cal./cm ²	Required Garments	Required Protective Equipment
1	4	Shirt (Long Sleeve) and Pants (Long) or Coveralls; Flash Suit Hood or Faceshield; Jacket, Parka, Rainwear, or Hard Hat Liner (AN)	Hard Hat; Safety Glasses or Goggles (SR); Hearing Protection (Ear Canal Inserts); Heavy Duty Leather Gloves; Leather Footwear (AN)
2	8	Shirt (Long Sleeve) and Pants (Long) or Coveralls; Flash Suit Hood or Faceshield and Balaclava; Jacket, Parka, Rainwear, or Hard Hat Liner (AN)	Hard Hat; Safety Glasses or Goggles (SR); Hearing Protection (Ear Canal Inserts); Heavy Duty Leather Gloves; Leather Footwear (AN)
3	25	Shirt (Long Sleeve) (AR); Pants (Long) (AR); Coveralls (AR); Flash Suit Jacket (AR); Flash Suit Pants (AR); Flash Suit Hood, Gloves, Jacket, Parka, Rainwear, or Hard Hat Liner (AN)	Hard Hat; Safety Glasses or Goggles (SR); Hearing Protection (Ear Canal Inserts); Heavy Duty Leather Gloves; Leather Footwear (AN)
4	40	Shirt (long sleeve) (AR); Pants (Long) (AR); Coveralls (AR); Flash Suit Jacket (AR); Flash Suit Pants (AR)	Hard Hat; Safety Glasses or Goggles (SR); Hearing Protection (Ear Canal Inserts); Heavy Duty Leather Gloves; Leather Footwear (AN)

* 1 of the 2 methods used to determine the PPE category for a job task. AN = As Needed (Optional), AR = As Required, SR = Selection Required.

Arc Flash & Flame-Resistant Apparel Materials

Arc flash materials resist burning and melting and are self-extinguishing.

- Canvas** is a durable woven fabric.
- Comfortouch** is a cotton/nylon blend that is breathable and durable.
- CoolTouch2** is a breathable blend.
- Cotton** is breathable and flexible.
- DuraStretch** is a soft cotton/nylon blend that stretches with movement.
- Excel FR** is a breathable cotton.
- Glenguard** wicks moisture to keep workers cool.

- Indura** is a cotton material that is comfortable, breathable, and resistant to molten iron splash.
- Inherent Blend and Treated Cotton** is a durable antistatic cotton that wicks moisture to keep workers cool.
- Modacrylic** is breathable and wicks moisture to keep workers cool.
- Nomex** is durable and breathable.

- Nomex IIIA** is a Nomex/aramid blend that is breathable and durable. It has better static dissipation than standard Nomex.
- Nylon** is strong and smooth and has excellent resistance to wear and abrasion.
- Protera** is lightweight and breathable.
- PVC** is a plastic that repels water.
- RevoLite** is a carbon fiber blend that provides high thermal protection.
- UltraSoft** is a cotton/nylon blend that is breathable, durable, and comfortable.



Arc Flash & Flame-Resistant Clothing Kits - Category 2

- Meet NFPA 70E standards
- Available in sizes from S to 4XL at Grainger.com

Kits include a selection of garments and headwear that protect workers from burn injuries in areas with sparks, open flame, and other potential fire hazards.

See Grainger.com for detailed descriptions of each kit's contents and garment features.



ATPV Rating	Garment Material	Includes	Color	Brand	Item No.
Without Gloves					
8 cal/sq cm	Protera®	8 Cal FR Protera Coverall, Faceshield Bag and Gear Bag, PureView Faceshield with Hard Hat, Safety Glasses	Beige	National Safety Apparel	D0761
8 cal/sq cm	UltraSoft®	10 Cal Balaclava, Arc Flash Coverall, AS1000 PrismShield® Faceshield, Faceshield Bag, North Zone Hard Hat, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2560
8 cal/sq cm	UltraSoft®	Arc Flash Coat and Bib Overalls, North Zone Hard Hat, PRO-HOOD, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2562
8 cal/sq cm	UltraSoft®	10 Cal Balaclava, Arc Flash Coat and Bib Overalls, AS1000 PrismShield® Faceshield, Faceshield Bag, North Zone Hard Hat, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2563
8 cal/sq cm	UltraSoft®	10 Cal Balaclava, Arc Flash Coat and Over Pant, AS1000 PrismShield® Faceshield, Faceshield Bag, North Zone Hard Hat, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2575
12 cal/sq cm	UltraSoft®	Coverall, Ear Plugs, Face Shield, Gear Bag, Hard Cap, Safety Glasses	Blue	Chicago Protective Apparel	J6474
12 cal/sq cm	UltraSoft®	12 Cal Balaclava, Arc Flash Coverall, AS1200 PrismShield® Faceshield, Faceshield Bag, North Zone Hard Hat, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2561
12 cal/sq cm	UltraSoft®	Arc Flash Coat and Bib Overalls, North Zone Hard Hat, PRO-HOOD, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2564
12 cal/sq cm	UltraSoft®	Arc Flash Coverall, Lift Front PRO-HOOD, North Zone Hard Hat, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2576
12 cal/sq cm	UltraSoft®	Arc Flash Coat and Bib Overalls, Lift Front PRO-HOOD, North Zone Hard Hat, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2579
20 cal/sq cm	UltraSoft®	Arc Flash Coat and Bib Overalls, North Zone Hard Hat, PRO-HOOD, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2565
20 cal/sq cm	UltraSoft®	Coverall, Lift Front PRO-HOOD	Gray/Red	Honeywell Salisbury	K2577
20 cal/sq cm	UltraSoft®	Arc Flash Coverall, Lift Front PRO-HOOD, North Zone Hard Hat, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2577
20 cal/sq cm	UltraSoft®	Arc Flash Coat and Bib Overalls, Lift Front PRO-HOOD, North Zone Hard Hat, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2578
20 cal/sq cm	UltraSoft®	20 Cal Balaclava, Arc Flash Coverall, AS2000 PrismShield® Faceshield, Faceshield Bag, North Zone Hard Hat, Safety Glasses, Storage Bag	Gray/Red	Honeywell Salisbury	K2580
With Gloves					
12 cal/sq cm	UltraSoft®	10 in Leather Protector Gloves, 11 in Class 0 Rubber Gloves, Balaclava, Cap Bracket, Chin Cup, Ear Plugs, Face Shield, Glove and Gear Bag, Hard Cap, Jacket and Bib, Safety Glasses	Blue	Chicago Protective Apparel	H5438
12 cal/sq cm	UltraSoft®	11 in Class 0 Rubber Gloves, 12" Leather Protector Gloves, Balaclava, Cap Bracket, Coveralls, Ear Plugs, Face Shield with Chin Cup, Glove and Gear Bag, Hard Cap, Safety Glasses	Blue	Chicago Protective Apparel	H5439