

Arc Flash Protective Clothing

Some time ago OSHA identified Arc Flash and Arc Blast as being a significant hazard. Since that time OSHA determined that workers shall be provided with clothing that did not worsen their condition if exposed to this multi-hazard event.

As a result of this identification and directive to protect, experts throughout North America came together to generate a consensus standard which would determine levels of protection. These levels of protection have been adopted by NFPA 70E® and CSA Z462 and identified as Hazard Risk Categories (HRC).

It is important to understand that these Hazard Risk Categories are not designed to protect from all injury, but to mitigate the impact of an Arc Flash on the individual. The first choice should always be to reduce or eliminate the hazard.

The Hazard Risk Categories (HRC) identified below are derived from NFPA 70E® and CSA Z462 standards subject to periodic change. You should verify current requirements for your location and type of work to ensure compliance with local requirements and regulations.



Hazard Risk Category 0

- Long sleeve shirt and long pants made of Nonmelting or Untreated Natural Fiber with a weight of at least 4.5 oz/yd²
- Safety glasses or goggles
- Hearing protection
- Heavy duty leather gloves



Hazard Risk Category 1

- Minimum Arc-Rating of 4 cal/cm²
- Arc-Rated long sleeve shirt and pants or Arc-Rated coverall.
- Arc-Rated face shield.
- Hard hat
- Safety glasses or goggles
- Hearing protection
- Heavy duty leather gloves
- Leather work shoes



Hazard Risk Category 2

- Minimum Arc-Rating of 8 cal/cm²
- Arc-Rated long sleeve shirt and pants or Arc-Rated coverall.
- Arc-Rated flash suit hood or Arc-Rated face shield and balaclava
- Hard hat
- Safety glasses or goggles
- Hearing protection
- Heavy duty leather gloves
- Leather work shoes

*Refer to NFPA 70E® Annex M Layering of Protective Clothing and Total System Arc Rating for complete details on layering.



Hazard Risk Category 3

- Minimum Arc-Rating of 25 cal/cm²
- Total clothing system as it would be worn*
- Arc-Rated flash suit hood
- Hard hat
- Safety glasses or goggles
- Hearing protection
- Heavy duty leather gloves
- Leather work shoes



Hazard Risk Category 4

- Minimum Arc-Rating of 40 cal/cm²
- Total clothing system as it would be worn*
- Arc-Rated flash suit hood
- Hard hat
- Safety glasses or goggles
- Hearing protection
- Heavy duty leather gloves
- Leather work shoes

Sizing

Arc flash suits shall permit easy and rapid removal by the wearer. Clothing shall cover potentially exposed areas as completely as possible. Optimal protection can be achieved by selecting garments with ample room for movement and visibility. Size should not be excessive to a point where it becomes an interference.

Below are sizing charts relating to clothing available in this section. Utilize these charts for accurate sizing and fitting. Garments in this section identify with the corresponding sizing chart.

A

Coveralls/Lab Coats/Coats/Pants (Bib Overalls)

	S	M	L	XL	2X	3X
Chest (In.)	34-36	38-40	42-44	46-48	50-52	54-56
Inseam (In.)	Short=28"	Regular=30"	*Long=32"	X-Long=34"		
	*standard					

Work Shirts and Knit Shirts

	S	M	L	XL	2X	3X
Chest (In.)	34-36	38-40	42-44	46-48	50-52	54-56
Neck (In.)	14-14½	15-15½	16-16½	17-17½	18-18½	19-19½

B

User Body Measures

	S	M	L	XL	2X	3X	XL	XL
Chest (In.)	35	39	41	45	49	53	57	61
Waist (In.)	30	33	36	40	44	48	52	56

Vertical Measurements

Short: minus 1" on sleeve and body length and minus 2" on inseam length

Tall: plus 1" to sleeve and body length and plus 2" to inseam length

Short	from 5'7"	to	5'10"
Regular	from 5'10"	to	6'1"
Tall	from 6'1"	to	6'4"
X-Tall	from 6'4"	to	6'7"

C

Coveralls/Lab Coats/Coats/Pants (Bib Overalls)

	S	M	L	XL	2X	3X
Chest (In.)	34	36-38	40-42	44-46	48-50	52-54
Inseam (In.)	Short=28"	Regular=30"	*Long=32"	X-Long=34"		
	*standard					

Fabrics Comparison

Aramid / Nomex Fabrics	Protera Fabrics	FR Treated Cotton Fabrics
Inherently FR Mid-Weight Mid-Comfort High Durability High Initial Cost	Inherently FR Light Weight High Comfort High Durability Low Initial Cost	Treated Natural Fibers Light Weight High Comfort Mid Durability Low Initial Cost