

Request the best

ARC FLASH PROTECTION

from Head to Toe



Be Smart. Be Safe.

Protection from Electric Shock
and Arc Flash.

Meeting OSHA Regulations
and NFPA 70E Standards.

ISO 9001:2000 Registered

SALISBURY

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Protection from Electric Shock and Arc Flash. Meeting OSHA Regulations and NFPA 70E Standards.

The following information will give you a better understanding of the NFPA 70E standard, why it's important and what is needed to meet its requirements. It will also provide you with the pertinent questions needed to ask when selecting the appropriate equipment needed to meet the NFPA 70E standard.

Salisbury is your complete safety solution to meet the NFPA 70E standard.

When speaking with a potential customer...

NOTES

1. Do you know what NFPA is?

NFPA stands for National Fire Protection Association. Codes and standards to reduce worldwide burden of fire and other hazards on the quality of life.



2. Are you familiar with the NFPA 70E standard?

The NFPA 70E Standard for Electrical Safety in the Workplace is designed to establish an electrical safety program and address arc flash and electric shock. The program covers protection to the employee from electrical hazards such as shock, arc flash.

3. Do you work on energized equipment over 50 volts?

Lock-out Tag-out Voltage Testing Trouble Shooting
NOTE: All these tasks require the appropriate PPE (Personal Protective Equipment).

4. Do you have an electrical safety program in place?

NFPA 70E can provide you with a guideline to implement an electrical safety work program.

You must establish a program that protects against shock and arc flash per OSHA 1910.132.

Before you can establish your electrical safety work program you must determine how much hazard protection you need depending on the work you do. This hazard assessment is determined by one of the three following methods.

Method 1

Use the formulas in NFPA 70E 2004 to determine your hazard assessment. Refer to NFPA 70E 130.3(a) or NFPA 70E table 130.7(c)(9)(a).

Method 2

Use an industry accepted software to determine your hazard assessment.

Method 3

Use a consultant firm to determine your hazard assessment.

Once your hazard assessment is complete you will know your Hazard Risk Category (HRC) which is given in a number ranging from 0-4. Then the proper protective apparel for the job can be determined by utilizing this HRC number. Please refer to NFPA 70E 2004 Table 130.7(C)(10) and Table 130.7(C)(11) for this information.



The Salisbury Solution: Providing customers with a complete line of protective clothing and equipment to meet all your safety requirements.

NOTES

The Arc Protection System PPE (Personal Protective Equipment)

Use your assessed HRC or appropriate ATPV (Arc Thermal Protective Value) PPE protection when purchasing these protective garments. Refer to NFPA 70E 2004 Table 130.7(c)(ii) to determine your minimum ATPV for your assessed HRC.

Face, Head and Eyes

The face and head are protected with faceshields, hard hats, protective inner lining hoods, external protective hood, safety glasses and full coverage hoods with built in shields ranging from 8 cal/cm² - 100 cal/cm² protection.



AST1000HAT



JSHV1BL



TS56005B



FH31RB



AFHOOD

Body Protection

The upper body is protected by flash jackets, coats, and coveralls. The clothing ranges in protection from 8 cal/cm² - 100 cal/cm².

The lower body and legs are protected by bib overalls and coveralls ranging in protection from 8 cal/cm² - 100 cal/cm².



ACAIR102



ACCA11BL



ACB4030GY



ACC3132RB

Additional Comfort

Salisbury offers the compact PRO-AIR™ belt mounted POWERED AIR SYSTEM for additional comfort while wearing Salisbury PRO-WEAR™ Arc Flash Protective Clothing. This system is designed to provide purified forced ambient air through filters/cartridges that remove contaminants, providing clean air and comfort to the user. Use this unit with Salisbury PRO-HOODs.

NOTES

5. Do you have protection against electric shock?

rubber insulating gloves rubber insulated matting insulated tools

NOTE: All these items protect against potential electric shock.

6. Do you have rubber insulating gloves?

Hand Protection

Rubber insulating gloves worn with leather protectors protect workers when there is danger of electric shock.

Rubber Insulating Gloves shall be worn at all times while working on energized equipment 50 volts or higher. The solution to electrical safety always begins with **rubber insulating gloves**. Rubber Gloves are the most important piece of equipment for electrical worker's safety. Salisbury offers a wide range of high voltage (7,500V - 36,000V) and low voltage (500V - 1,000V) rubber insulating gloves. Salisbury's Type II low voltage gloves are available in blue. Contrasting colors makes inspecting for cuts and tears easier. Type I low voltage and high voltage gloves come in a wide variety of colors and styles.

Salisbury also offers glove liners which increase the comfort of wearing rubber gloves in all seasons.

Rubber insulating gloves are available in six ASTM defined voltage classes.
The chart on page 8 identifies the class, proof test voltage and maximum allowable exposure voltage.

low voltage gloves



high voltage gloves



Type I - natural (non-ozone resistant) rubber
Type II SALCOR® - synthetic rubber (resistant to ozone)
Both provide electrical workers with the highest level of electrical insulating protection.

However, in order to maintain this level of protection and ensure long life, it is essential that rubber goods are properly cared for. Before each use, rubber goods should be visually inspected for holes, embedded wires, rips or tears, ozone cutting, UV checking and signs of chemical deterioration. For additional information, refer to ASTM F1236, standard guide for visual inspection of electrical protective rubber products.

NOTES

Leather Protector Gloves should always be worn over Rubber Insulating Gloves to provide the needed mechanical protection against cuts, abrasions and punctures. All Salisbury protectors are ergonomically designed to ensure a proper fit over Rubber Gloves.



PROTECTOR SELECTION CHART Clearance Table

Glove Class	Min. Distance Between Tops of Protectors and Rubber Gloves	
	in.	mm
0,00	1/2	13
1	1	25
2	2	51
3	3	76
4	4	102

Proper storage extends the service life of rubber insulating gloves. Folds and creases may strain rubber and cause it to crack from ozone prematurely. By storing rubber gloves in the right size bag, and never forcing more than one pair into each bag, equipment will last longer.



6a. If you have rubber insulating gloves...

Are you inspecting your insulating equipment before each use?

OSHA 1910.137(b)(2)(ii) states “Insulating equipment shall be inspected before each day’s use and immediately following any incident that can reasonably be suspected of having caused damage. Insulating gloves shall be given an air test, along with the inspection.” Salisbury offers glove inflators to easily inflate your gloves for inspection.



Salisbury G-99 Glove Inflator provides an excellent tool to inspect gloves.

Are you electrically testing your insulating gloves every six months per OSHA 1910.268(f)(2)?

Issued gloves need to be electrically tested every six months per ASTM F496-02 In-Service Care for Insulating Gloves and Mittens specifications.



21406

21405



7. Do you have dielectric footwear?

Foot Protection

Dielectric footwear is available as additional protection for the worker.

Additional PPE (Personal Protective Equipment)

NOTES

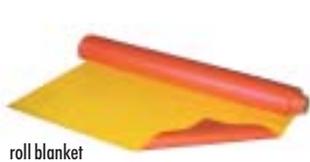
8. Do you have insulated tools?

Salisbury offers PRO-TOOL™ Insulated Tools & Tool Kits. These tools are all tested to 10,000 VAC for use up to 1,000 VAC and meet or exceed ASTM F1505-01 and IEC 900 Standards for Insulated Hand Tools. This product is necessary to be compliant with OSHA 1910.333 (c)(2), and NFPA 70E 2004. The insulating material used is impact resistant and flame retardant. Two-color insulation makes inspection easier which adds to the overall safety.

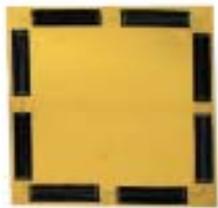


9. What other types of equipment protect a worker from phase to phase or phase to ground contact?

Salisbury offers many other protective equipment options such as insulating blankets, low voltage insulating blankets, slotted blankets, insulated matting, roll blankets and clear PVC roll blankets.



roll blanket



low voltage blanket



slotted blanket

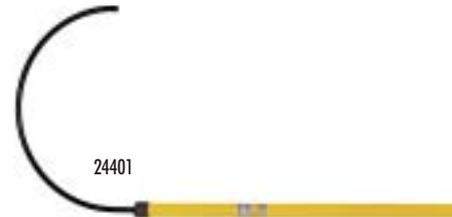
Grounding Equipment

Grounding equipment is essential to the electrical worker's safety while working on a de-energized equipment or lines. Salisbury offers a full line of grounding equipment available for industrial applications. Salisbury products are manufactured to the highest industry standards to meet your needs and ASTM Requirements.

visit www.whsalisbury.com/configurator/index.php to determine which grounding components you will need to meet your systems requirements.

NOTES**Insulated Rescue Hook**

The **Insulated Rescue Hook** is an invaluable tool for any workplace. It's used to withdraw an injured worker out of a hazardous area. Confined spaces, in vaults, or just near electrical cabinets and switch gear are some of the places where this tool is a must.

**Voltage Detectors**

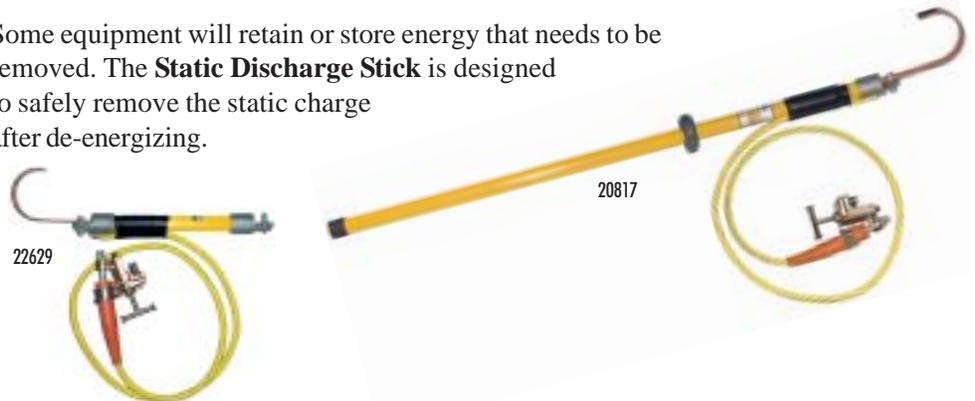
Self-Testing Voltage Detectors allow testing to be continuous and automatic. An intermittent flash and beep confirms the detector is functioning properly. **Self-Testing Voltage Detectors** are used to verify live or de-energized conductors. These testers may be used with rubber insulating gloves or hot sticks using the splined universal end fitting.



NOTE: Always test prior to work.

Static Discharge Stick

Some equipment will retain or store energy that needs to be removed. The **Static Discharge Stick** is designed to safely remove the static charge after de-energizing.



ASTM Chart

Rubber and SALCOR® Protective Equipment

Rubber insulating gloves are available in six ASTM defined voltage classes. Rubber insulating sleeves are available in Class 0 through 4. The chart below identifies the class, proof test voltage and maximum allowable exposure voltage.

ASTM Labeling Chart					
for Salisbury Linemen's Natural Rubber and SALCOR® Rubber Protective Equipment					
Class Color	Proof Test Voltage AC / DC	Max. Use Voltage AC / DC*	Rubber Molded Products Label	Glove Label	Rubber Dipped Sleeve Label
00 Beige	2500 / 10,000	500 / 750*			
0 Red	5,000 / 20,000	1,000 / 1,500*			
1 White	10,000 / 40,000	7,500 / 11,250*			
2 Yellow	20,000 / 50,000	17,000 / 25,500*			
3 Green	30,000 / 60,000	26,500 / 39,750*			
4 Orange	40,000 / 70,000	36,000 / 54,000*			

*Maximum use DC voltage is not part of any ASTM specification. Maximum use DC voltages are valid in reference to IEC 903 only.

Gloves and Sleeves must have a color coded label.

"Suitable for live working."
IEC60903:2002 & IEC60417 fig. 5216