

Everything You Need to Know About Electrical Safety Gloves



Employees working on energized electrical equipment must have appropriate hand protection to protect them from the risk of serious injury or death. For more than 50 years, Burlington Safety Laboratory Inc. has tested and distributed personal protective equipment for electrical applications. Our testing procedures comply with all CAL OSHA, FED, NFPA 70E, and ASTM/ANSI standards from our NAIL for PET-accredited facilities.

In addition to our testing services, Burlington Safety Laboratory Inc. stocks personal protective equipment from a broad range of trusted manufacturers, such as Salisbury, Hubbell, and Hastings.



What Are Electrical Safety Gloves?

Electrical safety gloves are rubber-insulated, dielectric PPE that protect electricians and linemen working with electrical equipment, providing a crucial first line of defense. They are designed to prevent injuries related to electric shock.



Safety Classifications

It is common practice in the industry to wear electrical safety gloves with an outer leather glove protector that helps prevent damaging the rubber gloves. A cotton inner liner offers additional comfort to the wearer. Each piece of personal protective equipment has an essential purpose, protecting electricians, linemen, and other workers from electric currents:



Leather Protector Gloves

are worn over rubber electrical safety gloves to offer another layer of protection against punctures, cuts, and abrasions.



Rubber Insulating Gloves

have specific classes or categories based on voltage ratings. They are available in a variety of cuff styles and colors.



Cotton Inner Liners provide warmth to the user in the colder months, absorb excess perspiration in warmer months, and enhance the comfort of wearing electrical safety gloves.

Types/Designs

Electrical safety gloves are divided into Type I and Type II categories based on their resistance to specific materials.

Type 1 gloves are typically made from natural rubber and do not have ozone resistance.

Type 2 gloves are ozone resistant and usually consist of synthetic rubber. It is important to note that only Class 00 and Class 0 electrical safety gloves are available in Type II. All other types of gloves consist of Type I rubber.

Compliance Standards & Testing Procedures to Help You Make Informed Decisions

Electrical safety gloves in industrial settings are essential to employee protection and must meet ASTM D120 specifications to be effective. Rubber-insulating safety gloves prove beneficial in a wide variety of industries and applications, including but not limited to the following:



Automotive



Electrical
Maintenance



Field Services



Elevator Repair &
Installation



Oil & Gas



Utilities &
Public Works



Transportation


Specific settings where workers need to wear electrical safety gloves to protect them from electric currents are:




Construction
Overhead Line Workers, High Voltage Electricians



Manufacturing
Power Plant, Industrial Electricians



Utilities
Lineworkers, Substation Electricians, Meter readers



Transportation
Railway, Airport, Maritime



Telecommunications



Military

ASTM Ratings

ASTM has implemented strict industry guidelines for the usage and ratings of rubber-insulating gloves. According to ASTM D120 Standard Specifications for Rubber Insulating Gloves, these are the gloves' ASTM ratings:

Class 00: Maximum 500V (AC) and 750V (DC)

Class 0: Maximum 1,000V (AC) and 1,500V (DC)

Class 1: Maximum 7,500V (AC) and 11,250V (DC)

Class 2: Maximum 17,000V (AC) and 25,500V (DC)

Class 3: Maximum 26,500V (AC) and 39,750V (DC)

Class 4: Maximum 36,000V (AC) and 54,000V (DC)



Testing

According to the Occupational Safety and Health Administration (OSHA) in 29 Code of Federal Regulations (CFR) 1910.137(c)(2)(viii), all electrical safety gloves and other electrical personal protective equipment must withstand periodic electrical testing. The test intervals are noted in Table I-5, and the voltages to be used are in Table I-4.

As illustrated in Table I-5, rubber-insulating safety gloves must get tested under the following conditions:

1. Before the first issue
2. Every six months after the first use
3. Whenever there is an indication of problems with the insulating value
4. After using the gloves without protectors
5. If an inspection reveals signs of defects

If the PPE has had electrical testing but has not been used for service, the equipment must not be used unless it has been electrically tested in the past 12 months.



Guidelines and Best Practices

OSHA guidelines state that personal protective equipment should not be used under the following conditions:

OSHA Code 1910.137(c)(2)(iii)(A): If there is a hole, puncture, cut, or tear

OSHA Code 1910.137(c)(2)(iii)(D): If the texture of the PPE changes, such as softening, swelling, hardening, or becoming inelastic or sticky

In adherence with OSHA Code 1910.137(c)(2)(vi), all insulating equipment must be stored in a location and in a manner that protects it from the following potentially damaging conditions:



Light



Extreme
Temperature



Excess
Humidity



Excess
Ozone



Damaging
Substances

Contact Burlington Safety Laboratory Inc. For All Your PPE Needs

Since 1971, [Burlington Safety Laboratory Inc.](https://www.burlingtonsafety.com) has been a leader in developing new technology for electrical safety gloves and other insulating personal protective equipment. In addition to being accredited by NAIL for PET, our test procedures meet all NFPA 70E, CAL OSHA, ASTM/ANSI, and FED standards.

As the capacity of power systems continues to increase globally, we recognize that electrical safety is more important than ever to prevent the risk of serious injury and death. Our quality control processes include accurate records of every article tested, including test values and dates. All technicians are fully trained to perform critical tests on protective equipment for our clients. We have three U.S.-based locations in New Jersey and California that stock a complete product line of electrical safety and rubber protective equipment.

[Contact us](#) to learn more about our high-quality products and testing services.

Your Safety is Our Concern

Never before has electrical safety been a more critical issue. Because the capacity of power systems is ever increasing, more and more work is being performed while equipment is energized.

This means that electrical workers must rely more than ever upon their personal protective equipment.

Burlington Safety Laboratory has been testing protective equipment since 1971. Our president, Peter Senin, was instrumental in establishing safety guidelines for the National Association of Independent Laboratories for Protective Equipment Testing (NAIL for PET).

Burlington has been a leader in developing new technology for insulating personal protective equipment. We are accredited by NAIL for PET, and our test procedures meet ASTM/ANSI, MIL Specs, NFPA 70E, FED and CAL OSHA standards.

Our Quality Control procedures include thorough and accurate records of each and every article tested, along with dates and test values. Burlington Laboratories Technicians are fully trained and pass written tests before they perform critical tests on your protective equipment.

Our operations have grown to three locations with Headquarters and East Coast Operations in Burlington, NJ, West Coast Operations in Pleasanton, CA and Westminster, CA. Each laboratory stocks a full line of Rubber Protective Equipment and Electrical Safety Equipment.

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