Burlington
Safety Laboratory Inc.

DIELECTRIC TESTING PROCESS

Electrical Safety Gloves

www.burlingtonsafety.com

Burlington Safety Laboratory has been testing protective equipment since 1971. We are accredited by NAIL for PET, and our test procedures meet or exceed 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 Safety Laboratory's technicians are fully trained before they perform critical tests on your personal protective equipment.

East Coast Operations

6 Cooper Street, Unit 100

Burlington, NJ 08016

609.387.3404

800.220.2120

Northern California

7087 Commerce Circle, Unit B

Pleasanton, CA 94588

925.251.1412

888.817.1412

Southern California

7382 Bolsa Avenue

Westminster, CA 92683

714.373.2801

800.296.2803

Dielectric Testing Process for Electrical Safety Gloves

Burlington Safety Laboratory has a short 2 week turnaround upon receiving electrical safety gloves for laboratory testing to ASTM standards. Customers can either ship their gloves to us or drop them off at our facility for testing. Upon receiving, our testing process consists of:

1. Preparatory Cleaning

The gloves undergo thorough cleaning in accordance with ASTM standards to ensure optimal testing conditions. For large quantities, an industrial cruise line washing machine is used, while smaller quantities are cleaned using commercial washing machines. This cleaning process effectively eliminates all streaks, stains, dirt, dust, oils, and other contaminants that may compromise the gloves' insulation properties. Additionally, any stamps and markings from previous test certifications are removed, ensuring accurate evaluation during the dielectric testing process.

Figure 1 - Industrial Cruise Line Washing Machine

2. Machine Drying

Following the washing phase, the gloves undergo a drying process to prepare them for dielectric testing.

Figure 2 - Industrial Dryers

3. Dielectric Testing

Utilizing cutting-edge safety equipment testing machines, the gloves undergo dielectric testing in adherence to ASTM Standards. As per the standards, gloves are required to undergo testing every 6 months to ensure their efficacy. These advanced machines facilitate simultaneous evaluation of the gloves' dielectric integrity and leakage current, ensuring thorough assessment of their electrical insulation properties. Regardless of the gloves' classification—be it class 00, 0, 1, 2, 3, or 4—our machines are equipped to handle the testing requirements. Any detected dielectric or leakage failures

are automatically identified by the machine, and appropriate actions are taken, including discarding, marking and returning, or replacing the gloves as per the customer's preference.

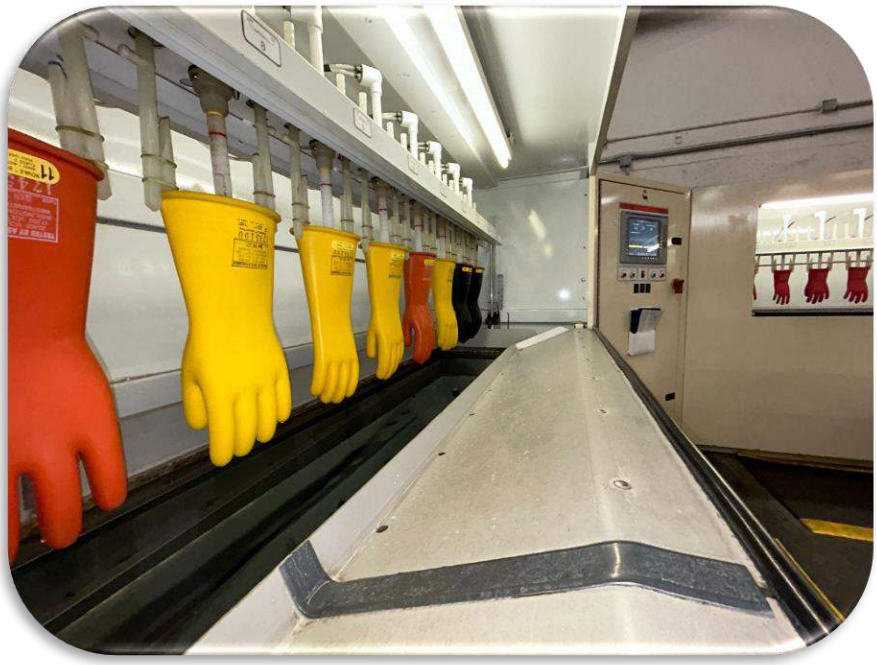

Figure 3 - Dielectric Testing

4. Re-Drying Process

Following the dielectric testing, the gloves undergo another round of thorough drying to prepare them for subsequent air testing.

Figure 4 - Glove Re-Drying

5. Air Testing

The gloves are then taken to our air testing station for visual inspection. Our skilled technicians meticulously examine each glove, both internally and externally, to detect any signs of potential defects. This rigorous inspection covers various aspects including age cracking, cuts, depressions, embedded material, form marks, hard spots, mold marks, nicks, snags, scratches, and ozone damage. This is often considered the most important part of the dielectric testing process for gloves. Any visual failures identified during this inspection process are promptly addressed, with gloves being discarded, marked and returned, or replaced according to the customer's specifications.

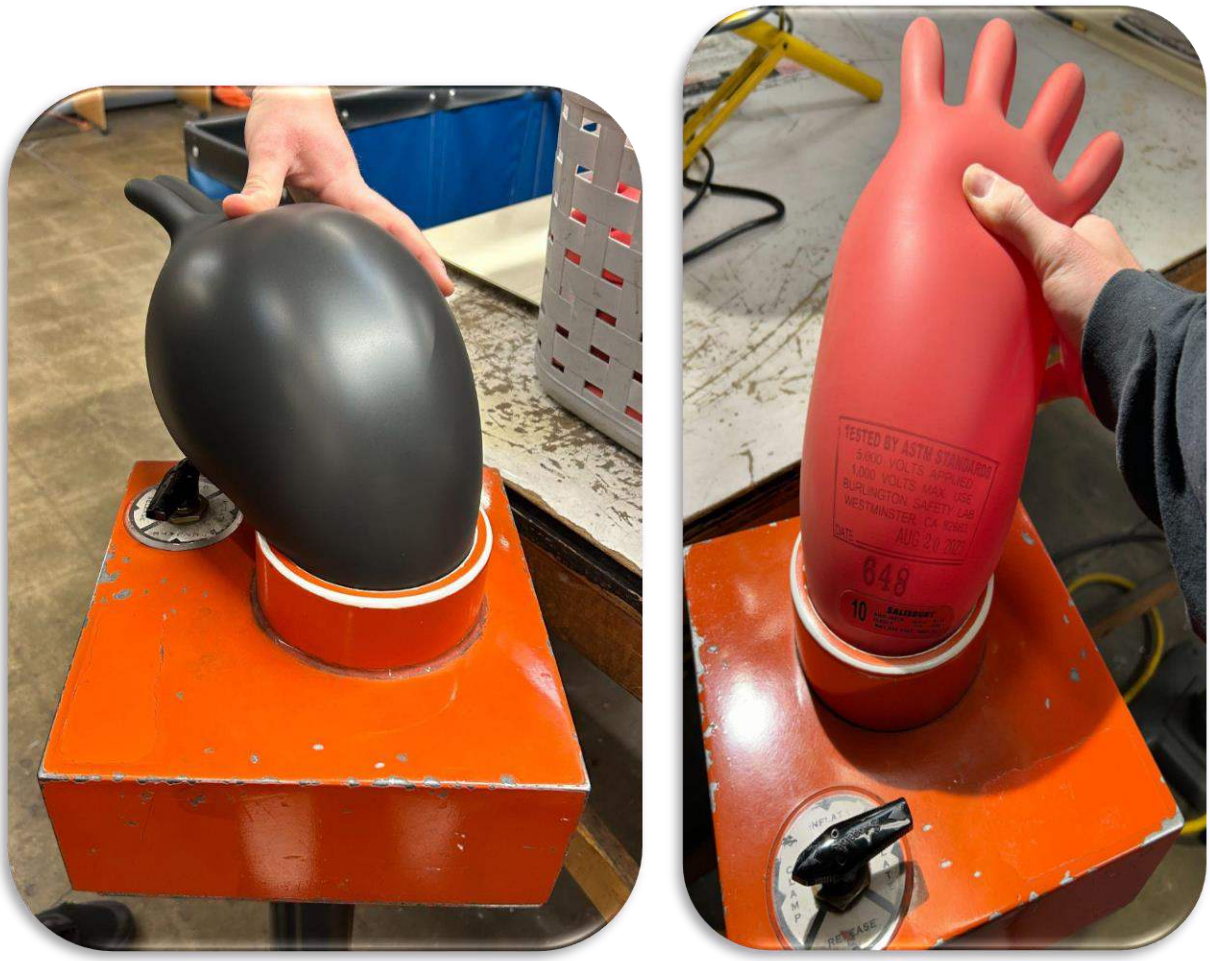

Figure 5 – Air Testing

6. Stamp

Upon completion of testing, each item undergoes identification stamping to facilitate traceability and ensure compliance with safety standards. Each glove is stamped with a unique serial number, accompanied by essential information including the proof test voltage, maximum use voltage, and the date of testing completion. This stamping process enhances accountability and enables easy monitoring of the gloves' testing history.

Figure 5 - Stamp

7. Bag Packaging

Following identification stamping, the gloves are carefully heat-sealed in individual plastic bags to provide optimal protection during storage and transportation. This packaging ensures that the gloves remain free from contaminants and maintain their integrity until they are ready for use.

Figure 6 - Bag Packaging

8. Box Packaging

Next, the gloves are placed into boxes and securely sealed with Burlington tape. Additionally, each box is affixed with an individualized sticker containing crucial details such as the serial number, testing date, and essential information pertaining to the gloves enclosed within. This personalized labeling enhances traceability and ensures that pertinent information is readily accessible for users.

Figure 7 - Box Packaging

9. Shipping or Pickup

Finally, the sealed boxes containing the gloves are either dispatched to the customer via UPS for delivery or made available for customer pickup, as per their preference. This ensures efficient delivery of the tested gloves to the designated recipients, facilitating seamless integration into their operations.

Figure 8 - Shipping or Pickup

In the Field - Rubber Glove Visual Inspection Tips

Checking or cracks due to UV or ozone

Splits, cuts or holes from snags and punctures

Grooves worn due to rope burns or heat exposure

Weak creases resulting from being left too long inside out or folded

Electrical puncture

"Blooms" or "swells" from chemicals or oils

ALWAYS:

- Follow company work policies and safety rules
- Inspect gloves and sleeves daily for damage
- Wear appropriate leather protectors over rubber gloves
- Wash gloves and/or sleeves with mild soap and rinse thoroughly
- Let gloves and/or sleeves air dry completely at room temperature
- Store gloves and/or sleeves in a protective bag

NEVER:

- Wear jewelry or sharp objects when using rubber gloves or sleeves
- Wear damaged gloves or sleeves
- Store gloves or sleeves inside out, folded or ways causing stretching or compression
- Store gloves or sleeves near sources of UV, Ozone or heat
- Allow gloves or sleeves to contact petroleum-based products (oil, gas, solvent, hand creams)

1. Grasp glove

2. Stretch to seal closed

3. Press and roll tightly

4. Twirl glove, rotating on rolled ends

5. Entrap air by holding in one hand

6. Hold close to ear, squeeze to add pressure, listen and feel for pinhole leaks

7. Turn glove inside out and repeat the process

TOOLS TO HELP EASE FIELD INSPECTION

G100
Glove Inflator Kit with Adapter & Storage Bag

"FAIT" Field Air Inflation Tool
Makes daily visual inspection simple and efficient

Testing Specifications

Rubber Insulating Equipment	ASTM Designation
Rubber Insulating Gloves 2.5 – 40kV, Class 00 – Class 4	D120 / F496
Rubber Insulating Sleeves 5 – 40kV, Class 00 – Class 4	D1051 / F496
Rubber Insulating Footwear 5 – 20kV Overshoes & Boots	F1116/F1117
Rubber Insulating Blankets 5 – 40kV, Class 0 – Class 4	D1048/F479
Rubber Insulating Line Equipment Line Hose, Hoods, Covers, etc.	D1050/F478

Jumpers/Grounds	ASTM Designation
Hotline Jumpers Insulation & Voltage Drop Test	F2321
Ground Sets and Leads Voltage Drop Test	F855

Line Guards	ASTM Designation
Plastic Line Guards	F712

Hot Line Tools	ASTM Designation
All Hot Sticks Switch/straight, telescopic, and Grip-All sticks	F711

Voltage Detectors & Meters
Voltage Detectors (Manufacturer's Functional Test)
Meters (Manufacturer's Functional Test) **Calibration Services Available**

Testing Intervals

Equipment	Testing Interval
Gloves	Every 6 months
Sleeves	Every 12 months
Blankets	Every 12 months
Line Hose	Every 12 months
Boots	Every 6 months
Grounds	Every 12 months
Fiberglass Tools	Every 2 years

www.burlingtonsafety.com

Email us at:

info@burlingtonsafety.com

or contact us at one of our offices:

Burlington, NJ	Pleasanton, CA	Westminster, CA
(800) 220-2120	(888) 817-1412	(800) 296-2803

Burlington Safety Laboratory Inc.