

# DIELECTRIC TESTING PROCESS

# **Line Hose**

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	Northern California	Southern California
6 Cooper Street, Unit 100	7087 Commerce Circle, Unit B	7382 Bolsa Avenue
Burlington, NJ 08016	Pleasanton, CA 94588	Westminster, CA 92683
609.387.3404	925.251.1412	714.373.2801
800.220.2120	888.817.1412	800.296.2803

### **Dielectric Testing Process for Electrical Safety Line Hose**

Burlington Safety Laboratory has a short 2 week turnaround upon receiving electrical safety line hose 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. Washing

Line hoses undergo a rigorous laundering process in accordance with ASTM Standards to ensure optimal cleanliness and adherence to safety regulations. Employing an industrial cruise line washing machine guarantees thorough cleaning, effectively removing all traces of streaks, stains, dirt, dust, oils, and other contaminants that may compromise the insulation properties of the line hoses. Additionally, this cleaning process ensures the removal of any stamps and markings from previous test certifications, providing a clean surface for subsequent testing procedures.



Figure 1 - Industrial Cruise Line Washing Machine

#### 2. Drip dry

Instead of machine drying, line hoses are carefully arranged on drying racks to allow for natural drying. This method ensures that the line hoses maintain their shape and prevents any kinks from forming due to bending during the drying process. By utilizing drying racks, we prioritize the preservation of the integrity of the line hoses, ensuring they are ready for subsequent testing procedures without compromising their structural integrity.

#### 3. Dielectric Testing

Once the line hoses are completely dry, they are transferred to our specialized Line Hose testing machine. This cutting-edge equipment is designed to accommodate line hoses of all classes, styles, and sizes. Each line hose is fitted with a metal rod and secured with a metal shell clamp to energize both the inside and outside of the line hose. Our advanced machines have the capability to test up to four line hoses simultaneously, enabling efficient testing of large quantities per day. This comprehensive testing process ensures that each line hose meets the required standards for dielectric integrity and electrical safety.



Figure 2 - Line Hose Dielectric Testing

#### 4. Visual

Following the dielectric testing, each line hose undergoes a meticulous visual inspection conducted by our skilled technicians. This inspection involves thorough examination of the interior and exterior surfaces of the line hoses. Our technicians carefully scrutinize for signs of age cracking, cuts, depressions, embedded material, form marks, hard spots, mold marks, nicks, snags, scratches, ozone damage, and tears. Given the robust nature of line hoses, the acceptance criteria for visual defects are adjusted accordingly to account for their thickness. This rigorous visual inspection ensures that any potential defects or irregularities are promptly identified and addressed, maintaining the integrity and safety of the line hoses.



Figure 3 - Visual Inspection

#### 5. Stamp

Upon completion of testing, each line hose is stamped with a unique identifying serial number. The stamp includes essential information such as the proof test voltage, maximum use voltage, and the date of testing completion. This identification stamping enhances traceability and ensures that pertinent

information is readily accessible for each line hose, facilitating effective monitoring of testing history and compliance with safety standards.



Figure 4 - Stamp

#### 6. Ship or Pickup

Following testing and identification stamping, the line hoses are either dispatched to the customer via UPS for delivery or made available for customer pickup, based on their preference. This ensures efficient delivery of the tested line hoses to the designated recipients, facilitating their prompt integration into their operations.



Figure 5 - Shipping or Pickup



Rubber Insulating Equipment	ASTM Designation	
Rubber Insulating Gloves	D120 / F496	
2.5 – 40kV, Class 00 – Class 4		
Rubber Insulating Sleeves		
5 – 40kV, Class 00 – Class 4	D1051 / F496	
Rubber Insulating Footwear	F1116/F1117	
5 – 20kV Overshoes & Boots	F1110/F1117	
Rubber Insulating Blankets		
5 – 40kV, Class 0 – Class 4	D1048/F479	
Rubber Insulating Line Equipment	D1050/E478	
Line Hose, Hoods, Covers, etc.	01030/F476	

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

Line Guards	ASTM Designation
Plastic Line Guards	F712

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



### **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:

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(800) 220-2120	(888) 817-1412	(800) 296-2803

