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| Title of Training | Di-Electric Voltage Glove Training | |
| Equipment Info. | Make/Model/Type | Novak 00 Voltage Gloves |
| Date of Training | February 24, 2015 | Instructor: |

DIELECTRIC (VOLTAGE) GLOVE TRAINING

USE & CARE OF INSULATED RUBBER GLOVES

Some Brieser Construction workers use insulated rubber gloves from time to time. Often, long periods may lapse between times when gloves are needed. As a refresher, here are some rules and information to reacquaint you with guidelines for the use of insulated rubber gloves.

The proper selection of rubber gloves should be in accordance with the “Class of Rubber Glove” and its “Maximum Use Threshold” as shown in the first two columns of Table A. Leather protectors or “over-gloves” should always be worn over rubber insulating gloves to provide the needed mechanical protection against cuts, scrapes and punctures. Their use should conform to the “Minimum Distance”, as described in the third column of Table A. The “Minimum Distance” relates to the distance between the top of the protector gauntlet to the top of the rubber glove cuff.

| <u>Table A Class of Rubber Glove</u> | <u>Maximum Use Voltage</u> | <u>Minimum Distance</u> |
|--------------------------------------|----------------------------|-------------------------|
| 0 | 1,000 volts | 1 inch |
| 1 | 7,500 volts | 1 inch |
| 2 | 17,000 volts | 2 inches |
| 3 | 26,500 volts | 3 inches |
| 4 | 36,000 volts | 4 inches |



Voltage should be considered to be phase-to-phase voltage unless all conductors except the one being worked are insulated (with protective devices) or isolated so that physical contact cannot be made with any energized part. In that case, phase-to-ground voltage will determine maximum use voltage.

When using rubber gloves, they should be put on before coming within falling or reaching distance (not less than 5 feet) of unprotected energized circuits or apparatus,

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or those which may become energized. They should not be removed until out of falling or reaching distance of such circuits or apparatus.

Rubber gloves should never be worn inside out or without leather protectors. They should be exchanged at any time they become damaged or the user becomes suspicious of them.

Rubber gloves should be inspected for corona cracks or other damage and should be given an air test (by blowing into the glove) at least once each day while in use, preferably at the beginning of the work period and at any other time when their condition is in doubt. They should be checked before each use.



When not in use, gloves should be kept in canvas bags or other approved containers and stored where they will not become damaged from sharp objects or exposed to direct sunlight. They should never be folded while stored nor should other objects be placed upon them.

Rubber gloves should be stored in the glove bag with the cuffs down to permit drainage, better ventilation and reduce the possibility of damage.

Approach Boundaries to Live Parts for Shock Protection

TABLE 130.2(C) Approach Boundaries to Live Parts for Shock Protection.
(All dimensions are distance from live part to employee.)

| (1) Nominal System Voltage Range, Phase to Phase | (2) Limited Approach Boundary ¹ | | (4) Restricted Approach Boundary ¹ ; Includes Inadvertent Movement Adder | (5) Prohibited Approach Boundary ¹ |
|-----------------------------------------------------------|-----------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| | Exposed Movable Conductor | Exposed Fixed Circuit Part | | |
| Less than 50 | Not specified | Not specified | Not specified | Not specified |
| 50 to 300 | 3.05 m (10 ft 0 in.) | 1.07 m (3 ft 6 in.) | Avoid contact | Avoid contact |
| 301 to 750 | 3.05 m (10 ft 0 in.) | 1.07 m (3 ft 6 in.) | 304.8 mm (1 ft 0 in.) | 25.4 mm (0 ft 1 in.) |
| 751 to 15 kV | 3.05 m (10 ft 0 in.) | 1.53 m (5 ft 0 in.) | 660.4 mm (2 ft 2 in.) | 177.8 mm (0 ft 7 in.) |
| 15.1 kV to 36 kV | 3.05 m (10 ft 0 in.) | 1.83 m (6 ft 0 in.) | 787.4 mm (2 ft 7 in.) | 254 mm (0 ft 10 in.) |
| 36.1 kV to 46 kV | 3.05 m (10 ft 0 in.) | 2.44 m (8 ft 0 in.) | 838.2 mm (2 ft 9 in.) | 431.8 mm (1 ft 5 in.) |
| 46.1 kV to 72.5 kV | 3.05 m (10 ft 0 in.) | 2.44 m (8 ft 0 in.) | 965.2 mm (3 ft 2 in.) | 635 mm (2 ft 1 in.) |
| 72.6 kV to 121 kV | 3.25 m (10 ft 8 in.) | 2.44 m (8 ft 0 in.) | 991 mm (3 ft 3 in.) | 812.8 mm (2 ft 8 in.) |
| 138 kV to 145 kV | 3.36 m (11 ft 0 in.) | 3.05 m (10 ft 0 in.) | 1.093 m (3 ft 7 in.) | 939.8 mm (3 ft 1 in.) |
| 161 kV to 169 kV | 3.56 m (11 ft 8 in.) | 3.56 m (11 ft 8 in.) | 1.22 m (4 ft 0 in.) | 1.07 m (3 ft 6 in.) |
| 230 kV to 242 kV | 3.97 m (13 ft 0 in.) | 3.97 m (13 ft 0 in.) | 1.6 m (5 ft 3 in.) | 1.45 m (4 ft 9 in.) |
| 345 kV to 362 kV | 4.68 m (15 ft 4 in.) | 4.68 m (15 ft 4 in.) | 2.59 m (8 ft 6 in.) | 2.44 m (8 ft 0 in.) |
| 500 kV to 550 kV | 5.8 m (19 ft 0 in.) | 5.8 m (19 ft 0 in.) | 3.43 m (11 ft 3 in.) | 3.28 m (10 ft 9 in.) |
| 765 kV to 800 kV | 7.24 m (23 ft 9 in.) | 7.24 m (23 ft 9 in.) | 4.55 m (14 ft 11 in.) | 4.4 m (14 ft 5 in.) |

Note: For Flash Protection Boundary, see 130.3(A).
¹See definition in Article 100 and text in 130.2(D)(2) and Annex C for elaboration.

Section 130.2(C) defines requirements that must be observed before a qualified person can cross the Restricted Approach Boundary. This section recognizes that a tool or other object is considered to be an extension of the person's body. If a worker is holding an object in his or her hand, the requirements of this

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section apply to both the worker and the object. The effect of these requirements is that the worker (or extended body part) is prevented from being exposed to any difference of potential greater than 50 volts. The purpose of columns 2 and 3 of Table 130.2(C) is to recognize that the possibility of contacting an electrical conductor that can move is greater than the possibility of contacting an electrical conductor that is fixed in place with no possibility of moving. This risk is associated with the relative position of the conductor and the worker.

If that distance can vary because the conductor can move (such as a bare overhead conductor or a conductor installed on racks in a manhole), or if the distance can vary because the platform (articulating arm) on which the employee is standing can move, then column 2 applies. The Restricted Approach Boundary accounts for some inadvertent movement by the worker. In other words, a worker might move his or her hand unintentionally. The inadvertent movement adder accounts for this unintended movement.

Important Notice

This Safety Training Topic (STT) does not necessarily cover all possible hazards associated with this equipment and should be used in conjunction with equipment manual. It is designed as a guide to be used to compliment training in the field at Brieser Construction and as a reminder to users prior to equipment use

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| EMPLOYEE NAME (Print or Type) | EMPLOYEE SIGNATURE | TRADE | JOB TITLE |
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