



WORKPLACE SAFETY

A W A R E N E S S C O U N C I L

Personal Protective Equipment - For the Hands (Gloves)

Insulating gloves provide an excellent means of protecting the workers from accidental electrical contact. To be effective the insulating gloves must have high insulative qualities, while also being comfortable, durable and flexible.

Because safety is involved, the employer and employee must become familiar with the differences between the various types and classes of insulating gloves available.

Protective Glove Type's

First, for insulating gloves there are two "Type's":

Type I glove is not ozone-resistant

Type II is ozone-resistant.

Ozone is a form of oxygen that is found in the air surrounding a conductor in high voltages. It can causes dangerous cracks to form in rubber products, including insulating gloves, thus rendering them unsafe. Type I rubber gloves can also be negatively affected by UV light so care should be taken to properly store and inspect these gloves.

The Type II gloves are not as susceptible to ozone and UV rays, however they are not as flexible as Type I and therefore more uncomfortable to wear.

Protective Glove Classification

Protective gloves are categorized into six classifications, each based on the approved voltage levels the gloves can provide protection for. It's quite easy to determine the classification based on a color-coded tag found on the glove.

Voltage Classifications for Rubber Gloves

Tag Color	Class	Proof Test Voltage AC / DC	Max. Usage Voltage AC / DC	Glove Tag
Beige	00	2,500 / 10,000	500 / 750	
Red	0	5,000 / 20,000	1,000 / 1,500	
White	1	10,000 / 40,000	7,500 / 11,250	
Yellow	2	20,000 / 50,000	17,000 / 25,500	
Green	3	30,000 / 60,000	26,500 / 39,750	
Orange	4	40,000 / 70,000	36,000 / 54,000	

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FAST FACT: Remember, it's not the color of the glove that's important – it's the color of the tag!

Maintenance of PPE

Insulating equipment must be inspected for damage before each days use and anytime damage is suspected. Typical damage to insulating equipment might include the following:

- Embedded foreign objects (metal slivers, splinters)
- Holes, punctures, tears or cuts
- Ozone damage (fine cracks)
- Swelling, softening, sticky or hardening
- Damage from chemicals

Insulating equipment must also be stored in a way that does not damage the material. The following items can cause damage:

- Temperature extremes
- UV damage (from sunlight)
- Excessive humidity
- Ozone (UV rays, arcing)
- Foreign materials (oils, petroleum products, hand lotion, baby powder)



Proper storage extends the service life of gloves. Folds and creases strain natural rubber and cause it to cut from ozone prematurely. Storing rubber gloves in the right size bag and never forcing more than one pair into each bag will help equipment last longer.

Glove Air Tests

Before each days use OSHA requires air testing on insulated gloves. To conduct the test, fill the glove with air and hold against your cheek to feel for and hear releasing air.

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