

# Working Safely Around Electricity Infographic











# ELECTRICAL SAFETY

What is the cost  
of compromised  
electrical safety?

## Lockout/Tagout (LO/TO)

LO/TO was the eighth most cited OSHA violation in 2013, accounting for 12% of US fatalities. One amputation in the workplace caused by failure to LO/TO will cost\* directly over \$60,000 and indirectly over \$2 million.

Four steps to isolating equipment during Lockout/Tagout.

-   
Identify the energy source
-   
Isolate the energy source
-   
Lockout and/or tagout the energy source
-   
Test that the isolation is effective

According to OSHA each year proper LO/TO:

Safeguards  
**3 MILLION**  
People

Prevents  
**120**  
Deaths

Eliminates  
**50,000**  
Injuries

## Arc Flash

The most common clothing item that workers fail to use as last protection against an Arc Flash burn are gloves.

Skin temperature for curable burn	176 °F
Skin temperature causing cell death	205 °F
Ignition of clothing	752 ° - 1,472 ° F
Metal droplets from arcing	1,832 ° F
Surface of sun	9,000 ° F
Arc terminals	35,000 ° F

One curable burn injury from  
Arc Flash at a workplace  
**DIRECTLY COSTS\* \$40,000 &  
OVER \$150,000 INDIRECTLY**



Flash suit protects  
skin and face



Respirator  
protects from  
inhalation of toxic  
substances



Flame retardant  
hat for head  
protection







Hearing protection  
from Arc Flash  
explosion



Gloves can  
prevent  
electrocution

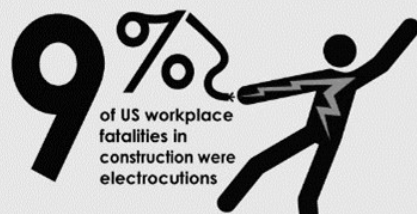
## NFPA 70E

The intent of NFPA 70E, regarding Arc Flash is to provide guidelines — starting with most preferred, to the last line of defense — that will limit injury of second degree burns.

-   
Eliminate the Hazard
-   
Lockout the hazard - or isolate it
-   
Educate, training, and upkeep of visual communication is required
-   
The last line of defense is personal protection equipment (PPE)

## Cable and Wire Marking

Prevention of serious injuries or fatalities starts with identifying electrical energy sources. Cable markers and tags are identifiers critical to safety.



One electric shock injury  
**DIRECTLY COSTS\* OVER \$100,000  
& INDIRECTLY OVER \$215,000**

Source: <https://www.graphicproducts.com>