

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.

1 Identify the energy source	2 Isolate the energy source	3 Lockout and/or tagout the energy source	4 Test that the isolation is effective
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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
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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)
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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.

9% of US workplace fatalities in construction were electrocutions

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

