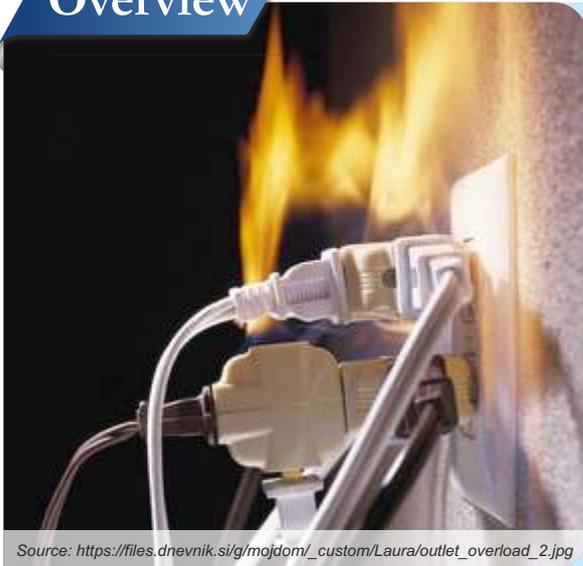


LiVSafe is a conscious safety initiative of Liberty Videocon to help people live safer, secure lives through an education series of proactive and preventative suggestions in the safety arena. This document does not purport to promote any product directly or indirectly.

## Measures to augment adequate safety from electrical fire hazards

### Overview



One of the major reasons for industrial calamities in India is electricity related faults and as much as 56% of Loss Events are reportedly caused by them. Overheating, ageing of the material and use of sub-standard quality of electrical gadgets have been contributing to the increasing electrical fire accidents in industries, as well as commercial establishments. Even a small electrical problem can have extremely far-reaching consequences if not mitigated in time. Over time, the efficiency of the electrical supply system becomes low, and the energy is spent generating heat. If left unchecked, heat can rise to the point where connections start to melt leading to a disaster.

We at Liberty Videocon General Insurance value the importance of having safety of electrical equipment at your work place; and intend to suggest some useful measures to ensure adequate safety from possible electrical fire hazards. We sincerely hope that the measures suggested in this document will help in implementing safe, secure ways of preventing such accidents at your business establishment.

Source: [https://files.dnevnik.si/g/mojdom\\_custom/Laura/outlet\\_overload\\_2.jpg](https://files.dnevnik.si/g/mojdom_custom/Laura/outlet_overload_2.jpg)

### Causes of Electrical Fire

Three elements must be present in order to initiate fire. These are oxygen, fuel and heat. Electricity can play an important role in this process by providing the heat source.

- Over fusing of an electrical circuit can result in high current flow through the wires overloading the circuit. Increasing current above the rated capacity causes the wire to generate excess heat.
- Exposed wiring, connectors and switches, can come in contact with water. Over time, the water will accumulate salts which increase its ability to conduct the current. This current can eventually develop to a point where it generates a significant quantity of heat.
- Spark is generated whenever a contact is opened or closed. For example, if specially designed switches and contacts are not installed in an environment in which combustible gaseous mixtures are reasonably expected to be present.
- Faulty electrical outlets and old, outdated equipment.
- Light fixtures, lamps and light bulbs are another common reason for electrical fires. Installing a bulb with a wattage that is too high for the lamps and light fixtures is a leading cause of electrical fires.
- Keeping combustible materials like cloth or paper near power panels and electrical fittings. The material heats up and ignites, causing a fire.

### Tips for augmenting safety from electrical fire hazards

#### General

- Replace or repair damaged or loose electrical cords.
- Regularly maintain all electrical cords. Replace any cord that is cracked, frayed or otherwise damaged. Also, replace



cords that become hot when in use. Avoid running extension cords across doorways or under carpets.

- If a fuse blows or a circuit breaker is tripped, don't just replace or reset it. Find out what caused the circuit to overload and correct the problem.

- Never replace a fuse or circuit breaker with one that exceeds the amperage rating for a given circuit.



- Consider having additional circuits or outlets added by a qualified electrician so you do not have to use extension cords.

- Follow the manufacturer's instructions for plugging an appliance into a receptacle outlet.



- Avoid overloading outlets. Plug only one high-wattage appliance into each receptacle outlet at a time.

- If outlets or switches feel warm, frequent problems with blowing fuses or tripping circuits, or flickering or dimming lights, call a qualified electrician.

- Place lamps on level surfaces, away from things that can burn and use bulbs that match the lamp's recommended wattage.

## Housekeeping and Electrical Equipment

- Maintain a regular schedule of cleaning and maintaining electrical equipment.

- Remember that accumulation of dust and dirt on motor housing, or sawdust, swarf and shavings around a motor not only increase the fire hazard, but can also contribute to premature equipment failure.



## Moisture and Electricity

- Make every effort to keep electrical equipment dry when working in tanks, boilers and other damp places.



## Oil and Electricity

- When lubricating machinery, over-oiling can be just as hazardous as under-oiling. Excessive oil can soak into motor windings and hasten insulation deterioration, and the accumulation of dust, dirt and lint create a fire hazard. Clean up excess oil and properly discard cleaning rags and materials.



## Summary

A good maintenance program for electrical equipment not only reduces the risk of fire, explosion and personal injury, it can also save your company from avoidable repair costs, premature replacements and downtime.

Follow these best safety practices at your workplace:

- Develop a preventive and predictive maintenance schedule and stick to it.
- Maintain good housekeeping practices, including proper disposal of cleaning materials.
- Upgrade old or outdated fixtures and wiring to conform to current energy demands and operations.
- Follow all National Electrical Code standards. When in doubt, seek the advice of a licensed electrician.

## Trivia

- Electricity travels at the speed of light i.e. @ 186,000 miles per second
- A spark of static electricity can measure up to 3,000 volts
- Lightning is a discharge of electricity in the atmosphere. Lightning bolts can travel at around 2,09,214 km / hour and reach nearly 29,982°C in temperature
- Nearly one third (30%) of home electrical fires begin with ignition of wire or cable insulation.

Source: <http://www.producer.com/wp-content/uploads/2012/07/power.jpg>

### Liberty Videocon General Insurance Company Limited

10th Floor, Tower A, Peninsula Business Park, Ganpatrao Kadam Marg, Lower Parel, Mumbai - 400 013  
Phone: +91 22 6700 1313 Fax: +91 22 6700 1606 Email: [LiVSafe@libertyvideocon.com](mailto:LiVSafe@libertyvideocon.com)

[www.libertyvideocon.com](http://www.libertyvideocon.com)

The principles contained in this material are general in scope and, to the best of our knowledge, current at the time of publication. Liberty Videocon General Insurance specifically disclaims all liability for damages or personal injury alleged to arise from reliance on the information contained in this document.

Insurance is the subject matter of the solicitation.  
IRDA Registration No. 150

CIN : U66000MH2010PLC209656

Trade Logo displayed above belongs to Liberty Mutual and used by the Liberty Videocon General Insurance Company Limited under license.