

COMMERCIAL PROPERTY

LITHIUM-ION BATTERIES A GROWING FIRE RISK

LITHIUM-ION batteries power everything from laptops and power tools to forklifts and electric vehicles. As their use grows, commercial property owners need to consider the fire risks and resulting liability these devices may create.

Although generally safe when used properly, lithium-ion batteries pack significant energy into a small space and can overheat. They can enter "thermal runaway," a chain reaction that generates intense heat and may result in a fire or explosion.

According to a report by the National Institute of Standards and Technology, plug-in electric vehicle fires are growing by about 45% annually. Lithium-ion battery fires from consumer devices such as laptops, smartphones and tablets are growing by 10% annually.

These fires can spread quickly, burn at extremely high temperatures and release flammable and toxic gases. They can also be difficult to extinguish and may reignite after appearing to be out.

Where the risk comes from

In addition to employees' phones and laptops, batteries may be found in power tools, handheld scanners, forklifts, manufacturing equipment, automated warehouse systems and products stored as inventory.

Employees and tenants may also bring e-bikes and e-scooters onto the premises to charge indoors.

Causes of battery failure

- Overcharging or using an incompatible or damaged charger
- Physical damage from drops, impacts, crushing or punctures
- Exposure to excessive heat
- Manufacturing defects
- Improper storage, handling or disposal

Charging alone may present a heightened risk because batteries generate heat during the process. Damaged batteries can be particularly hazardous.

Reducing the risk

Business and property owners can take steps to reduce their exposure. Start by identifying where lithium-ion batteries are used, charged and stored and incorporating them into fire risk assessments.

Consider establishing designated charging and storage locations away from combustible materials, exits and heavily traveled areas. Inspect batteries and chargers for damage and follow manufacturers' instructions. Use compatible chargers and equipment from reputable manufacturers. Remove damaged, swollen or overheating batteries from service.

Employees should be trained to recognize warning signs, follow safe charging procedures and know what to do if a battery overheats or catches fire.



Commercial landlords should consider addressing lithium-ion batteries in lease agreements. Rules may cover where e-bikes and scooters can be stored and charged, acceptable safety standards for devices and chargers and prohibitions against damaged or modified batteries. Property managers can reinforce the rules during routine inspections.

For larger installations, such as energy storage systems or EV charging stations, owners may want to involve qualified engineering and fire protection professionals during planning.

Review your insurance

Commercial property insurance may cover fire damage, while general or product liability insurance may provide protection against certain third-party claims.

A business interruption policy may cover lost income if a fire temporarily halts operations.

Coverage, exclusions and limits vary, however. Before installing significant battery systems or allowing substantial on-site battery storage or charging, talk with us. We can review your coverage and discuss whether additional risk controls or protection may be appropriate.

If you have any questions regarding your coverage or our products, please call us at one of our offices:

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