

The main safety concerns with lead-acid vehicle batteries is the corrosive acid (electrolyte) and its ability to produce an electrical charge or cause burns.

- Keep all forms of ignition far away from batteries including open flames, cigarettes, and any tools that could create sparks, like grinders.
- Ensure that tools used on or near batteries are insulated. Never place tools or metal objects on top of or near batteries. Remove all jewelry and watches before working on a battery.
- Keep batteries clean and free of excess dust to avoid conditions that may cause a fire or explosion.
- Avoid leaning over the battery when charging, testing, connecting, disconnecting, or jump-starting.
- Charge batteries in well-ventilated areas to prevent the accumulation of explosive gases. The battery recharging location should have necessary fire protection and emergency equipment.
- Always use proper lifting techniques or material handling equipment when moving batteries to avoid strains and injuries.
- Ensure batteries are securely placed to prevent them from tipping or dropping, which could cause acid spills or physical injuries.
- Store batteries upright. Keep battery vent caps tight.
- Ensure that charger cables and clamps are in good condition before use. Never jump-start a frozen battery.
- Dispose of batteries according to local environmental regulations, never in the regular trash.



Soil and ground water contamination can occur if acid spills are not cleaned up quickly and safely. Spilled acid can also become airborne as it dries causing tissue irritation or permanent damage.

- All employees should be familiar with the spill procedure requirements for the facility where they are working.

- Lead-acid batteries contain sulfuric acid, a highly corrosive liquid that can cause severe burns on contact with skin or eyes.
- Batteries are heavy and if they are not handled correctly or they are dropped there is danger of sprains, strains, or other bodily injuries.

Sufficient personal protective equipment (PPE) is recommended when working with vehicle batteries.

- Wear chemical-resistant acid-proof gloves to protect hands from acid burns.
- Use chemical splash safety goggles or safety glasses with side shields worn under a full-face shield to prevent acid splashes in the eyes.
- Wear a rubber or neoprene apron or acid-resistant clothing to protect the body from acid spills.
- Acid-resistant steel-toed safety boots can protect the feet from acid splashes or accidental drops.
- Use respiratory protection if working in an area with lead dust or where ventilation is poor.

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