



Spent Lead-Acid Batteries — Requirements for Transporters

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This fact sheet summarizes transportation requirements for spent lead-acid batteries (SLABs).

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Environmental Concerns

Lead acid batteries are those made of lead plates, usually encased in plastic and containing an acid electrolyte, such as sulfuric acid. These batteries are commonly found in vehicles, boats, depth finders, motorcycles, snowmobiles, motorized wheelchairs, and all-terrain vehicles.

If managed improperly, spent lead-acid batteries may leak or spill and cause lead and/or acid contamination of the soil and ground water. Spent lead acid batteries (SLABs) must be transported in a manner that prevents short circuiting and leaking of acid.

Storage Requirements

The Minnesota Pollution Control Agency (MPCA) regulates SLAB storage. Transporters who store SLABs between trips to the reclaimer must follow these storage rules:

- SLABs may be stored either indoors or outdoors. *Indoors* means in a building having a roof and at least three walls which are permanently attached to an impermeable floor which lies directly on the ground. Semitrailers and floorless sheds do not qualify as indoor storage areas.
- When storing indoors, store SLABs on a non-reactive, curbed and impermeable surface. A non-reactive and impermeable surface will help ensure that acid and lead will not corrode or pass through the containment area and leak into the soil

or ground water. Curbing will prevent leaks or spills from running off the edge of the containment area.

- If your storage area has a floor drain, you may:
 - place the batteries in a plastic tub or other container that will provide adequate containment of a spill or leak;
 - seal the floor drain; or
 - place a dike or berm around the floor drain.
- When storing outdoors, store SLABs on a non-reactive, curbed and impermeable surface, construct the outdoor storage area in a way that will prevent rain, snow, and draining water from entering.

Inspecting Batteries

Inspect batteries regularly for cracks or leaks. Because SLABs stored *outdoors* have a greater possibility of cracking and leaking because of freezing and thawing, they should be inspected more often.

Place cracked or leaking batteries in an acid-resistant, leakproof, closed container.

Report any **uncontained** spills by calling the Minnesota Duty Officer at one of these 24-hour numbers:

Minnesota Duty Officer

Local area: (651) 649-5451
Greater Minnesota (800) 422-0798



Transport Requirements

All *for-hire* transport of SLABs is regulated by the Minnesota Department of Transportation (MnDOT). All *for-hire* transporters must have appropriate motor carrier authority in order to operate. Contact MnDOT about how to receive authority to transport SLABs for hire.

Because SLABs are considered hazardous materials under MnDOT requirements:

- shipments of SLABs must be accompanied by proper MnDOT hazardous material shipping papers; and
- vehicles carrying loads weighing over 1000 pounds must be placarded.

Hazardous materials requirements apply **except** when SLABs are transported according to requirements 1 through 4 below:

1. No other hazardous materials are transported in the vehicle carrying the load of SLABs.
2. SLABs are loaded or braced in such a manner to prevent:
 - short-circuiting*,
 - becoming damaged**, or
 - leaking acid from the vehicle*** during transport.

* Do not place SLABs with side terminals side-by-side with their terminals facing each other.

** Put a nonmetallic barrier such as, thick layers of 200-pound test cardboard, wood braces, or other structural reinforcement, between stacked SLABs to prevent battery terminals from puncturing other SLABs. *Do not* rely on terminals to support *any* weight of stacked SLABs.

*** Put SLABs damaged before or during transport in a corrosion-resistant, sealable container, such as a five-gallon polypropylene pail. (Small amounts of acid can be neutralized with baking soda, lime, or cement.)
3. Any other material loaded in the same vehicle with the load of SLABs is blocked, braced, or secured in a manner to prevent damage to the SLABs.
4. The transport vehicle is carrying **no** material shipped by any person other than the shipper of the batteries.

Remember –

1. **Protect** *all* SLAB loads against leaking and short circuiting.
2. **Properly block and brace** *all* SLAB loads including those carried in vans, pickups, trailers or any other kind of transport vehicle.

Reclaiming and Recycling Requirements

The MPCA regulates SLAB reclaiming and recycling.

State law requires transporters of SLABs to deliver all loads of SLABs to a recycling facility. Any violation of this law is a misdemeanor, with each individual SLAB not delivered to a recycler counted as a separate violation.

State law prohibits the disposal of SLABs and the placement of SLABs in mixed municipal solid waste. Violation of this law is also a misdemeanor.

More Information

Your metropolitan county and the Minnesota Pollution Control Agency have staff available to answer

waste management questions. For more information, contact your metropolitan county hazardous waste office or the MPCA office closest to your county.

Department of Transportation staff can provide assistance on hazardous material transport requirements.

Complete laws and rules regulating lead-acid batteries are found in Minn. Stat. ch. 115 and 221, Minn. R. ch. 8870 and 49 Code of Federal Regulations pts. 171 to 177.

Metro County Hazardous Waste Offices

Anoka County	(763) 422-7093
Carver County	(952) 361-1800
Dakota County	(952) 891-7020
Hennepin County	(612) 348-8100
Ramsey County	(651) 773-4466
Scott County	(952) 496-8177
Washington County	(651) 430-6655

Minnesota Pollution Control Agency

Toll free	(800) 657-3864
Brainerd	(218) 828-2492
Detroit Lakes	(218) 847-1519
Duluth	(218) 723-4660
Marshall	(507) 537-7146
Rochester	(507) 285-7343
St. Paul	(651) 297-2274
Willmar	(320) 214-3786

Web Site <http://www.pca.state.mn.us>

Minnesota Department of Transportation

Freight & Commercial Vehicle	
Operations	(651) 405-6060
Toll free	(888) 4-SAFETY
Web Site:	http://www.dot.state.mn.us