



Setting Standards for Excellence

The Association of Electrical and Medical
Imaging Equipment Manufacturers
www.nema.org

Best Practices - Common Household Battery Collection

NEMA maintains these advisory best practices as a service to customers living in areas governed by battery collection mandates. These best practices are common to general disposal of batteries and do not constitute an endorsement or recommendation for the collection of batteries. The information and conclusions set forth herein are made in good faith and are believed to be accurate as of the date of preparation. However, by law, waste disposal determinations are ultimately the responsibility of the generator.

Packaging and Transportation

Used batteries, even when 'dead,' may still contain some residual charge. When battery terminals come into contact with one another, there is the potential for short circuit. Short circuiting leads to heat generation, especially when large quantities of batteries are placed together in a container.

Numerous global transportation agencies require protection against short circuit when transporting batteries, either new or used. While rules vary by region, in some areas it may be illegal to ship batteries that are not packaged so as to prevent terminal contact and potential short circuit. The US Department of Transportation (DOT), for example, requires that all batteries be individually protected against short circuiting during transportation. A drum full of loose, non-insulated batteries would not meet this requirement.

To minimize the potential for short circuit, battery terminals should be insulated prior to storage. This is most commonly achieved by placing tape over at least one terminal, or by placing a single battery inside a small plastic bag and sealing the bag. While the potential for heat generation related to short circuiting is negligible in the most commonly-used consumer batteries, consumers often do not differentiate among different battery chemistries. It is therefore prudent to require that safeguards be put in place for all collected batteries.

Safety Considerations

While batteries are safe to handle, leakage is possible at the end of a battery's life. Caution is advised if a battery appears to be leaking liquid, has a powdery white substance visible on the surface, or emits a strong odor. Neoprene or natural rubber gloves or a similar protectant should be worn when handling batteries to avoid exposure to leaking materials. Guidance on how to respond to specific exposures is given below.

Inhalation: Provide fresh air and seek medical attention.

Skin Contact: Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

Eye Contact: Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

Ingestion: Do not induce vomiting or give food or drink. Seek medical attention immediately. Call the NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (**202-625-3333** - collect) day or night.

Storage of Used Batteries

Consumers generally should avoid storing large quantities of batteries in the home. Used batteries should have at least one terminal insulated prior to storage in a non-conductive (non-metal) and leak-proof container in a dry, well-ventilated environment at or below room temperature (70°F / 21°C). The use of a plastic-lined steel drum is acceptable. All storage containers should be covered to prevent exposure of contents to snow or rain.

Revision Date: February 2009

Supersedes: None

1300 North 17th Street, Suite 1752 — Rosslyn, VA 22209 — 703.841.3200 — 703.841.5900 fax