

USE AND HANDLING MERCURY DEVICES

1. Introduction: Mercury switches and relays are inexpensive, recyclable devices which offer high performance and high reliability. Durakool uses unique engineering practices, materials and design, such as our welded steel switch housings, to create hermetically sealed mercury devices which are highly resistant to damage and degradation.
2. Mercury Devices in Perspective
 - Mercury, in many applications, is classified as a hazardous material.
 - Many household cleaners, paints, light bulbs, insecticides, medicines, smoke alarms, batteries and numerous other household items contain beneficial, hazardous materials.
 - These hazardous materials, while beneficial and often taken for granted, require special care in handling and disposal.
 - Mercury devices should also be viewed in this same manner.
 - Mercury devices offer unique benefits which provide important, affordable, safety and security features to the marketplace.
 - Proper mercury management procedures requiring special care in handling, are simple, easy and safe.
3. Basic Facts About Mercury Devices
 - Government agencies do not forbid the use of mercury and other beneficial, hazardous materials; they require responsible management of these materials.
 - Pure elemental mercury is relatively non-toxic if ingested.
 - Exposed mercury gives off vapors very slowly at normal room temperature.
 - Most mercury related health hazards are related to long-term exposure to mercury vapor.
 - A damaged product with exposed mercury is unlikely to have formed mercury compounds that pose an immediate health risk, but good personal hygiene and rubber gloves provide protection against exposure. To avoid long term exposure to mercury vapor and its compounds, prompt clean up is essential.
 - Federal OSHA law defines an "article" as an item which does not release hazardous chemicals under normal conditions of use; therefore, our mercury devices are classified as an "article."
 - Per U. S. Department of Transportation Rules and Regulations, mercury switches and relays of the totally enclosed, sealed in metal, leak proof type construction are exempt from special packaging materials requirements. Conventional packaging methods for shipment are satisfactory. Damaged Durakool devices with exposed mercury would require special handling and packaging for shipments per DOT Rules and Regulations. (See Section 7)
4. Normal End of Life Disposal
 - Business enterprises **should not** send mercury devices to a landfill and should dispose of them through a proper hazardous material recycling organization.
 - Consumers and business enterprises should contact their local waste management authority for directions on recycling and proper disposal of sealed mercury devices.

5. First Response Action for Mercury Device Ruptures/Spills

- Comply with your company's contingency plan or do the following:
 - Avoid electrical hazards and turn off power to the affected equipment.
 - Mercury vapors alone, do not necessitate the evacuation of personnel if the mercury spill area is properly ventilated, if tracking is prevented, and if clean-up action is taken promptly.
 - Avoid skin contact and use good preventive action to avoid ingestion and eye contact with mercury or other contaminants.
 - Mercury beads easily roll down slight inclines to the lowest level, so use damp rags to block and confine exposed, moving mercury from entering flooring cracks, the water drainage system or the soil.
 - Make the proper notifications as per your contingency plan, where applicable.
 - Clean-up should occur immediately.

6. Clean-Up Procedures

- Be sure no electrical hazard is present before beginning.
- Use rubber gloves to avoid skin contact and use good personal hygiene habits to avoid ingestion and eye contact of mercury or contaminants.
- **Do not** use a standard vacuum cleaner or air hose as a clean-up procedure.
- Examine the affected equipment for the presence of mercury pools, drops, droplets, and other evidence of contaminated surfaces.
- Use a mercury spill kit from a safety supply firm where available, or:
 - Use a clean, resealable jar or strong plastic bags to hold the mercury, damaged device and any other contaminated clean-up materials.
 - Use a clean paint brush and improvise a paper dust pan; then brush up the free mercury and contaminants and put these in a jar or plastic bag (brush and paper dust pan).
 - Use damp paper towels to clean up any remaining droplets of mercury in the contaminated area.
 - Clean hand tools used for device removal.
 - Deposit the mercury and cleaning materials in a jar, and then place the jar and device into a plastic bag.
 - Deposit the brush and paper dust pan into the bag (put into a jar or plastic bag).
 - Dispose of barrier materials and gloves, into the bag and seal the bag.
 - Label the bag's contents as "mercury materials" and note "hazardous materials."
 - Repeat the above steps for each bag used in clean-up.
- Store the packaged mercury materials in a secure place awaiting final disposal and notify your management.

7. Disposal and Reporting of a Ruptured Mercury Device

- A ruptured mercury device and materials should not go to a landfill. They should go to an approved mercury recycling center. Contact your local solid waste management authority for directions for proper disposal for recycling for your locality.
- Some recyclers offer a special "shipping kit" comprised of packing materials and documents for mercury and contaminants, such as Bethlehem Apparatus Co., Inc., PO Box Y, 890 Front Street, Hellertown, PA 18055, telephone number 610-838-7034.
- If your firm is large enough to require an OSHA reporting system, you must copy your incident report to your proper OSHA office.
- The EPA currently requires reporting when the exposed mercury exceeds one pound (454 grams).

NOTE: The contents of this publication are intended for general information purposes only, and should not be construed as legal advice or legal opinion on any specific facts or circumstances. You are urged to consult with your consultants, legal counsel, or appropriate governmental agencies regarding any specific fact situations or legal questions you may have.