

Fluorescent Light Bulbs and Mercury

Compact Fluorescent Light Bulbs (CFLs) have had a relatively new introduction into the marketplace. Their use constitutes one means of being environmentally conscious while still satisfying personal needs. Some, but not all, of these bulbs are deemed ENERGY STAR compliant. ENERGY STAR qualified CFLs:

- use about 75 percent less energy than standard incandescent bulbs and last up to 10 times longer;
- save about \$30 or more in electricity costs over each bulb's lifetime and save 2000 times its own weight in greenhouse gases; and,
- produce about 75 percent less heat, for improved operation safety and reduction in energy costs associated with cooling.

CFLs, like all fluorescent lamps, contain small amounts of mercury as vapor inside the glass tubing, averaging between 1.0 and 4.0 mg per bulb. This is a concern for landfills and waste incinerators where the mercury from lamps is released and contributes to air and water pollution. In the U.S., lighting manufacturers have voluntarily capped the amount of mercury used in CFLs at a maximum of 4.0 mg/bulb.

Spent lamps should be recycled to contain the small amount of mercury in each lamp, in preference to disposal in landfills. In the European Union, CFLs are one of many products subject to a recycling scheme. The retail price includes an amount to pay for recycling, and manufacturers and importers have an obligation to collect and recycle CFLs. Safe disposal requires storing the bulbs unbroken until they can be processed. Only 3 percent of CFL bulbs are properly disposed of or recycled. However, Home Depot® is the first retailer in the U.S. to make CFL recycling options widely available (no endorsement of this retailer is expressed or implied).

Special handling instructions for CFL breakage is currently not printed on the packaging of household CFL bulbs. Proper cleanup should be done immediately. Prolonged exposure to mercury could happen if the mercury got under furniture, appliances, into carpeting, and could contribute to health problems.

Even though CFLs function longer than their incandescent counterparts, they do fail, as do other fluorescent lights. The failure is not due to the loss of the mercury inside the tube. When recycling is not a viable option, the Environmental Protection Agency and the Alabama Department of Environmental Management recommend that CFLs be double-bagged in plastic bags or in a paint can with a sealable lid, taped shut to prevent leakage of mercury vapor and placed in regular trash.