



# Recycling CFLs: What You Need to Know



Observing a few simple rules about handling and recycling CFLs helps keep mercury out of the environment and helps protect the members of your household.



Compact fluorescent lamps (CFLs) are a safe, energy-efficient alternative to incandescent lighting. CFLs that carry the ENERGY STAR® label use up to 75 percent less electricity and last up to 10 times longer than traditional incandescent bulbs. A qualified 13-watt compact cfl produces the same amount of light as a 60-watt incandescent light bulb and produces much less heat. The benefits of using CFLs are clear, but due to the small amount of mercury they contain, it is important that they are handled and recycled properly. While removing or storing CFLs, take care to avoid breakage.

## Safe Removal and Storage of CFLs

To properly remove and prepare used CFLs for disposal:

1. Remove used CFLs by gripping at the base and twisting to unscrew the bulb.
2. Place CFLs in a safe container, their original box, or in a container supplied by a fluorescent lamp recycler to protect them from breaking.
3. You can mark the container "Fluorescent Light Bulb for Recycling." You can add more bulbs to it until you're ready to take them to a proper location for disposal.

## Safe Disposal of Used CFLs

The Environmental Protection Agency (EPA) encourages recycling of all CFLs (it's also required by California law). Visit these Web sites to find out what household hazardous waste collection and recycling programs are available in your area:

- **Integrated Waste Management Board** - [www.ciwmb.ca.gov/Electronics/Collection/RecyclerSearch.aspx](http://www.ciwmb.ca.gov/Electronics/Collection/RecyclerSearch.aspx)
- **Earth 911** - [www.Earth911.com](http://www.Earth911.com)
- **EPA** - [www.epa.gov/bulbrecycling](http://www.epa.gov/bulbrecycling)

### What to do when a CFL breaks

- Before clean up, air out the room.
- Have people and pets leave the room, and don't let anyone walk through the breakage area on the way out.
- Ventilate the area. Open a door or window and leave the room for 15 minutes or more.
- Shut off the central forced-air heating/air conditioning system, if you have one.

### Cleanup Steps

- Wear appropriate personal protective equipment, such as a dust mask and gloves to keep CFL dust and glass from being inhaled or contacting your skin.
- Carefully scoop up glass pieces and powder using stiff paper or cardboard and place them in a secure container with lid (such as a canning jar) or in a sealed plastic bag.
- Use sticky tape, such as duct tape, to pick up any remaining small glass fragments and powder.
- Wipe the area clean with damp paper towels or disposable wet wipes. Place towels in the glass jar or plastic bag.
- Do not use a vacuum or broom to clean up the broken bulb on hard surfaces.
- On carpeting, after all visible materials are removed, vacuum the area where the CFL was broken, if necessary. Remove the vacuum bag (or empty and wipe the canister), and put the bag or vacuum debris in a sealed plastic bag.

### Disposal of Cleanup Materials

- Wash your hands after disposing of the jars or plastic bags containing cleanup materials.
- Take broken lamps and all cleanup materials to a local household hazardous waste recycling center.

For additional information on cleanup and disposal of broken CFLs please visit the following Web sites:

- [www.dtsc.ca.gov/HazardousWaste/UniversalWaste/Fluorescent\\_Lights.cfm](http://www.dtsc.ca.gov/HazardousWaste/UniversalWaste/Fluorescent_Lights.cfm)
- [www.epa.gov/mercury/spills/index.htm#fluorescent](http://www.epa.gov/mercury/spills/index.htm#fluorescent)

# What is mercury and why is it harmful?

Mercury is an element that occurs naturally in the air, soil, and water. It is found in many rocks, including coal and when coal is burned, mercury is released into the environment. Of all the mercury humans release into the air, coal-burning power plants are the largest single source, accounting for over 40 percent of total emissions. Mercury in the air eventually settles into water where it can transform into methyl mercury and build up in fish. The improper treatment and disposal of products or wastes containing mercury can release mercury into the environment as well. Though harmless in many forms, mercury can be poisonous when absorbed through the lungs, skin, or digestive system. To avoid contaminating our environment it is important to properly dispose of items that contain mercury.

## Why do CFLs contain mercury?

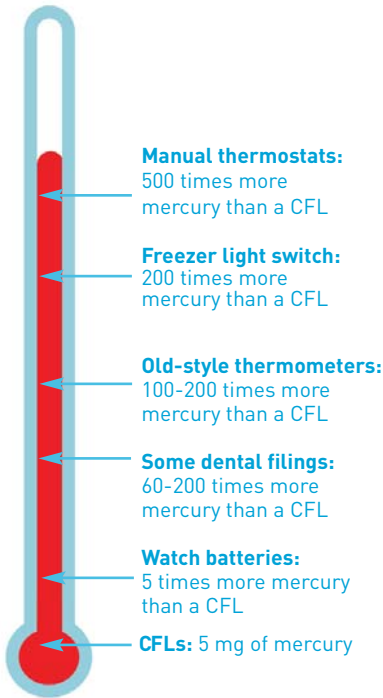
CFL technology requires mercury to provide light because of its excellent conductivity and high surface tension.<sup>1</sup> Mercury is the only metal that is liquid at room temperature, and it conducts energy well. For that reason, it is also used in products such as batteries and blood pressure cuffs.

## How much mercury is in CFLs?

CFLs contain less mercury than many products we encounter every day, including the amalgam used to fill dental cavities and the button cell batteries in watches. CFLs are typically manufactured with recycled mercury, and no mercury is emitted when an ENERGY STAR qualified light bulb is in use.

While ENERGY STAR qualified light bulbs contain a small amount of mercury, their use creates a net reduction of mercury emissions to our environment, as compared to using incandescent lighting. Compact fluorescent lamp manufacturers continue to find ways to reduce the amount of mercury in the bulbs. Visit [www.nema.org/gov/env\\_conscious\\_design/lamps/cfl-mercury.cfm](http://www.nema.org/gov/env_conscious_design/lamps/cfl-mercury.cfm).

Substituting CFLs for traditional incandescent light bulbs is one of the easiest things you can do to help reduce your energy use, save money on electricity bills, and protect the environment. Observing a few simple rules about handling and recycling CFLs helps keep mercury out of the environment and helps protect the members of your household.



| Products that may contain mercury   |  |
|---|--|
| Products  | Average Amount of Mercury <sup>2</sup> |
| Most CFLs, including ENERGY STAR light bulbs                                    | Less than 5 mg                         |
| Button cell batteries used in watches, hearing aids, some toys, and calculators | 9 mg                                   |
| Street lighting   | 30 mg                                  |
| Dental amalgam  | 82 mg per filling <sup>3</sup>         |
| Fever thermometer   | Up to 1,000 mg                         |
| Old-style residential thermostats   | Up to 4,500 mg                         |
| Mercury blood pressure monitors   | 110,000 g                              |
| Mercury barometers  | 500,000 mg                             |

## Notes

1. <http://epa.gov/mercury>
2. [www.capecodextension.org](http://www.capecodextension.org)
3. Dental from MVS Solutions, Inc., [www.mvssolutions.com](http://www.mvssolutions.com)

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