Published on *British Columbia Drug and Poison Information Centre (BC DPIC)* (http://dpic.org)

Mercury in Compact Fluorescent Lamps (CFLs)

Article type:
poison information
Access:
public

What is in a CFL? CFLs contain a very small amount of mercury vapour (around 5 mg), which is approximately 100 times less than the amount of mercury in an oral thermometer and roughly the amount that would cover the tip of a pen. The white powder inside the bulb is a metallic compound called phosphor.

How do CFLs work? When a CFL is turned on, electricity causes the mercury vapour to produce short-wave ultraviolet (invisible) light, which then causes the phosphor to fluoresce and produce visible light. Mercury is the only element that is able to produce this effect. The mercury is not released as long as the lamp remains intact.

Is it toxic? When a CFL is broken, the mercury vapour is released into the air. A small amount of mercury may be left attached to the white phosphor powder. The amount of mercury in a CFL is not considered dangerous but the following is recommended to minimize exposure.

To clean-up a broken CFL:

- Leave the room and ventilate for 5-10 minutes before starting clean-up.
- Open windows and doors to the outdoors.
- After ventilation, scoop broken glass and powder onto a piece of stiff paper or cardboard.
- Do not vacuum at this time as it may spread mercury vapour or mercury-containing powder.
- Use sticky tape to pick up smaller particles.
- Wipe the area with a damp disposable cloth or towel.
- Place all collected materials (broken glass, tape, cloth) in a sealed container such as a glass jar with a tight fitting lid or 2 sealed plastic bags. Place outside until you take to a recycling centre.
- After vacuuming the next few times, remove the vacuum bag or empty and wipe the canister with a damp disposable cloth or towel.
- For a list of nearby retail recycling centres visit www.lightrecycle.ca

How do I prevent breakage?

- Handle the CFL by the base of the lamp to prevent glass breakage.
- When the lamp is burned-out return it to your nearest recycling depot.

I'm looking for more detailed information about CFLs. Visit Natural Resources Canada website: http://oee.nrcan.gc.ca/residential/business/manufacturers/questions-answers.cfm

Need more information? Call the Poison Control Centre.

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Source URL (retrieved on *2014-07-30 22:22*): http://dpic.org/faq/mercury-compact-fluorescent-lamps-cfls