

# **DISPOSAL OF MERCURY-CONTAINING LAMPS**

Mercury-containing lamps are the single largest category of products that contain mercury and a significant percentage of waste mercury-containing lamps end up in landfill each year. Mercury-containing lamps can be recycled to recover the mercury, as well as the glass, plastic and phosphor powder, they contain.

## **Mercury in lamps**

Mercury-containing lamps include everything from the small compact fluorescent lamps (CFLs) used mostly in homes to the fluorescent tubes commonly used in offices and high intensity discharge (HID) lamps used for street lighting and sports grounds. Small amounts of elemental mercury are essential for the operation of these lamps.

Generally, the higher the power usage, the more mercury that is required to operate the lamp. Mercury-containing lamps include:

- HID lamps, such as mercury vapour lamps used for street lighting, which contain between 50 and 1000 milligrams (mg) of mercury per lamp
- linear fluorescent tubes, as used in most commercial and public buildings, which are required by an Australian standard to contain less than 15 mg of mercury per tube

- CFLs used mostly in homes, which are required by an Australian Standard to have a maximum of 5 mg of mercury per bulb
- some neon tubes, as used in signs.

Even without recycling of waste lamps, using CFLs releases less mercury into the environment than using incandescent light bulbs. This is because burning coal to produce electricity releases mercury. CFLs use only about 20 per cent of the electricity that incandescent bulbs use to produce the same amount of light, therefore requiring less electricity to be generated. The result is that use of CFLs releases about 80 per cent less mercury than incandescent light bulbs.

## **FluoroCycle: increased recycling of mercury containing lamps**

FluoroCycle is a voluntary, national scheme that aims to increase recycling of mercury-containing lamps from the commercial and public space lighting sectors. Those sectors account for the largest consumption of mercury-containing lamps.

## **Disposing of mercury-containing lamps**

Waste disposal and handling is primarily a state and local government responsibility in Australia. Some states do not allow disposal to landfill of large amounts of mercury-containing lamps, such as those generated by businesses, institutions, or councils.

Please check with your local authority to determine what conditions apply where you live.

## **Broken lamps**

Mercury is a potent neurotoxin and exposure should be avoided. The short-term nature of the potential exposure to mercury from a broken CFL or fluorescent tube – particularly after effective clean-up of lamp material – does not constitute a significant health risk to exposed adults, pregnant women or children.

The United States Environmental Protection Agency provides a suggested procedure for cleaning up a broken CFL.

## **Specialty recyclers**

An alternative to landfill disposal is taking mercury-containing lamps to specialty recyclers who are able to safely recover not only the mercury, but also the glass, phosphor and aluminium contained in the lamps. Recovered mercury is commonly sold to the dental industry, where it is used in amalgam for fillings. A number of companies provide mercury-containing lamp recycling services in Australia.

Most lamp recyclers collect large quantities of lamps from capital cities and selected regional areas for transport to a mercury-recycling facility. CFLs and tubes can also be posted to recyclers in special-purpose containers.

## **Collection programs and drop-off points**

Several states have household chemical collection programs and/or drop-off points that accept domestic quantities of CFLs and fluorescent tubes for recycling.

Please check with your state environment agency and/or local authority to determine if there is a collection point near you and the types and quantities of lamps accepted for recycling.

Source: <https://www.environment.gov.au/protection/national-waste-policy/mercury-containing-lamps>