FACT SHEET – IMPROVING RESOURCE RECOVERY CENTRES

# Fluorescent lights

Fluorescent lights are lamps or tubes that use fluorescence to produce light. Fluorescent lights must be separated from the processing and disposal of general waste, as they contain hazardous materials (e.g. mercury) that must be safely disposed of, and valuable materials that can be recovered. A white coating on the inside of the tube or bulb of fluorescent light usually makes them distinguishable from incandescent and other lights.

## Items classifying as fluorescent lights

Items that classify as fluorescent lights in this fact sheet include:

- compact fluorescent lamps (CFLs)
- linear fluorescent light bulbs or fluorescent tubes (commonly used in offices and warehouses)
- mercury vapour lamps and high intensity discharge (HID) lamps (used for factory and street lighting).

## Regulatory requirements and standards (OH&S and environmental)

Various acts, regulations and guidelines apply to the storage, transfer, transport, recycling and disposal of fluorescent lights at resource recovery centres/transfer stations. These include:

- Occupational health and safety (OH&S):
  - Occupational Health and Safety Act 2004 (Victorian Government)
  - Occupational Health and Safety Regulations 2007 (Victorian Government)
  - Guide to Best Practice at Resource Recovery Centres (Sustainability Victoria)
  - Code of Practice for Manual Handling 2000 (WorkSafe Victoria).
- Environmental:
  - Environment Protection Act 1970 (EPA Victoria)
  - Environment Protection (Industrial Waste Resource) Regulations 2009 (EPA Victoria)
  - FluoroCycle – A voluntary product stewardship scheme that seeks to increase the national recycling rate of waste mercury-containing lamps (Lighting Council Australia).

## Potential hazards and requirements

Fluorescent lights contain many materials that can pose risks to workers, the community, public health and the environment if not managed correctly. These include:

- broken glass (from bulbs or tubes)
- chemicals (potentially toxic, e.g. mercury).

When handling fluorescent light, it is important that resource recovery centre/transfer station operators:

- follow the correct safe manual handling and management procedures (refer to WorkSafe Victoria's Code of Practice for Manual Handling)
- use equipment to aid handling (e.g. forklifts)
- wear appropriate personal protective equipment (PPE).

## Acceptance criteria

Criteria for accepting fluorescent lights includes the following:

- fluorescent lights should not be broken (if broken they should be wrapped in paper and disposed of in the general waste stream)
- items should be separated from general waste and other waste streams
- items should be of domestic quantities (i.e. up to 20 items per customer), with larger quantities directed to private fluorescent light recycling contractors.

Source: Fluorocycle (fluorocycle.org.au)

## Storage guidelines

The storage of fluorescent lights should be undertaken, ideally, in accordance with best practice and, as a minimum, in compliance with regulatory requirements.

Best practice storage involves:

- sorting fluorescent lights into types (e.g. tubes or globes)
- storing fluorescent lights in purpose-built stillages or sealed cardboard boxes.

These best practice activities should be undertaken in addition to the minimum requirements, which include the following:

- where possible, store fluorescent lights in a secure and undercover area
- store fluorescent lights in sealed bins, containers or boxes with lids, for each type of light (e.g. tubes or globes)
- store only up to a recommended maximum of 500 tubes and 500 globes
- store fluorescent lights in a suitably labelled area.

## Transport and re-use/recycling guidelines

Numerous OH&S and environmental hazards can arise when transporting and processing fluorescent lights, namely through breakage and the leaking of hazardous material. As such, fluorescent lights should be sent to appropriately licensed recovery and recycling facilities for processing. At these facilities, hazardous and valuable materials (e.g. mercury, phosphor, aluminium and glass) are safely extracted and either treated or recycled into other products. Materials that cannot currently be recycled are generally disposed of to landfill.

Best practice in the transport and recycling of fluorescent lights involves obtaining a certificate of reuse/ recycling from the processing or recycling facility.

Minimum requirements for the transport and re-use/recycling of fluorescent lights from resource recovery centres/transfer stations includes the following:

- collection should only occur by a suitably qualified collection contractor
- transport may occur in boxes, bulk bins or other suitable transport process
- the location for processing should be appropriately licenced and should be known to the resource recovery centre/transfer station
- broken fluorescent lights should be wrapped in paper and disposed of in the general waste stream.

Other lights (including incandescent, LED and halogen lights) should be collected, stored, transported and recycled separately to fluorescent lights. These lights are usually collected individually and crushed before the materials are separated into glass, aluminium and other materials for re-use in other products. Incandescent, LED and halogen lights should not be placed with glass or co-mingled recycling streams, as they contain heatproof glass that can contaminate the recycling streams.


## Record keeping guidelines

It is important to keep records of fluorescent lights received and sent for recycling. This is to enable tracking of resource recovery from the site, as well as managing onsite storage.

Record keeping requirements related to fluorescent lights includes the following:

- recording at the gatehouse the receipt of a fluorescent light items
- conducting monthly stocktakes of whitegoods stored at the facility, to ensure the site does not exceed to the recommended maximum quantity of fluorescent lights stored
- recording the volume or weight of fluorescent lights collected by the approved contractor.

## Framework for continuous improvement

The priority for any decision regarding the acceptance and management of fluorescent lights is to divert these materials from landfill, while protecting the OH&S of all stakeholders (namely operators and customers) and the environment.

Framework for the continuous improvement of recycling and resource recovery practises for fluorescent lights include the following:

- Communicate and engage with other local municipalities to investigate consolidated collection/joint procurement activities.
- Seek out and build relationships with local collection and recycling contractors, who meet the relevant standards and regulations.
- Continuously improve storage areas, working towards storing fluorescent lights in separated streams, in purpose-built stillages or boxes, in a secure, undercover and suitably labelled area.
- Consider becoming a signatory to FluoroCycle, a voluntary product stewardship scheme that seeks to increase the national recycling rate of mercury-containing lamps. The scheme targets the commercial and industrial sectors where the majority of waste lamps are generated, to assist in reducing the amount of mercury sent to landfill.

## Resources

FluoroCycle
03 9859 4545
www.fluorocycle.org.au

## Further information

For further information and resources, please contact Sustainability Victoria on 03 8626 8700 or visit www.sustainability.vic.gov.au

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