

FLUORESCENT

Typical items we accept:

- Linear tubes
- Energy saving bulbs/Halogen bulbs
- Fluorescent lamps (CFLs)
- Mercury, Metal halide/Sodium SON/SOX lamps
- Filament /lighting/sterilisation/sunbed tubes

In the United Kingdom, industries are responsible for more than a million tonnes of electrical and electronic waste every year. The total figure, including domestic wastage, comes to more than two million tonnes. Many of the items which are disposed of contain elements which can be hazardous to the environment and to personal health.

The mercury from a single fluorescent tube is enough to pollute 30,000 litres of water beyond the safe drinking level in the UK. In 2005, changes were made to the Hazardous Waste Regulations such that fluorescent tubes and other types of lamps were newly classified as hazardous waste items. Any damage or breakage of fluorescent tubes could see people being exposed to mercury dust and vapour. The main problem with mercury vapour is the fact that it is both odourless and invisible. It also easily vaporises at room temperature. In addition to their mercury, there are also other metals present within fluorescent lamps, depending on the type of lamp in use. They need to be disposed of correctly (separately from general waste) to ensure your business remains compliant with the regulations.

As a result, the Waste Electrical and Electronic Equipment (WEEE) Regulations were updated in January 2014, replacing the previous version from 2006. The items which come under the WEEE banner are varied and include IT and telecommunications equipment, medical devices and household appliances both large and small such as; televisions, fridges, cookers, vacuum cleaners and toasters. Also included are various forms of lighting equipment.

OUR FLUORESCENT TUBE RECYCLING SOLUTION

We provide a selection of containers suitable for the storage of spent light tubes which can be delivered to site. Our logistics service will arrange for the containers to be collected/replaced on a scheduled or on-demand basis as required. Spent fluorescent light tubes are delivered to our Materials Recycling Facility (MRF). The initial stage begins with the Tube Eater machine where they are crushed. This machine contains a built in particle filter and carbon absorption system to minimise exposure to mercury vapour and phosphor dust during this process.

With all fluorescent tube and mercury lamp recycling plants, lamps need to be crushed before they can be further processed. Equipment has now been designed to accept both whole and pre-crushed lamps of all kinds and sizes. This gives us the advantage over other lamp recycling plants, providing a closed-loop recycling process.

Glass is crushed before undergoing a dry process that separates the phosphor powder from the glass and metal. The phosphor powder contains mercury and is taken to a specialist facility for mercury and rare earth metal recovery. Once crushed, the lamp debris is fed into a uniquely designed agitator unit that loosens the mercury bearing phosphor powder, adhering to the glass. Eddy currents and magnets remove aluminium and steel used in the end caps. The crushed glass can be mixed with a new

glass melt for a variety of applications, i.e. furnace linings, fibre glass, the manufacture of glass blocks, in addition to making new lamps.

During this process, the mercury bearing dusty air generated inside the unit is continually drawn off to a filter unit that removes and collects the powder. Air exhausted from this filter is then further cleaned by passing through another larger and highly sophisticated filter. This removes the last traces of mercury vapour and other impurities before it is allowed to vent to atmosphere as clean air. The mercury contaminated phosphor powder is distilled to produce pure mercury for re-use.

Our digital data capture systems enable us to provide complete chain-of-custody reporting from collection to final destination. Electronic waste transfer notes are issued for all materials we manage in compliance with your Duty of Care obligations. We offer a cradle to grave document trail which maintains the detailed records necessary by the Environmental Agency.

The McGrath Group is accredited to various trade bodies and accreditations including PAS 402:2013. We also operate an integrated management system which is certified against international standards OHSAS 18001 (Health & Safety), ISO 9001 (Quality) and ISO 14001 (Environmental) this ensures our products and services are supplied safely, consistently and sustainably.



KEY FACTS

EWC Codes:

20 01 21
16 02 13
16 02 14
20 01 23*
20 01 35
20 01 36

Percentage we recycle:

100%

Relevant regulations:

Hazardous Waste Regulations 2005
Waste Electronic & Electrical Equipment (WEEE) Regulations 2014

