



# EucoLight – LightingEurope Platform on Article 15 WEEE Directive - Product Sheet on Product Categories

## Introduction

The lighting industry, represented by such industry associations as EucoLight (representing European lighting WEEE compliance schemes) and LightingEurope (representing manufacturers of lighting products, equipment and luminaires) has long been involved with the recycling of lighting products and equipment. For example, it played an influential role in the development of the Waste Electrical and Electronic Equipment (WEEE) Directive.

The WEEE Directive sets collection, recycling and recovery targets for several categories, including large household appliances, small household appliances and lighting equipment (lamps/LEDs).

In addition to the legal obligations established by the WEEE Directive, EucoLight and LightingEurope have collaborated to facilitate an exchange of information relevant to the recycling of lighting products. The present document aims to illustrate the information producers already provide for various lamp types and lighting products, based on the Art. 15 WEEE Directive requirements regarding the presence of substances, mixtures, components and other information needed to prepare a product for environmentally-sound recycling.

*Disclaimer: The information contained within this document is meant to be used as an indication of what information recyclers need to have to ensure the correct treatment of lighting products. For more detailed information, please contact the manufacturers directly.*

## Category: HID lamps

### Ceramic Metal Halide lamp (CMH):

#### Items to be removed from any separately collected WEEE:

- ) Substances (CMH): mercury, thallium, krypton-85, argon, quartz, ceramic, polycrystalline alumina, and lead solder.

### Quartz Metal Halide lamp (QMH):

#### Items to be removed from any separately collected WEEE:

- ) Substances (QMH): mercury, thallium, nitrogen, krypton-85, thorium metal & iodide, tungsten, quartz, ceramic, amorphous silica, polycrystalline alumina, barium peroxide, and lead solder.

### Additional information needed to prepare components or whole appliances for environmentally-sound recycling:

- ) All mercury-containing lamps can be recycled. All Metal Halide lamps contain mercury in the arc tube.
- ) Ceramic Metal Halide lamps with Edison Screw base caps may use lead solder.
- ) Using a Toxicity Characteristic Leaching Procedure (TCLP) to test for lead or mercury could cause the lamp to be classified as hazardous waste in the United States.
- ) Many businesses in the United States manage these lamps as universal wastes.
- ) In Member States of the European Union, these lamps are disposed of and collected separately from universal waste. Lamps are marked with the WEEE label, in compliance with Article 14(4) of Directive 2012/19/EU and European standard EN 50419. Local regulations can help further ensure compliance with collection and recycling.

### Special handling information:

- ) If arc tubes are broken, ventilate the area where the breakage occurred.
- ) Use adequate general and local exhaust ventilation to minimize exposure levels. Open windows and doors and use fans to displace vapours.
- ) Use an appropriate, NIOSH-approved respirator.
- ) Use OSHA-approved safety glasses or goggles, puncture resistant gloves and protective or old clothing.
- ) Avoid generating dust during clean-up.
- ) Avoid generating mercury dust. To avoid dispersing spilled mercury, do not spray water on it. Use specially equipped mercury vacuum systems or eyedroppers.
- ) Do not use standard vacuum cleaners during clean-up. Optionally, sweep up all particles using disposable gloves or wipe up with a damp cloth or paper towel. Place all waste in a puncture-resistant closed container or double-bag. Dispose of materials according to local regulations.

- ) Practice personal hygienic protocol. Wash hands thoroughly before eating, drinking, smoking, handling tobacco products, applying cosmetics, or using toilet facilities. Dispose of contaminated clothing.
- ) Seek competent medical assistance for any concerns or in the case of an exposure.

**Figures (source: Tungsram)**



- 1) CMH lamp:** low watt, combining the power and light quality of far larger and less efficient lamps.



- 2) CMH double ended:** Low wattage double ended lamps can be used transversely for wide beam floodlighting.



- 3) HPS elliptical diffuse:** combine HPS technology (providing stability, efficiency and uniformity) and the Metal Halide technology (providing

bright white quality light) to produce highly efficient light sources with good colour rendering and consistent colour performance throughout the lamp's lifecycle. This is achieved by using the ceramic arc tube material from the Lucalox™ lamp, which minimises the chemical changes inside the lamp throughout its life. When combined with the halide doses used in Arcstream™ Metal Halide lamps, the quality and stability of the dose maintains the colour consistency.

### **QMH (Quartz Metal Halide)**



- 1) High brightness, high quality white and coloured light with good colour rendition, excellent colour consistency and energy efficiency make these lamps suitable for retail environments and commercial interiors. Lamps with a UVC feature are optimal for museum and retail environments where UV control is important.



- 2) Metal Halide lamps' high brightness, high quality white light with good colour rendition and energy efficiency makes makes these lamps suitable for many commercial and industrial interiors, particularly in high-ceiling areas.
- 3) Sport light lamps are high light output Metal Halide lamps with high a Colour Rendering Index. They are designed for use in sport stadiums and other recreational facilities.

