

MSDS Fluorescent (UV-A) lamps

I. PRODUCT IDENTIFICATION

Type: PL/BL 9W 11W 36W T5/BL 4W 6W 8W
T8 / T12: BL 10W 15W 18W 36W

II. LAMP MATERIALS AND HAZARDOUS INGREDIENTS

Glass & Metal

The glass tube used in PL T5 T8 lamps are manufactured from glass which contain 1g lead by weight .The cathodes in the lamps are made of tungsten, The tungsten coil is covered by emission material. The emission material consists of triple carbonate, ZrO₂ , 5% NC/Butyl acetate, Butyl acetate in the tube in quantity of 1-10 mg/lamp depending on types. The pins at the end of each cap are made of copper alloy, which contain 32920ppm lead and 43ppm cadmium by weight. None of these materials would present a potential hazard in the event of breakage of the lamp, aside from the obvious ones due to broken glass.

Phosphor

The fluorescent product line uses Phosphor, Chemical formula: BaSi₂O₅ : Pb and Sr₂P₂O₇ : Eu.

The composition of this compound include: Barium oxide 24.3%; Silicon oxide 25.4%; Lead nitrate 0.2%; Strontium oxide 16.6%; Phosphorus pentoxide 33.1%; Europium Oxide 0.4%.

Normally a lamp has approximately 1.6grams of the phosphor in it. It depends on the type.

MATERIAL DATA SAFETY DATA SHEET (MSDS) INFORMATION AND APPLICABILITY

The Material Safety Data Sheet (MSDS) requirements of the Occupational Safety and Health Administration (OSHA) for chemicals are not applicable to manufactured articles such as lamps. No material contained in a lamp is released during normal use and operation.

The following information is provided as a service to our customers. The following Lamp Material Information Sheet contains applicable Material Safety Data Sheet information.

Solid Mercury

Mercury is present in small amounts in solid mercury in all fluorescent lamps. The overall fleet average for all 'Foshan Electrical and Lighting Co.,LTD'lamps,for PL 9W 11W 36W T5 4W 6W 8W they are less then 5 milligrams,for T8 10W 15W 18W they are less then 10 milligrams.

The amount of mercury present in any given lamp comply with the requirements of the RoHS Directive 2002/95/EC.

III. HEALTH CONCERNS

A) Phosphor

Except for small changes, it is essentially the same phosphor that has been in use in our lamps for over 10 years. No significant adverse effects, either by ingestion, inhalation, skin contact, or eye implant, were found in a five-year animal study of the original phosphor by the Industrial Hygiene Foundation of the Mellon Institute. Also, there have been no significant adverse effects on humans by any of these routes during the many years of its manufacture or use. The phosphor is somewhat similar to the inert mineral apatites (calcium phosphate-fluorides) which occur in nature. Europium, barium and Plumbum compounds are characterized by OSHA as hazardous chemicals, as are most inorganic compounds. However, due to their insolubility, relatively low toxicity and small amount present in the phosphor and the lamp, these materials do not present a significant hazard in the event of breakage of the lamp.

B) Mercury

Neither the mercury nor the phosphor concentration in air produced as a result of breaking one or a small number of fluorescent lamps should result in significant exposures to the individual. However, when breaking a large number of lamps for disposal, appropriate industrial hygiene monitoring and controls should be implemented to minimize airborne levels or surface contamination. We recommend that the work be done in a well-ventilated area, and local exhaust ventilation or personal protective equipment may be needed.

IV. DISPOSAL CONCERNS

A) TCLP

A Toxicity Characteristic Leaching Procedure (TCLP) conducted on traditional fluorescent lamp designs for mercury would most likely cause the lamps to be classified as a hazardous waste due to the mercury content. While small numbers of these lamps placed in ordinary trash may not appreciably effect the nature or method of disposal of the trash, under most circumstances disposal of large quantities may be regulated. You should review your waste handling practices to assure that you dispose of waste lamps properly and contact your state environmental department for any regulations that may apply.