

Lamp Material Information Sheet

Material Safety Data Sheets (MSDS) Information and Applicability

The Material Safety Data Sheet (MSDS) requirements of the Occupational Safety and Health Administration (OSHA) for chemicals are <u>not</u> 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.

I. Product Identification

GE LED Replacement Lamps

GE Consumer & Industrial Lighting 1975 Noble Road Nela Park Cleveland, OH 44112 (216) 266-2222

II. Lamp Materials and Hazardous Ingredients

THERE ARE NO KNOWN HAZARDS FROM EXPOSURE TO LED LAMPS THAT ARE INTACT.

Lamp Assembly – Glass and Metal

The glass globe used in some of the LED lamp is manufactured from soda-lime glass and is essentially similar but not identical to that used throughout the glass industry for incandescent lamps, bottles and other common consumer items. Some of the glass globes may contain a thin coating of clay and silca inside the surface of the glass. The lamp bases are generally nickel-plated brass. None of these materials would present a hazard in the event of breakage of the lamp, aside from the obvious ones due to broken glass.

<u>LED</u>

Replacement Lamps use LEDs that emit white light. The LED's composition consists of metals, phosphor, plastics and InGaN (Indium Gallium Nitride) semiconductor chip. Due to their insolubility and inertness, these materials do not present a significant hazard.

Electronic LED Driver

The electronic LED driver is built into the lamp housing. The driver consists of parts that are essentially similar, but not identical, to those used throughout the electronics industry for other common consumer electronic equipment.

Plastic Material

The plastic housing is typically made of PBT (Polybutylene-terephthalate) or PET (Polyethyleneterephthalate) fire retarded plastic with a bromine-containing polymer and antimony oxide. The plastic housing is glass fiber filled. This product consists primarily of high molecular weight polymers that are not hazardous.

III. Health Concerns

There are no known health hazards from exposure to lamps that are intact. No adverse effects are expected from occasional exposure to broken lamps. If the lamp is broken and the LEDs are exposed, do not look directly into the LEDs. As a matter of good practice, avoid prolong or frequent exposure to broken lamps. The major hazard from broken lamps is the possibility of sustaining cuts from the glass and eye injury if you look directly into exposed LEDs when emitting light.

<u>UV</u>

The Ultraviolet energy emitted by LED lamps complies with the Photobiological Safety of Lamps IEC 62471.

IV. Disposal Concerns

LED Replacement Lamp

Dispose in accordance with local regulations; recycling is recommended for large quantity disposal. All lamps sold meet the EC directive 2002/95/EC for ROHS (Restriction of Hazardous Substances) and EC directive 2006/1907/EC REACH (Registration, Evaluation, Authorization and Restriction of Chemicals).