



## 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 do not apply to manufactured articles such as lamps. During normal use and operation no materials contained in a lamp are released.

The following contains applicable Material Safety Data Sheet information

#### I. PRODUCT IDENTIFICATION

##### **DAMAR® Mercury Vapor Lamps**

DAMAR Worldwide 4 LLC  
PO BOX 2347  
Sarasota, FL 34230-2347

#### II. LAMP MATERIALS AND HAZARDOUS INGREDIENTS

- A. GLASS: These lamps contain an inner quartz arc tube that is surrounded by an outer envelope made of heat-resistant glass.
- B. PHOSPHOR: On coated lamps the phosphor used to coat these lamps is made of yttrium vanadate phosphate. This material has a low toxicity and is relatively insoluble, but high exposure levels may result in cough, irritation of nasal passages and respiratory tract, and difficulty in breathing. The breakage of one or a small number of lamps should not result in a significant exposure to yttrium vanadium.
- C. ARC TUBE: A small amount of mercury is contained in the quartz arc tube. This amount ranges from 14mg in a 50 watt lamp to 250mg in a 1000 watt lamp. The quartz arc tube also contains a small amount of inert gas argon. The arc tube also contains small amounts of thorium iodide, sodium iodide, and scandium iodide. None of these materials poses a health hazard in the small amounts that are present in the arc tube. The coating on the ends of the arc tube consists of aluminum oxide, which has a low level of toxicity.
- D. METAL: The support wires used in the construction of the lamp are made from stainless steel or nickel-coated iron. The electrodes in the lamp are made of tungsten. Many of the mercury lamps have a brass base with a lead solder connection.

#### III. HEALTH CONCERNS

- A. MERCURY: Not applicable for an intact lamp. No adverse affects are expected from occasional exposure to phosphor powder dust and elemental mercury vapor due to lamp breakage. However, breaking a large number of lamps for disposal should only occur with sufficient ventilation. Ventilation and personal protective equipment such as respirators may be needed.
- B. ULTRAVIOLET (UV) RADIATION: When operating, the quartz arc tube produces a considerable amount of ultraviolet radiation. The ultraviolet radiation is filtered to acceptable levels by the outer glass envelope during normal lamp operation. However, the UV filtering is lost if the outer glass envelope is broken. These lamps have the following warning notice required under Federal Regulation 21 CFR 1040.30:

“WARNING: This lamp can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if outer envelope of the lamp is broken or punctured and the arc tube continues to operate. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used.”

#### II. DISPOSAL CONCERNS

TCLP: The test preformed on these lamps for lead and mercury may cause the lamp to be classified as hazardous waste. These lamps use mercury in the arc tube and lead in the base, with levels that should pose little risk of exposure under normal handling and use. While disposing of small amounts of these lamps acceptable, state and/or local regulations may still regulate the disposal of large quantities of mercury-containing products. To check state regulations or to locate a recycler, go to <http://www.lamprecycle.org/>