DAMAR®

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 Date Sheet Information

I. PRODUCT IDENTIFICATION

DAMAR Fluorescent lamps

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II. LAMP MATERIALS AND HAZARDOUS INGREDIENTS

A. PHOSPHOR: The fluorescent product line uses two different phosphor systems. One phosphor system (halophosphate) uses calcium chloro-fluoro-phosphate, with small amounts (less than 1-2% by weight the phosphor) of antimony and manganese, both of which are tightly bound in the phosphor matrix. The second phosphor system (triphospher) uses a mixture of rare earth elements such as lanthanum, and yttrium as either an oxide or as a phosphate, along with a barium/aluminum oxide. These phosphors produce better lamp efficiency and color rendition. A T12 fluorescent lamp has approximately 1-1.25 grams of phosphor per foot of lamp. A standard 4 foot lamp contains 4-5 grams of phosphor coating. A T8 lamp has proportionally less phosphor due to its smaller size.

B. MERCURY: Mercury is present in small amounts in all fluorescent lamps. The amount of mercury will vary in any given lamp depending on the design life and size of the lamp. Shorter life and smaller size lamps generally have a lower mercury content.

C. GLASS AND METAL: The glass tube used in this fluorescent lamp is manufactured from soda-lime glass and is essentially similar but not identical to that used throughout the glass industry for bottles and other common consumer items. The end-caps on the lamp are generally aluminum while the wires in the lamps are made of tungsten.

III. HEALTH CONCERNS

A. PHOSPHOR: Except for small modifications, the halophoshor is essentially the same material that has been in use in fluorescent lamps for decades. OSHA characterizes antimony, manganese, yttrium and barium compounds as hazardous chemicals. 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 lamp breakage.

B. 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.

IV. DISPOSAL CONCERNS

TCLP: A toxicity test on these lamps would likely list these lamps as hazardous waste. Disposing of small quantities of these lamps will not appreciably affect the environment or pose a hazard. State and/or local regulations my regulate disposing of large quantities of mercury-containing products. To check state regulations or to locate a recycler, go to www.lamprecycle.org