

Material Safety Data Sheet-MSDS

Lamp Material Information SheetMaterial Safety Data Sheet (MSD

Information and ApplicabilityThe Material Safety Data Sheet (MSDS) requirements of the Occupational Safety and Health Administration (OSHA)(29 CFR 1910.1200)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.

I. Product Identification and manufacturer

TCS Technologies UV curing, UV inkjet, metal halide and exposure lamps

TCS Technologies

430 Sandshore Road, Unit 1 Hackettstown, NJ 07840 USA908-852-7555

II. Lamp Materials and Hazardous Ingredients

Glass

These lamps consist of a quartz arc tube. Depending on the lamp type, the envelope is either clear fused quartz or metal-coated quartz. The quartz arc tube contains a small amount of mercury, ranging from 14 milligrams in a 1000-watt up to 870 mg in a 20,000-watt lamp. The arc tube contains a small amount of inert gas argon used as a fill gas. All TCS lamps are free of thorium iodide.

Also contained in the arc tube are small amounts of gallium and iron iodide, and in some cases tin iodide. None of these materials are expected to be a hazard in the small quantities present in the arc tube. The coating on the ends of the arc tube is aluminum oxide or pure gold, a material generally considered to have a low order of toxicity.

Metals

Any metal used in lamp construction is made from nickel-coated brass while the electrodes are pure tungsten and seal assembly is molybdenum. A lead free silver solder is used for electrical connections to the base.

HAZARDOUS INGREDIENTS continued

	OSHA (PEL)	ACGIH (TLV)	% by Wt.
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	Mg/m3	Mg/m3	
Mercury (7439-97-6).	1 Ceiling	.025 8 hr. TWA	Less than .03%
Iodine (7553-56-2)	1.0 mg/m3	1.0 mg/m3	Less than .02%
	(.1 ppm ceiling)	(.1 ppm ceiling)	
Inert ingredients (Quartz, Metal)			Approx. 98.9% by weight

III. Health Concerns

Mercury Exposure

The air concentration of mercury resulting from the breakage of one lamp should result in no significant exposure to the individual. However, appropriate monitoring, controls and equipment should be implemented to control airborne mercury and dust levels or surface contamination. Such work should be done in a well-ventilated area, and local exhaust ventilation or personal protective equipment may be needed.

Ultraviolet (UV) Radiation

The UV lamp, when operating, generates a considerable amount of ultraviolet radiation.

Lamp can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation. Use only with adequate shielding or other safety precautions. Turn the power off before replacing the lamp.

IV. Disposal Concerns

TCLP

A Toxicity Characteristic Leaching Procedure (TCLP) test conducted on the lamp for mercury could cause the lamp to be classified as a hazardous waste. TCS Technologies uses mercury in its arc tube. The mercury vapor should pose little risk of exposure under normal use and handling. State regulations will vary regarding the nature or method of disposal. You should review your waste handling practices to assure that you dispose of waste lamps properly. Please check with state environmental departments regarding individual state disposal requirements. TCS Technologies recommends recycling of spent UV lamps. We offer this service free of charge on **allour** lamps.

V. Physical data

FIRE AND EXPLOSION DATA

This item is a light bulb; it has no fire data.

Reactivity data

Stability: Lamp is stable.

Incompatibility: Quartz will react with hydrofluoric acid.

Polymerization: Will not occur.