

## Ceramic Metal Halide Lamps

## Current Lighting Solutions, LLC

25825 Science Park STE 400  
Beachwood, OH 44122-7392

### Safety Data Sheet (SDS), Material Safety Data Sheets (MSDS)

#### Information and Applicability

The Product Safety Data Sheet (SDS) requirements, formally known as the Material Safety Data Sheets (MSDS), 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 Product Safety Data Sheet contains applicable Safety Data Sheet information.

### Section 1. Product Identification

Current Constant Color Ceramic Metal Halide (CMH) Lamps

Current Lighting Solutions, LLC  
25825 Science Park STE 400  
Beachwood, OH 44122-7392

### Section 2. Hazardous Identification

#### Ultraviolet (UV) Radiation

The CMH arc tube, when operating, generates ultraviolet radiation. The UV is filtered to acceptable levels by the "UV Control" quartz capsule or by the glass outer envelope during normal use. However, if the quartz capsule or outer envelope is broken, the UV filtering is lost. CMH Lamps that could pose a risk of UV hazard will have the following R-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. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.**

**This lamp certified to comply with FDA radiation performance standards, 21 CFR Subchapter J. USA: 21 CFR 1040.30 or Canada: SOR/80-381"**

The self-extinguishing feature referred to above does not currently exist for CMH lamp types. Further, if the outer envelope of the lamp is broken, its support structure will still be electrically connected and could present an electrical shock hazard. Therefore, regardless of the type, if the outer envelope of the lamp is broken, turn the power off before replacing the lamps.

For additional information on protection from UV radiation, visit the FDA website for more information: <http://www.fda.gov/cdrh/radhealth/products/urburns.html>.

### Section 3. Lamp Composition and Detailed Ingredient Information

#### Envelope

CMH lamps consist of an inner high purity alumina ceramic arc tube enclosed in an outer envelope of heat-resistant glass. Depending on the lamp type, the envelope is either clear or coated with a diffusing material. The material used as a diffuser in coated HIGH-WATT CMH SPXX lamps is specially prepared kaolin clay that contains no crystalline silica or asbestos as impurities. These types of clays are generally considered to be toxicologically relatively inert materials.

#### Arc Tube

The alumina arc tube contains a small amount of mercury, ranging from less than 3 milligrams in a 20-watt lamp up to 45 mg in a 400-watt lamp. The arc tube also contains small amounts of krypton<sup>85</sup>, iodides of sodium, thallium, dysprosium, holmium, thulium, and in some cases iodides of calcium, cesium, and cerium. None of these materials are expected to be a hazard in the small quantities present in the arc tube.

#### Metals

Internally, the support wires used in the lamp construction are made from nickel-coated iron, stainless steel, molybdenum, or niobium, while the electrodes are tungsten. Many of the ceramic metal halide types will use a brass base and have lead-soldered connections to that base.

### Section 4. First Aid Measures

Not applicable to intact lamps during normal use and operation.

### Section 5. Fire-Fighting Measures

No special precautions necessary for fire fighters.

### Section 6. Accidental Release Measures

Less than 1% of the mercury in a Metal Halide lamp is in vapor form and will be released if a lamp is accidentally broken. This extremely small exposure is less than 0.05 mg of mercury and is insignificant to an individual. Removing the broken lamp debris and ventilating the area for 15 minutes (if possible) is recommended. Do not vacuum lamp fragments. Clean-up all visible lamp pieces before vacuuming.

### Section 7. Handling and Storage

New lamps being held for use, or spent lamps being held for recycling, should remain in their original packaging, or other protective packaging, and should be placed in a dry storage area that minimizes any risk of accidental breakage.

### Section 8. Exposure Controls/Personal Protection

No special requirements during normal use and operation.

### Section 9. Physical and Chemical Properties

Not applicable to intact lamps.

### Section 10. Stability and Reactivity

Not applicable to intact lamps.

## Section 11. Toxicological Information

### Mercury Exposure

The air concentration of mercury resulting from the breakage of one or a small number of lamps should result in no significant exposure to the individual. However, if breaking many lamps for disposal, 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.

## Section 12. Ecological Information

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## Section 13. Disposal Considerations

### TCLP

Some CMH lamps consistently pass the Toxicity Characteristic Leaching Procedure Test, such as the CMH PAR 38 lamps. However, a TCLP test conducted on other types of CMH lamps for lead or mercury could cause the lamp to be classified as a hazardous waste. Some CMH Metal Halide lamps use lead solder on the lamp base and all CMH lamps use a small amount of mercury in the arc tube. The lead solder or mercury vapor should pose little risk of exposure under normal use and handling. While small numbers of these lamps placed in the ordinary trash should not appreciably affect the nature or method of disposal of the trash in most states, under most circumstances disposal of large quantities is regulated.

Some states require all mercury containing lamps to be recycled regardless of the quantity being disposed or whether they pass the TCLP test or not. You should review your waste handling practices to assure that you dispose of waste lamps properly. Contact your state environmental department for any regulations that may apply. To check state regulations or to locate a recycler, go to [www.lamprecycle.org](http://www.lamprecycle.org).

Universal Waste

Used lamps being stored for recycling must be managed as Universal Waste.

- (1) Lamps being held for recycling should be held in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps and such containers should remain closed.
- (2) Any lamp that is broken or shows evidence of damage should be placed in a container that is closed, structurally sound, and compatible with the contents of the broken lamps.
- (3) If storing lamps for recycling, each container in which such lamps are stored must be labeled or marked clearly with one of the following phrases: "Universal Waste--Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)."

**Section 14. Transport Information**

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**Section 15. Regulatory Information**

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**Section 16. Other Information**

The Product Safety Data Sheet for Ceramic Metal Halide Lamps was prepared in 2022.