



MATERIAL SAFETY DATA SHEET TUNGSTEN HALOGEN LAMPS

Tungsten Halogen Lamps, manufactured or distributed by FEIT ELECTRIC COMPANY, are exempted from the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200) because they are "articles." The following information is provided by FEIT ELECTRIC COMPANY as a courtesy to its customers.

I. PRODUCT IDENTIFICATION

Trade Name (as labeled): Tungsten Halogen Lamps
(Quartz Halogen)

Manufacturer: FEIT ELECTRIC COMPANY
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Pico Rivera, CA 90660
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II. HAZARDOUS INGREDIENTS

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

If a lamp is broken, some of the following materials may be released:

| Chemical Name | CAS Number | % by wt. | Exposure Limits in Air (mg/cubic m) | |
|--|------------|----------|-------------------------------------|-------------------|
| | | | ACGIH (TLV) | OSHA (PEL) |
| Hydrogen Bromide | 10035-10-6 | 0-<1.0 | 10.0 Ceiling | 10.0 |
| Methyl Bromide | 74-83-9 | 0-<1.0 | 20.0 | 80.0 Ceiling |
| Methyl Iodide | 74-88-4 | 0-<0.05 | 10.0 | 28.0 |
| Tungsten | 7440-33-7 | 0.05-1.0 | --- | --- |
| (Insoluble compounds) | --- | --- | 5.0 | --- |
| Molybdenum | 7439-98-7 | 0.02-1.0 | --- | --- |
| (Insoluble compounds) | --- | --- | 10 | 15 |
| Glass (Alkaline Earth Aluminosilicate) | --- | 0-95 | 10 ⁽²⁾ | 15 ⁽²⁾ |
| Quartz, Fused | 60676-86-0 | 0-95 | 0.1 Resp. Dust | 0.1 |

⁽¹⁾ This chemical is subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

⁽²⁾ Limits as nuisance particulate.

III. PHYSICAL PROPERTIES

Not applicable to intact lamp.

IV. FIRE & EXPLOSION HAZARDS

Flammability: Non-combustible

Fire Extinguishing Materials : Use extinguishing agents suitable for surrounding fire.

Special Fire Fighting Procedure : Use a self-contained breathing apparatus to prevent inhalation of dust and/or fumes that may be generated from broken lamps during firefighting activities.

Unusual Fire and Explosion Hazards : When exposed to high temperature, toxic fumes may be released from broken lamps.

V. HEALTH HAZARD

THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSURE TO LAMPS THAT ARE INTACT. No adverse effects are expected from occasional exposure to broken lamps. As a matter of good practice, avoid prolonged or frequent exposure to broken lamps unless there is adequate ventilation. The major hazard from broken lamps is the possibility of sustaining glass cuts.

V. HEALTH HAZARD (continued)

EFFECTS OF OVER EXPOSURE TO BROKEN LAMPS BY INHALATION, INGESTION OR CONTACT (SKIN OR EYE):

Hydrogen Bromide - Short-term exposure to hydrogen bromide may cause irritation of the eyes, nose and throat. It will cause a burn when a solution is splashed onto skin or into eyes. Repeated or prolonged exposure to hydrogen bromide may cause irritation of the nose and throat with mucous production and indigestion.

Methyl Bromide - Short-term exposure to methyl bromide may cause headache, dizziness, nausea, vomiting, blurred, vision, slurred speech and convulsions. High concentrations may also cause unconsciousness and death. High concentrations may also cause lung irritation resulting in congestion with coughing, chest pains, and shortness of breath; kidney damage is also possible. Lung effects may be delayed in onset. Prolonged or repeated exposure to methyl bromide may cause a variety of symptoms due to injury to the central nervous system; including visual disturbances, slurred speech, numbness of limbs, confusion, shaking, and unconsciousness.

Methyl Iodide - Exposure to methyl iodide may cause nausea and vomiting, diarrhea, dizziness, slurred speech, visual disturbances, staggering, shaking, irritability, drowsiness, coma and death. It may irritate the eyes and lungs. Prolonged exposure to methyl iodide may cause skin irritation.

Quartz, Fused - Fibrosis of the lungs causing shortness of breath and coughing has been associated with silica exposure.

Glass - Glass dust is considered to be physiologically inert and as such, has an OSHA exposure limit of 15 mg/cubic meter for total dust and 5 mg/cubic meter for respirable dust.

Tungsten - Inhalation of dust may cause mild irritation of nose and throat. Contact may cause mechanical irritation of skin and eyes.

Molybdenum - Oxides have caused irritation to the eyes, nose and throat; weight loss and digestive disturbances in experimental animals.

EMERGENCY AND FIRST AID PROCEDURES:

Glass Cuts: Perform normal first aid procedures. Seek medical attention as required.

Inhalation : If discomfort or irritation to the nose and throat develop, remove from exposure and seek medical attention as needed. If breathing has stopped, perform artificial respiration; keep affected person warm and at rest; get medical attention as soon as possible.

Ingestion: In the unlikely event of ingesting a large quantity of material, seek medical attention immediately.

Contact, Skin : Thoroughly wash affected area with mild soap or detergent and water and prevent further contact. Seek medical attention as needed.

Contact, Eye : Wash eyes, including under eyelids, immediately with copious amounts of water for 15 minutes. Seek medical attention.

CARCINOGENIC ASSESSMENT (NTP ANNUAL REPORT, IARC MONOGRAPHS, OTHER):

Methyl iodide was identified as a known or suspected carcinogen by NTP and/or IARC.

VI. REACTIVITY DATA

Stability : Stable

Conditions to avoid: None for intact lamps.

Incompatibility (materials to avoid): None for intact lamps.

Hazardous decomposition products (including combustion products): None for intact lamps.

Hazardous polymerization products : Will not occur.

VII. PROCEDURES FOR DISPOSAL OF LAMPS

If lamps are broken, ventilate area where breakage occurred. Clean-up by vacuuming or other method that avoids dust generation. Take usual precautions for collections of broken glass. Place materials in closed containers to avoid generating dust.

It is the responsibility of the waste generator to ensure proper classification of waste products. To that end, TCLP tests should be conducted on all waste products, including this one, to determine the ultimate disposition in accordance with applicable federal, state and local regulations.

VIII. SPECIAL HANDLING INFORMATION - FOR BROKEN LAMPS

Ventilation : Use adequate general and local exhaust ventilation to maintain exposure levels below the PEL or TLV limits. If such ventilation is unavailable, use respirators as specified below.

Respiratory protection: Use appropriate NIOSH approved respirator if airborne dust concentrations exceed the pertinent PEL or TLV limits. All appropriate requirements set forth in 29 CFR 1910.134 should be met.

Eye protection : OSHA specified safety glasses, goggles or face shield are recommended if lamps are being broken.

Protective clothing : OSHA specified gloves are recommended for dealing with broken lamps.

Hygienic practices : After handling broken lamps, wash thoroughly before eating, smoking or using toilet facilities.

IX. INFORMATION FOR SAFE USE

Burns : All tungsten halogen lamps operate at higher temperatures than standard incandescent lamps; some as high as 1832 F, 1000°C. Therefore, caution must be used in replacing lamps. Allow enough time for lamp to cool before attempting replacement.

Shattering : Tungsten halogen lamps are at high pressure at all times and may unexpectedly shatter. Care must be taken to read and follow the directions and warnings accompanying the specific product to avoid personal injury and/or property damage.

UV Radiation : Some tungsten halogen lamps produce UV (ultraviolet) radiation which can cause skin burns and/or eye injury if not properly shielded. Care must be taken to read and follow the directions and warnings accompanying the specific product to avoid personal injury.

Although FEIT ELECTRIC COMPANY attempts to provide current and accurate information herein, it makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage or injury of any kind which may result from, or arise out of, the use of/or reliance on the information by any person.

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In case of questions, please call:

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