

Product Safety Data Sheet: Xenon Lamps

Section 1: Identification

This Safety Data Sheet covers xenon (Xe) lamps that are used in accelerated weathering and lightfastness testing. It covers the products **X-1800**, **X-1800+**, **X-1850**, **X-1850+**, **X-1500**, **X-6500**, and **X-12000**.

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Section 2: Hazard(s) Identification

The materials used in xenon lamps are not hazardous. These materials include quartz jacket, xenon gas, ceramic materials, tungsten, and molybdenum.

Quartz is present in its crystalline form in a xenon lamp. A broken lamp may generate a very small quantity of quartz respirable dust. OSHA has set a permissible exposure limit (PEL) for total quartz dust of $(1/2)[30/(\% \text{SiO}_2 + 2)]$ mg/m³, time-weighted average (TWA).

Q-Lab xenon lamps do not produce ozone.

Section 3: Composition/Information on Ingredients

Chemical Name	CAS Number
Quartz	14808-60-7
Xenon	7440-63-3
Tungsten	7440-33-7
Molybdenum	7439-98-7

Section 4: First Aid Measures

Xenon lamps are not hazardous in their normal operating state and no first aid measures are relevant.

Section 5: Fire-Fighting Measures

Materials in xenon lamps are not combustible nor flammable and fire-fighting measures will not be necessary. Under extreme heat the lamp may crack or melt.

Section 6: Accidental Release Measures

No special precautions are required for xenon lamps under normal conditions. However, although there is no chemical hazard, the quartz glass from a broken xenon lamp can pose a sharps hazard and caution must be taken in handling a broken xenon lamp.

Section 7: Handling and Storage

The ceramics of the xenon lamp do not sufficiently insulate operators from high voltage upon starting – therefore, lamp holders must be isolated from the luminaire. The degree of electrical isolation required is dependent on lamp voltage.

Additionally, lamps can expand during operation, thus lamp holders must be designed to accommodate this expansion. Xenon lamps should be stored and transported in the cardboard packaging provided.



Section 8: Exposure Controls/Personal Protection

Xenon lamps emit ultraviolet (UV) radiation, which can cause skin and eye injury. Operators must avoid exposure and use lamps only in fixtures that shield operators and laboratory occupants.

Lamps should be handled using safety glasses and skin protection, such as cotton gloves.

Section 9: Physical and Chemical Properties

Xenon lamps consist of a quartz tube with a diameter up to 2 cm and a length of up to 70 cm with ceramic insulation and filled with xenon gas.

Xenon lamps are not flammable nor explosive and are not subject to boiling or melting. The quartz is brittle and can crack if impacted. Quartz can soften at temperatures over 1600 °C – well above temperatures experienced in normal use.

Section 10: Stability and Reactivity

Xenon lamps are not chemically reactive and are highly chemically stable under storage and operating conditions. Hazardous reaction or polymerization will not occur.

Xenon lamps can be attacked by fluorhydric acids.

Mechanical impact can cause the quartz jacket of the lamp to shatter.

Section 11: Toxicological Information

Xenon lamps do not pose a toxicological hazard.

Section 12: Ecological Information (non-mandatory)

N/A

Section 13: Disposal Considerations (non-mandatory)

These lamps are environmentally friendly and can be disposed of normally.

Section 14: Transport Information (non-mandatory)

No special precautions are needed for shipping of xenon lamps from a safety standpoint, though they should be packaged to avoid breakage.

Section 15: Regulatory Information (non-mandatory)

N/A

Section 16: Other Information

This SDS was updated July 2022 by Q-Lab Corporation.



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