Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 09/23/2015 Reviewed on 09/23/2015

1 Identification

· **Product identifier**

· **Trade name: Medium-pressure ultraviolet (UV) discharge lamps**
· **CAS Number:**
14808-60-7

· **Recommended use and restriction on use**
· **Recommended use:** Manufactured article used for industrial printing and curing.
· **Restrictions on use:** Contact manufacturer.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Superior Quartz Products Inc.
2701 Baglyos Circle
Bethlehem, PA 18020
(610) 317-3450
superior@SQPUV.com

· **Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazard(s) identification

· **Classification of the substance or mixture**
The substance is not classified as hazardous according to the Globally Harmonized System (GHS).
· **Additional information:**
Product generates ultraviolet light during usage.
Exposure to product contents is highly unlikely during normal usage.
0 % of the mixture consists of component(s) of unknown toxicity.

· **Label elements**
· **GHS label elements**
The product is not classified as hazardous according to OSHA GHS regulations within the United States.
· **Hazard pictograms:** Not regulated.
· **Signal word:** Not regulated.

· **Hazard-determining components of labeling:** None.
· **Hazard statements:** Not regulated.
· **Precautionary statements:** Not Regulated.
· **Other hazards**
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**
· **CAS No. Description**
14808-60-7 quartz

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· **Additional information:** Ozone (CAS 10028-15-6) may be formed during use.

4 First-aid measures

· **Description of first aid measures**
· **General information:**
This is a sealed unit that will not result in exposure to the contents under normal and reaonsable conditions of use. In the unlikely event of exposure to contents, appropriate first aid should be administered.
· **After inhalation:**
Unlikely route of exposure.
Remove victim to fresh air.
Seek medical treatment in case of complaints.
· **After skin contact:**
If exposed to product contents:
Immediately rinse with water.
Seek medical treatment in case of complaints.
· **After eye contact:**
Unlikely route of exposure.
If exposed to product contents:
Rinse opened eye for several minutes under running water.
Remove contact lenses if worn.
Seek medical treatment in case of complaints.
· **After swallowing:**
Unlikely route of exposure.
Do not induce vomiting; immediately call for medical help.
· **Information for doctor**
· **Most important symptoms and effects, both acute and delayed:**
During operation, UV lamps emit ultraviolent radiation between 220 and 440 nanometers. Direct or reflected irradiation may be harmful to eyes and skin. Short term exposure can evoke erythema to the skin and will affect the cornea of the eyes causing irritation and/or conjunctivitas similar to "welder's burn". Long term exposure may cause severe skin burns and possible blindness.
UV lamps may emit short-wave radiation causing ozone to be emitted. If headache, shortness of breath or heavy chest symptoms occur, remove the affected person to fresh air and provide supplemental oxygen treatrment as needed.
· **Danger:** No relevant information available.
· **Indication of any immediate medical attention and special treatment needed:**
No relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
The product is not flammable.
Use fire fighting measures that suit the environment.
· **For safety reasons unsuitable extinguishing agents:** None.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.

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· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information:** No relevant information available.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures:**
Ensure adequate ventilation.
If product is leaking, wear protective clothing.
If containers are leaking, use respiratory protective device against the effects of fumes/dust/aerosol.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Pick up mechanically.
Use a mercury spill kit to absorb spilled materials.
Dispose of the collected material according to regulations.
· **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**
· **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Handle with care. Avoid jolting, friction and impact.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:** None.
· **Specific end use(s):** No relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
10028-15-6 ozone	
PEL (USA)	Long-term value: 0.2 mg/m³, 0.1 ppm

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REL (USA)	Ceiling limit value: 0.2 mg/m³, 0.1 ppm
TLV (USA)	Long-term value: 0.1* 0.16** 0.2*** mg/m³, 0.05* 0.08** 0.1*** ppm *heavy, **moderate, ***light work
EL (Canada)	Long-term value: 0.05* 0.08** 0.1*** ppm * heavy, **moderate, ***light work
EV (Canada)	Short-term value: 0.6 mg/m³, 0.3 ppm Long-term value: 0.2 mg/m³, 0.1 ppm
LMPE (Mexico)	Long-term value: 0.1* 0.08** 0.05*** ppm Ceiling limit value: 0.1 ppm A4, trabajo *ligero,**moderado;***pesado

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Avoid contact with the eyes and skin.
· **Engineering controls:**
Special materials should be readily available for skin exposures and for spills. See Section 4 for skin exposure information, and Section 6 for spill control information.
· **Breathing equipment:**
Not required under normal conditions of use.
Use suitable respiratory protective device in case of insufficient ventilation.
For spills, respiratory protection may be advisable.
· **Protection of hands:**
A broad spectrum protective cream against ultraviolet rays is recommended.

Thermally-protective gloves.

· **Eye protection:**

All personnel in the vicinity of an illuminated lamp should wear approved safety glasses with ultraviolet protection.

· **Body protection:**
Not required under normal conditions of use.
Protection may be required for spills.
· **Limitation and supervision of exposure into the environment** Avoid release to the environment.
· **Risk management measures** See Section 7 for additional information.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General information**
· **Appearance:**

Form:	Solid material
Color:	Colorless

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· **Odor:** Ozone during use
· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition:**
Melting point/Melting range: 1670 °C (3038 °F)
Boiling point/Boiling range: 357 °C (675 °F) (mercury)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**
Lower: Not determined.
Upper: Not determined.
· **Oxidizing properties** Not determined.

· **Vapor pressure:** Not determined.

· **Density:** Not determined.
· **Relative density:** Not determined.
· **Vapor density:** Not determined.
· **Evaporation rate:** Not determined.

· **Solubility in / Miscibility with:**
Water: Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**
Dynamic: Not determined.
Kinematic: Not determined.
· **Other information** No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions:** Reacts with strong acids and alkali.
· **Conditions to avoid:** No relevant information available.
· **Incompatible materials:** No relevant information available.
· **Hazardous decomposition products:**
Toxic metal compounds
Mercury metal and vapor.

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Mercury oxides.
Product may generate ozone.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **LD/LC50 values that are relevant for classification:** None.
· **Primary irritant effect:**
· **On the skin:** Based on available data, the classification criteria are not met.
· **On the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:** Risk of injury from ultraviolet radiation.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
Substance is not listed.		

· **NTP (National Toxicology Program):**		
14808-60-7	quartz	K

· **OSHA-Ca (Occupational Safety & Health Administration):**
Substance is not listed.

· **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Acute effects (acute toxicity, irritation and corrosivity):** None.
· **Repeated dose toxicity:** None.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No relevant information available.
· **Persistence and degradability:** No relevant information available.
· **Behavior in environmental systems**
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Additional ecological information**
· **General notes:** Avoid release to the environment.

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· **Other adverse effects:** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
The Toxicity Characteristic Leaching Procedure (TCLP) must be used to test the lamp to determine if it is hazardous waste. The waste leachate containing less than 0.2 mg/L of mercury is not hazardous and not subject to federal regulations. Waste leachate mercury concentrations exceeding 0.2 mg/L must be disposed of as hazardous waste.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**
· **DOT, IATA** 3506
· **ADR, IMDG** Not regulated.
· **UN proper shipping name**
· **DOT, IATA** Mercury contained in manufactured articles
· **ADR, IMDG** Not regulated.
· **Transport hazard class(es)**

· **DOT**

· **Class** 8 Corrosive substances

· **ADR, IMDG**
· **Class** Not regulated.

· **IATA**

· **Class** 8 Corrosive substances
· **Packing group**
· **DOT, IATA** III
· **ADR, IMDG** Not regulated.
· **Environmental hazards** Not applicable.
· **Special precautions for user** Not applicable.

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· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**
· **Remarks:** Lamps containing not more than 1g of mercury are not regulated per 173.164(a)(5).

· **ADR**
· **Remarks:** Lamps containing not more than 1kg of mercury are not regulated per special provision 366.

· **IMDG**
· **Remarks:** Lamps containing not more than 1kg of mercury are not regulated per special provision 366.

· **IATA**
· **Remarks:** Lamps containing not more than 1g of mercury are not regulated per special provision A69.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 302 (extremely hazardous substances):**
Substance is not listed.

· **Section 304 (emergency release notification):**
Substance is not listed.

· **Sections 311/312 (hazardous chemical threshold planning quantity in pounds):**
Substance is not listed.

· **Section 355 (extremely hazardous substances):**
Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**
Substance is not listed.

· **TSCA (Toxic Substances Control Act)**
Substance is listed.

· **Proposition 65 (California)**
· **Chemicals known to cause cancer:**
References to chemical components listed below are based on unbound respirable particles and are not generally applicable to product as supplied.
Present in trace quantities: lead diiodide.

14808-60-7	quartz

· **Chemicals known to cause reproductive toxicity for females:**
Substance is not listed.

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· **Chemicals known to cause reproductive toxicity for males:**
Substance is not listed.

· **Chemicals known to cause developmental toxicity:**
Present in trace quantities.

7439-97-6	mercury
7774-29-0	mercury diiodide

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**
Substance is not listed.

· **IARC (International Agency for Research on Cancer):**

14808-60-7	quartz	1

· **TLV (Threshold Limit Value established by ACGIH):**

14808-60-7	quartz	A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**
Substance is listed.

· **Canadian substance listings**

· **Canadian Domestic Substances List (DSL):**
Substance is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%):**
Substance is not listed.

· **Canadian Ingredient Disclosure list (limit 1%):**

14808-60-7	quartz

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 09/23/2015 / -
· **Sources**
Website, European Chemicals Agency (http://http://echa.europa.eu/)
Website, US EPA Substance Registry Services (http://http://ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (https://www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
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