

MATERIAL SAFETY DATA SHEET**CESIUM CHLORIDE**

PRODUCT CODE NUMBER(S): 2760-1, 2761-1

PRODUCT IDENTIFICATION**Chemical Name and Synonyms:** *Cesium chloride; Cesium monochloride; Hydrochloric acid, cesium salt***Chemical Family:** *Inorganic salt***Chemical Formula:** *CsCl***Product Use:** *Laboratory chemical***Manufacturer's Name and Address:***Caledon Laboratories Ltd.
40 Armstrong Avenue
Georgetown, Ontario L7G 4R9***Telephone No:** *(905) 877-0101***Fax No:** *(905) 877-6666***Emergency Telephone No:** *CANUTEC (613) 996-6666***HAZARDOUS INGREDIENTS OF MATERIALS**

<i>Ingredients</i>	<i>%</i>	<i>TLV Units</i>	<i>CAS No.</i>
<i>Cesium chloride</i>	<i>>99</i>	<i>15 mg/m³ (total dust)</i>	<i>7647-17-8</i>

PHYSICAL DATA**Physical State:** *Solid***Odour and Appearance:** *White crystalline powder; odourless***Odour Threshold (ppm):** *Not applicable***Vapour Pressure (mm Hg):** *Does not form vapour***Vapour Density (Air = 1):** *Not applicable***Evaporation Rate:** *Not applicable***Boiling Point (°C):** *1303°C***Melting Point (°C):** *646°C***pH:** *6.0 to 7.5 (3M, aqueous, 20°C)***Specific Gravity:** *3.988***Coefficient of Water/Oil distribution:** *Not available***SHIPPING DESCRIPTION****UN:** *Not regulated***T.D.G. Class:** *Not regulated***Pkg. Group:** *Not regulated***REACTIVITY DATA****Chemical Stability:** *Stable, hygroscopic***Incompatibility with other substances:** *May react violently with strong oxidizing agents, strong bases, or strong acids. Reacts violently with boron trifluoride.***Reactivity:** *Hygroscopic. Protect from moisture. Avoid heat and generation of dust.***Hazardous Decomposition Products:** *Oxides of contained metal and halogen, free halogen***FIRE AND EXPLOSION DATA****Flammability:** *Not combustible***Extinguishing Media:** *Use extinguishing media appropriate to the material that is burning. Use water in flooding amounts to cool containers, and disperse toxic vapours. Fight fire from upwind, from a safe distance. Because of release of toxic products, firefighters should wear protective equipment (positive-pressure self-contained breathing apparatus) and full Bunker Gear.***Flash Point (Method Used):** *Not applicable***Autoignition Temperature:** *Not applicable***Upper Flammable Limit (% by volume):** *Not applicable***Lower Flammable Limit (% by volume):** *Not applicable***Hazardous Combustion Products:** *Toxic oxides, free halogen***Sensitivity to Impact:** *None identified***Sensitivity to Static discharge:** *None identified***TOXICOLOGICAL PROPERTIES AND HEALTH DATA***To the best of our knowledge, the physical, chemical and toxicological properties of this substance have not yet been thoroughly investigated.***Toxicological Data:****LD₅₀:** *(oral, mouse) 2,300 mg/kg***LC₅₀:** *Not available***Effects of Acute Exposure to Product:****Inhaled:** *No human or animal information available. Inhalation of dust may cause mild transitory irritation of upper respiratory tract with wheezing, coughing, and shortness of breath.***In contact with skin:** *No human or animal information available. Not expected to be irritating, based on pH.***In contact with eyes:** *No human or animal information available. Dusts or solutions may cause mild, temporary irritation, with redness, tearing, itching, pain.***Ingested:** *Large doses may cause gastrointestinal irritation, nausea and vomiting. Ingestion is not a typical route of industrial exposure.***Effects of Chronic Exposure to Product:***Prolonged or repeated exposure to cesium compounds may cause blood and neuromuscular effects, with hyper-irritability, spasms, dizziness, abdominal cramps, vomiting, diarrhea, convulsions and collapse. Chronic ingestion of cesium has been fatal to laboratory animals, possibly due to the replacement of potassium.***Carcinogenicity:** *Probably not carcinogenic. No human or animal information available.***Teratogenicity:** *No human or animal information available*

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Reproductive Effects: No human or animal information available

Mutagenicity: No information available

Synergistic Products: None known

PREVENTIVE MEASURES

Engineering Controls: Local exhaust ventilation recommended.

Respiratory Protection: Dust mask. Up to 10x TLV, or the maximum use specified by the respirator supplier, whichever is lowest, NIOSH/MSHA approved half-face dust/mist filter respirator. Up to 50x TLV, or the maximum use specified by the respirator supplier, whichever is lowest, NIOSH/MSHA approved full face-piece dust/mist filter respirator. Higher or unknown concentrations, or for fire or spill conditions, self-contained breathing apparatus, or full face-piece, positive-pressure supplied-air respirator.

Eye Protection: Chemical safety glasses.

Skin Protection: Protective gloves and other protective clothing sufficient to prevent contact.

Other Personal Protective Equipment: Safety shower and eye wash in work area.

Leak and Spill Procedure: Ventilate area of spill. Restrict access to spill area. If spill is large, and dust is present, clean-up personnel should be trained in the handling of hazardous materials, and should wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes. Dampen material and collect into suitable containers for disposal. Wash area of spill thoroughly with water.

Waste Disposal: Follow all federal, provincial and local regulations.

Handling Procedures and Equipment: Workers using this chemical should be properly trained in its hazards and its safe use, and should wear appropriate protective equipment and clothing. Keep work areas free of incompatible materials. Use the smallest amounts possible for the purpose, in designated areas with adequate ventilation. Avoid generating dusts. Avoid all contact and inhalation. Wash thoroughly after working with this chemical. Keep containers closed when not in use.

Storage Requirements: Store in suitable, labelled containers, in a cool, dry, ventilated area, away from incompatible substances. Keep tightly closed. Avoid dust buildup by frequent cleaning of storage area.

FIRST AID MEASURES

Specific Measures:

Eyes: Flush eyes thoroughly with gently running water, holding eyelids open while flushing, for five to ten (5-10) minutes, or until no trace of chemical remains. If irritation persists, get medical attention.

Skin: Remove contaminated clothing. Brush or wipe off dry material. Wash skin with plenty of water until no evidence of chemical remains. If irritation persists, get medical attention.

Inhalation: Remove to fresh air. Give oxygen and get medical attention for breathing difficulty.

Ingestion: If victim is alert and NOT convulsing, give several glasses of water to drink to dilute. If large amounts were swallowed or if victim feels unwell, get medical advice. If vomiting occurs spontaneously, rinse mouth thoroughly and give more water to drink.

REFERENCES USED

CCINFO disc: MSDS's, April 2007

Budavari: The Merck Index, 12th ed., 1997

Sax, Lewis: Hawley's Condensed Chemical Dictionary, 11th ed., 1987

Suppliers' Material Safety Data Sheets

ADDITIONAL INFORMATION

Date Issued: February 21, 1992

Revision: April 2010

MSDS: 2760-1, 2761-1

Proposed WHMIS Designation: Not a controlled product. Not required to be updated every three years (WHMIS 1992, B-40, Section 29,2)

Prepared by: Caledon Laboratories Ltd. (905) 877-0101
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