CALEDON LABORATORY CHEMICALS

MATERIAL SAFETY DATA SHEET

PHENYL MERCURIC ACETATE

PRODUCT CODE NUMBER(S): 5550-1

PRODUCT IDENTIFICATION

Chemical Name and Synonyms: *Phenyl mercuric acetate*
Chemical Family: *Organic mercury salt*
Chemical Formula: $C_6H_5HgOCOCH_3$
Product Use: *Laboratory reagent*
Manufacturer's Name and Address:
Caledon Laboratories Ltd.
40 Armstrong Avenue
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HAZARDOUS INGREDIENTS OF MATERIALS

Ingredients	*%*	*TLV Units*	*CAS No.*
Phenyl mercuric acetate	*97*	*0.025 mg/m^3 (Hg)*	*62-38-4*

PHYSICAL DATA

Physical State: *Solid*
Odour and Appearance: *White to yellow crystalline powder*
Odour Threshold (ppm): *Not available*
Vapour Pressure (mm Hg): *1.2 x 10(-4) mm Hg @ 25°C*
Vapour Density (Air = 1): *11.6*
Evaporation Rate: *Not available*
Boiling Point (degrees C): *Decomposes*
Melting Point (degrees C): *149°C to 153°C*
pH: *Not available*
Specific Gravity: *Not available*
Coefficient of Water/Oil distribution: *Not available*

SHIPPING DESCRIPTION

UN: *1674*
T.D.G. Class: *6.1*
Pkg. Group: *II*

REACTIVITY DATA

Chemical Stability: *Stable under normal conditions of use and storage.*
Incompatibility with other substances: *May react violently or explosively with strong oxidizing agents, strong reducing agents, strong acids.*
Reactivity: *Avoid excessive heat, ignition sources, incompatible materials, generation of dust.*
Hazardous Decomposition Products: *CO, CO_2, mercury, mercury oxides*

FIRE AND EXPLOSION DATA

Flammability: *Combustible above 150°C. Mixtures of dust with air may be explosive above 37.8°C.*
Extinguishing Media: *Water fog or spray, alcohol foam, dry chemical, carbon dioxide. Water spray can also be used to cool containers, prevent dust formation, flush chemcial away from fire. Move containers from fire area if it can be done without risk. Use water spray or fog to cool containers and disperse vapours. Fight fire from upwind, from a safe distance. Firefighters must wear protective equipment (positive pressure full facepiece self-contained breathing apparatus) and clothing (chemical splash suit) sufifcient to prevent inhalation of vapours and contact with skin and eyes.*
Flash Point (Method Used): *>37.8°C*
Autoignition Temperature: *Not available*
Upper Flammable Limit (% by volume): *Not available*
Lower Flammable Limit (% by volume): *Not available*
Hazardous Combustion Products: *CO, CO_2, mercury, mercury oxides*
Sensitivity to Impact: *None identified*
Sensitivity to Static discharge: *As with most organic powders, mixtures of dust with air may be sensitive under certain conditions, when ignited by an electrostatic or other high-voltage spark, or other ignition source.*

TOXICOLOGICAL PROPERTIES AND HEALTH DATA

Toxicological Data:

LD_{50}: *(oral, rat) 41 mg/kg*
LC_{50}: *Not available*

Effects of Acute Exposure to Product:

Inhaled: *Dust and vapour arevery irritating and very toxic. Can cause burns and severe respiratory tract damage with sore throat, coughing, pain, tightness in chest, breathing difficulties, shortness of breath, bronchitis and pneumonitis. Readily absorbed, causing systemic mercury poisoning,with headache, muscle weakness, anorexia, gastrointestinal disturbance, rapid and weak pulse, shallow breathing, paleness, ringing in the ears, liver changes, fever, kidney damage, exhaustion and collapse. Delayed death may occur due to renal failure.*
In contact with skin: *Skin contact may cause irritation, dermatitis or sensitivity. Is readily absorbed through the skin in toxic amounts, with symptoms as in "Ingested".*
In contact with eyes: *Dust or solutions can cause irritation and even ulceration of the conjunctiva and cornea with permanent eye damage.*
Ingested: *Very toxic. Average lethal dose for inorganic mercury salts ~1g. Ingestion may cause burning of the mouth and pharynx, abdominal pain, vomiting, bloody diarrhea, and systemic poisoning, with symptoms as in "Inhaled".*

Effects of Chronic Exposure to Product:

Danger of cumulative and irreversible effects. Chronic exposure through any route will damage central nervous system, brain, liver, kidneys, and cause symptoms such as headache, tremors, personality and behaviour changes, loosening of teeth, loss of appetite, ulceration of skin, impaired memory, digestive disorders, skin rashes. Can cause skin sensitization. Repeated skin contact can cause skin to turn grey in colour. Persons with pre-existing nervous, kidney, or respiratory disorders, or known sensitivity to mercury may be more susceptible to the effects of this substance.

Carcinogenicity: *No information available*

Teratogenicity: *No information specific to mercurous chloride is available, but other mercury compounds have been shown to retard fetal growth in animal testing.*

Reproductive Effects: *Reproductive effects cited.*

Mutagenicity: *No specific information available, but other mercury compounds are mutagenic in bacterial and mammalian assays.*

Synergistic Products: *None known*

PREVENTIVE MEASURES

Engineering Controls: *Local exhaust required.*

Respiratory Protection: *Dust mask. Use only in a chemical fumehood. Up to 10x TLV, or the maximum use specified by the respirator supplier, whichever is lowest, NIOSH approved half- face high-efficiency 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 high-efficiency 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 goggles and/or face shield. Do not wear contact lenses when working with chemicals.*

Skin Protection: *Rubber gauntlet gloves. Impervious lab coat, or apron, sleeves, and boots as required to prevent contact.*

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

Leak and Spill Procedure: *Evacuate and ventilate area. Eliminate ignition sources. Cleanup personnel must be thoroughly trained in the handling of hazardous materials, and must wear protective equipment and clothing sufficient to prevent all contact and inhalation of fumes. Do not touch spilled material. Absorb on sand or other inert material, collect and transfer carefully into container for removal by disposal company. Prevent from entering sewers or waterways. Contaminated absorbent may pose the same hazards as the material; treat with caution. Wash site of spillage thoroughly with water and detergent.*

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

Handling Procedures and Equipment: *TOXIC; CUMULATIVE, POSSIBLE TERATOGEN, MUTAGEN, COMBUSTIBLE DUST. Workers handling this product must be thoroughly trained in its hazards and its safe use, and must wear appropriate protective equipment and clothing. Avoid generating dust. If there is dust, keep away from heat, sparks, and all sources of ignition, avoid the accumulation of static charge, use anti-sparking tools, ground and bond equipment and containers. Use the smallest amount possible for the purpose, in a designated area with adequate ventilation. Avoid all contact and inhalation of dust or fumes. Use good housekeeping to prevent accumulations of dust. Use work surfaces that can be easily decontaminated. Avoid contact with skin and eyes. Keep containers closed when not in use and when empty.*

Storage Requirements: *Store in sturdy, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight, and away from heat and ignition sources and incompatible or combustible materials. Protect from damage and inspect regularly for signs of leaking. Keep containers tightly closed.*

FIRST AID MEASURES

Specific Measures:

Eyes: *Flush thoroughly with gently running water for at least fifteen (15) minutes, holding eyelids open while flushing. Take care not to flush contaminated water into unaffected eye. Wear protective gloves to avoid contact during first aid procedures. Get medical attention.*

Skin: *Remove contaminated clothing, including watches, rings, belts, and shoes. Rescuer should wear impervious gloves to avoid contact with this chemical. Wash skin with plenty of running water for at least fifteen (15) minutes. Get medical attention. Decontaminate clothing and leather goods (shoes, belts) before reuse, or discard.*

Inhalation: *Remove to fresh air. Give oxygen and get medical attention for any breathing difficulty. If breathing has stopped begin artificial respiration immediately.*

Ingestion: *If the person is conscious, alert, and not convulsing, give large quantities (2 to 4 glasses) of water to drink immediately. After the water has been swallowed encourage vomiting (under medical supervision) by touching the back of throat with finger or by administering syrup of ipecac. Get medical attention immediately (show label if possible).*

REFERENCES USED

CCINFO disc: MSDS's, May 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: *July 15, 1991*

Revision: *May 2010*

MSDS: *5550-1*

Proposed WHMIS Designation: *D1A; D2A; D2B*

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