PRODUCT IDENTIFICATION

Chemical Name and Synonyms: Sodium cacodylate; Cacodylic acid, sodium salt; Sodium dimethyl arsenate
Chemical Family: Arsenic compound
Chemical Formula: C₂H₆AsO₂Na. 3H₂O
Product Use: Laboratory reagent

Manufacturer’s Name and Address:
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HAZARDOUS INGREDIENTS OF MATERIALS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>%</th>
<th>TLV Units</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium cacodylate</td>
<td>&gt;98</td>
<td>0.2 mg/m³ (as As)</td>
<td>124-65-2</td>
</tr>
</tbody>
</table>

PHYSICAL DATA

Physical State: Solid
Odour and Appearance: White crystals, odourless
Odour Threshold (ppm): Not applicable
Vapour Pressure (mm Hg): Not available
Vapour Density (Air = 1): Not available
Evaporation Rate: Not available
Boiling Point (degrees C): Not available
Melting Point (degrees C): 195 to 200°C
pH: Not available
Specific Gravity: Not available
Coefficient of Water/Oil distribution: Not available

SHIPPING DESCRIPTION

UN: 1688
T.D.G. Class: 6.1
Pkg. Group: II

REACTIVITY DATA

Chemical Stability: Stable
Incompatibility with other substances: May react violently or explosively with strong oxidizing agents, strong acids, strong bases. Reacts with acid to form highly toxic gas, dimethylarsine.
Reactivity: Avoid excessive heat, ignition sources, incompatible materials, generation of dust.
Hazardous Decomposition Products: COₓ, arsenic oxides, toxic gases.

FIRE AND EXPLOSION DATA

Flammability: Not combustible. Not expected to be an explosion hazard.
Extinguishing Media: Use an extinguisher appropriate to the surrounding material that is burning. Use water as spray or fog to cool containers, prevent dust formation, flush chemical away from fire. Fight fire from upwind, from a safe distance. Firefighters must wear protective equipment (positive-pressure, full face-piece self-contained breathing apparatus) and clothing (chemical splash suit) sufficient to prevent inhalation of dust or fumes, and contact with skin, eyes, and clothing.
Flash Point (Method Used): None
Autoignition Temperature: Not applicable
Upper Flammable Limit (% by volume): Not applicable
Lower Flammable Limit (% by volume): Not applicable
Hazardous Combustion Products: COₓ, arsenic oxides, toxic gases.
Sensitivity to Impact: None identified
Sensitivity to Static discharge: None identified

TOXICOLOGICAL PROPERTIES AND HEALTH DATA

Toxicological Data:
LD₅₀: (oral, rat) 644 mg/kg; (oral, mouse) 4 mg/kg
LC₅₀: (rat) >2,600 mg/m³/2 h

Effects of Acute Exposure to Product:
Toxic by all routes of exposure.
Inhaled: Highly toxic. Readily absorbed through respiratory tract. Inhalation of dust, mist or vapour may cause shortness of breath, rapid heart beat, headache, restlessness, low blood pressure, convulsions, collapse and death from circulatory failure. May cause severe irritation of mucous membranes and pulmonary edema, with cough, frothy sputum, noisy breathing, shortness of breath, cyanosis, and death.
In contact with skin: Highly toxic. May cause irritation, with redness and pain. Exposure to arsenic compounds may produce hyperpigmentation of the skin and hyperkeratoses of plantar and palmar surfaces. May be absorbed through skin, with symptoms as in "Ingested".
In contact with eyes: May cause moderate to severe irritation, with redness, tearing, pain, possible damage to conjunctiva.
Ingested: Highly toxic. Causes burning in throat and esophagus, severe abdominal pain, nausea, projectile vomiting, vomiting of blood, bloody diarrhea and shock with weak, rapid pulse, shallow breathing, strong odour of garlic on breath, in urine and sweat. May cause severe damage to liver and kidneys. Ingestion of arsenic compounds can cause convulsions, coma, and possibly death within 24 hours. Estimated lethal dose for humans, 120 mg.
PREVENTIVE MEASURES

Engineering Controls: Local exhaust ventilation required.
Respiratory Protection: Dust/mist mask. Use in a fume hood. Up to 10x TLV, or the maximum use specified by the respirator supplier, whichever is lowest, NIOSH/OSHA approved half-face dust/mist filter respirator. Up to 50x TLV, or the maximum use specified by the respirator supplier, whichever is lowest, NIOSH/OSHA 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 goggles or face shield. Do not wear contact lenses when working with chemicals.
Skin Protection: Impervious rubber or plastic gloves. Impervious apron, sleeve and boots sufficient to prevent impervious rubber or plastic gloves. Impervious apron, sleeve and boots sufficient to prevent contact. GET MEDICAL ATTENTION. Onset of symptoms may be delayed; if victim feels unwell during the next 24 hours, get medical attention immediately.
Inhalation: Immediately remove to fresh air (caution must be used by rescuers to avoid exposure to contaminating dust or fumes). Give oxygen or get medical attention for any breathing difficulty. If breathing has stopped begin artificial respiration immediately. Use mouth guard to avoid contact. GET MEDICAL ATTENTION.
Eye: Flush thoroughly with running water for at least fifteen (15) minutes. Get medical attention immediately. Decontaminate clothing completely before reuse, or discard; inform laundry of hazards of contaminated clothing.
Skin: Remove contaminated clothing (including shoes, watches, belts, rings). Drench skin with plenty of running water for at least fifteen (15) minutes. Get medical attention immediately. Decontaminate clothing completely before re-use, or discard; Inform laundry of hazards of contaminated clothing.
Ingestion: If victim is alert and not convulsing, rinse mouth thoroughly with water; give 2 to 4 glasses of water to drink to dilute, and induce vomiting by sticking a finger down the throat, or by giving syrup of ipecac. GET MEDICAL ATTENTION. If spontaneous vomiting occurs, rinse mouth thoroughly with water, and give 2 to 4 more glasses of water to drink. Onset of symptoms may be delayed; if victim feels unwell during the next 24 hours, get medical attention immediately.
Note to physician: If emesis is unsuccessful after two doses of ipecac, consider gastric lavage. Monitor urine arsenic level. Alkalization of urine may help prevent disposition of red cell breakdown products in renal cell tubular cells. Abdominal x-rays should be done for all ingestions. Chelation therapy with BAL, followed by n-penicillamine may be useful, but dosing guidelines are not clearly established.

RECOMMENDATIONS

FIRST AID MEASURES

Specific Measures:
Eyes: Flush thoroughly with 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 advice immediately.
Skin: Remove contaminated clothing (including shoes, watches, belts, rings). Drench skin with plenty of running water for at least fifteen (15) minutes. Get medical advice immediately. Decontaminate clothing completely before re-use, or discard; inform laundry of hazards of contaminated clothing.

TERATOGENICITY: Possible teratogen. Evidence inconclusive at present; has caused effects in animal testing.

REFERENCES USED

CCINFO disc: Cheminfo, MSDS’s
Budavari: The Merck Index, 12th ed., 1997
Suppliers’ Material Safety Data Sheets

ADDITIONAL INFORMATION

Date Issued: May 13, 1999
Revision: May 2011
MSDS: 8250-5
Proposed WHMIS Designation: D2A; D1B

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