Material Safety Data Sheet
Chlorodibromomethane

MSDS# 12163

Section 1 - Chemical Product and Company Identification

MSDS Name: Chlorodibromomethane
Catalog Numbers: AC195540000, AC195540100
Synonyms: Dibromochloromethane; CDBM.

Company Identification:
Acros Organics BVBA
Janssen Pharmaceuticalaan 3a
2440 Geel, Belgium

Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 124-48-1
Chemical Name: Chlorodibromomethane
%: 98+%
EINECS#: 204-704-0

Hazard Symbols: XN
Risk Phrases: 22 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Harmful if swallowed. May cause cancer based on animal studies. Causes eye, skin, and respiratory tract irritation. Target Organs: Blood, liver, respiratory system, eyes, skin.

Potential Health Effects
Eye: Causes eye irritation.
Skin: Causes skin irritation. May be harmful if absorbed through the skin.
Ingestion: Harmful if swallowed. May cause irritation of the digestive tract. May cause effects similar to those of acute inhalation.

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown blood. May be harmful if inhaled. May cause liver damage.
Chronic: May cause cancer according to animal studies. Prolonged exposure may produce a narcotic effect.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid immediately. Call a poison control center.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature: Not available

Flash Point: Not available

Explosion Limits: N/A

Explosion Limits: Lower:

Explosion Limits: Upper:

NFPA Rating: health: 2; flammability: 1; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Store in a tightly closed container. Store in a dry area. Keep refrigerated. (Store below 4°C/39°F.)

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorodibromomethane</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Chlorodibromomethane: None listed

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a
Respirators: NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid
Color: clear, colorless - pale yellow to orange
Odor: chloroform-like
pH: Not available
Vapor Pressure: Not available
Vapor Density: 7.2
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 115 - 120 deg C @ 760 mmHg
Freezing/Melting Point: -22 deg C (-7.60°F)
Decomposition Temperature: Not available
Solubility in water: 4.4 g/L (22°C)
Specific Gravity/Density: 2.451
Molecular Formula: CHBr2Cl
Molecular Weight: 208.28

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials.
Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents, strong acids, strong bases, magnesium.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 124-48-1: PA6360000
RTECS:

LD50/LC50: CAS# 124-48-1: Oral, mouse: LD50 = 800 mg/kg;
Oral, rat: LD50 = 370 mg/kg;

Carcinogenicity: Chlorodibromomethane - IARC: Group 3 (not classifiable)
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Please contact Fisher Scientific for shipping information
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

USA RQ: CAS# 124-48-1: 100 lb final RQ; 45.4 kg final RQ
European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN
Risk Phrases:
  R 22 Harmful if swallowed.
  R 36/37/38 Irritating to eyes, respiratory system and skin.
Safety Phrases:
  S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)
CAS# 124-48-1: Not available

Canada
CAS# 124-48-1 is listed on Canada's NDSL List
Canadian WHMIS Classifications: D1B, D2B
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 124-48-1 is not listed on Canada's Ingredient Disclosure List.

US Federal
TSCA
CAS# 124-48-1 is listed on the TSCA Inventory.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

--------------------------------------------------------------------------------
Section 16 - Other Information
MSDS Creation Date: 9/24/1998
Revision #5 Date 7/20/2009

Reviewed 2013.07.03 13:53:40 -04'00'

--------------------------------------------------------------------------------