Material Safety Data Sheet
Diphenhydramine Hydrochloride, 99%

MSDS# 03404

Section 1 - Chemical Product and Company Identification

MSDS Name: Diphenhydramine Hydrochloride, 99%
Catalog Numbers: AC350850000, AC350850250, AC350851000
Synonyms: Benzhydramine Hydrochloride; Dimedrolum.

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticaal 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
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 147-24-0
Chemical Name: Diphenhydramine Hydrochloride
%: 99%
EINECS#: 205-687-2

Hazard Symbols: XN
Risk Phrases: 22

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Warning! Harmful if swallowed. May cause eye and skin irritation. May cause cardiac disturbances. May cause respiratory and digestive tract irritation. May cause nervous system effects. Target Organs: Central nervous system, cardiovascular system.

Potential Health Effects
Eye: May cause eye irritation.
Skin: May cause skin irritation. May be harmful if absorbed through the skin.
Harmful if swallowed. May cause irritation of the digestive tract. May cause hallucinations and distorted perceptions. Ingestion may cause convulsions, seizures and possible coma. May cause rapid heartbeat and cardiac arrhythmias.
Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. May be harmful if inhaled.
Chronic: Effects may be delayed. Adverse reproductive effects have been reported in animals.
Section 4 - First Aid Measures

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

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water.

Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

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

Autoignition Temperature: Not available

Flash Point: Not available

Explosion Limits: Not available

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

Section 6 - Accidental Release Measures

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

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid breathing dust, mist, or vapor. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use only in a chemical fume hood.

Storage: Store in a cool, dry place. Store in a tightly closed container.

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>Diphenhydramine Hydrochloride</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Diphenhydramine Hydrochloride: None listed

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

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: Powder
Color: white
Odor: odorless
pH: 4.5-6 50g/l aq.sol
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: 168 - 169 deg C
Decomposition Temperature: Not available
Solubility in water: 1000 g/l
Specific Gravity/Density:

Chemical Stability:
Stable. Darkens on exposure to light.

Conditions to Avoid:
Incompatible materials, light, dust generation, exposure to air.

Incompatibilities with Other Materials:
Not available

Hazardous Decomposition Products:
Hydrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization:
Will not occur.

Section 10 - Stability and Reactivity

Section 11 - Toxicological Information
RTECS#:
CAS# 147-24-0: KR7000000

RTECS:
CAS# 147-24-0: Oral, mouse: LD50 = 164 mg/kg;
Oral, rat: LD50 = 500 mg/kg;

LD50/LC50:

Carcinogenicity:
Diphenhydramine Hydrochloride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other:
The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information
US DOT
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations

   European Labeling in Accordance with EC Directives
   Hazard Symbols: XN
   Risk Phrases:
      R 22 Harmful if swallowed.
   Safety Phrases:

   WGK (Water Danger/Protection)
   CAS# 147-24-0: 2

Canada

   CAS# 147-24-0 is listed on Canada's DSL List
   Canadian WHMIS Classifications: D1B
   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# 147-24-0 is not listed on Canada's Ingredient Disclosure List.

US Federal

   TSCA
   CAS# 147-24-0 is not listed on the TSCA Inventory. It is for research and development
   use only.

   Section 16 - Other Information

   MSDS Creation Date: 1/16/2002
   Revision #5 Date 7/20/2009

   The information above is believed to be accurate and represents the best information currently available
   to us. However, we make no warranty of merchantibility or any other warranty, express or implied,
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   their own investigations to determine the suitability of the information for their particular purposes. In no
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