



## MATERIAL SAFETY DATA SHEET

NAME OF PRODUCT: Diphenhydramine HCl

MSDS DATE: 22 May, 2012

### Notice

NSF Reference Standards are for test and assay use only and are not intended for human or animal consumption. This document communicates information relating to test and assay use only and may not be applicable for any unauthorized use.

#### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Diphenhydramine HCl  
Catalog Code: RS1-0079  
Synonym: 2-(Diphenylmethoxy)-N,N-dimethylethylamine hydrochloride  
Chemical Formula:  $C_{17}H_{21}NO \cdot HCl$   
CAS #: 147-24-0

#### Contact Information:

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#### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Name: Diphenhydramine HCl

CAS#: 147-24-0

% by Weight: 100%

Toxicological Data on Ingredients:  
Acute ORAL (LD50): 500 mg/kg [Rat]

#### SECTION 3: HAZARDS IDENTIFICATION

#### Potential Acute Health Effects:

Extremely hazardous in case of eye contact (irritant). Very hazardous in case of ingestion and inhalation. Hazardous in case of skin contact (irritant). Inflammation of the eye is characterized by redness, watering and itching.

#### Potential Chronic Health Effects:



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The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can product target organ damage.

CARCINOGENIC EFFECTS: Classified 2 (Reasonably anticipated) by NTP.

MUTAGENIC EFFECTS: Not Available.

TERATOGENIC EFFECTS: Not Available.

DEVELOPMENTAL TOXICITY: Not Available.

### SECTION 4: FIRST AID MEASURES

#### **Eye Contact:**

Check for and remove contact lenses. Flush eyes with plenty of water for at least 15 minutes. Seek medical attention. Cold water may be used do not use eye ointment.

#### **Skin Contact:**

In case of contact, immediately wash skin with non-abrasive soap and plenty of water. Cover skin with an emollient. Seek medical attention if irritation persists. Cold water may be used. Wash contaminated clothing before reusing.

#### **Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

#### **Inhalation:**

If inhaled, remove to fresh air. Seek immediate medical attention.

#### **Serious Inhalation:**

Not Available

#### **Ingestion:**

Do not induce vomiting. Loosen tight clothing. If the victim is not breathing perform mouth-to-mouth resuscitation. Seek immediate medical attention.

#### **Serious Ingestion:**

Not Available.

### SECTION 5: FIRE-FIGHTING MEASURES

Flammability of the Product: May be combustibile at high temperature.

Auto-Ignition Temperature: Not Available.

Flammable Limits: Not Available.

Flash Points: Not Available.

Products of Combustion: These products are carbon oxides (CO, CO<sub>2</sub>), and nitrogen oxides (NO, NO<sub>2</sub>...), and hydrogen chloride.

Fire Hazards in Presence of Various Substances: Not Available.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not Available.

Risks of explosion of the product in presence of static discharge: Not Available.

Special Remarks on Fire Hazards: Not Available.



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Special Remarks on Explosion Hazards: Not Available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface. Dispose of according to local and regional authority requirements.

Large Spill:

Use appropriate tools to put the material into a suitable waste disposal container. Finish cleaning by spreading water on the contaminated surface. Dispose of according to local and regional authority requirements.

### SECTION 7: HANDLING AND STORAGE

Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors/dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Storage:

Keep in original container tightly closed in a dry, cool and well-ventilated place. Protect from light.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

If laboratory operations generate dust, fume or mist, use local exhaust ventilation or other appropriate engineering controls to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles, lab coat, dust respirator and gloves. Be sure to use an approved/certified respirator or equivalent.

Personal Protection in Case of a Large Spill:

Splash goggles, full suit, dust respirator, boots and gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



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Exposure Limits: Not Available.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance: Solid.  
Odor: Not Available.  
Taste: Not Available.  
Molecular Weight: 291.82 g/mol  
Color: White.  
pH (1% soln/water): Not Available.  
Boiling Point: Decomposes.  
Melting Point: 168°C (334.4°F)  
Critical Temperature: Not Available.  
Specific Gravity: Density: Not Available.  
Vapor Pressure: Not Applicable.  
Vapor Density: Not Available.  
Volatility: Not Available.  
Odor Threshold: Not Available.  
Water/Oil Dist. Coeff: Not Available.  
Ionicity (in Water): Not Available.  
Dispersion Properties: See solubility in water.  
Solubility: Easily soluble in cold and hot water.

### SECTION 10: STABILITY AND REACTIVITY

Stability: The product is stable.  
Instability Temperature: Not Available.  
Conditions of Instability: Not Available.  
Corrosivity: Non-corrosive in presence of glass.  
Special Remarks on Reactivity: Not Available.  
Special Remarks on Corrosivity: Not Available.  
Polymerization: Will not occur.

### SECTION 11: TOXICOLOGICAL INFORMATION

Routes of Entry: Eye contact, Inhalation and ingestion.

Toxicity to Animals: Acute ORAL (LD50): 500 mg/kg [Rat]

Chronic effects on humans: Carcinogenic Effects classified 2 (Reasonably anticipated) by NTP. The substance is toxic to lungs and mucous membranes.



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Other Toxic Effects on Humans: Very hazardous in case of ingestion and inhalation. Hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not Available.

Special Remarks on Chronic Effects on Humans: Embryotoxic and/or fetotoxic in animal.

Special Remarks on other Toxic Effects on Humans: Not Available.

### SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not Available.

BOD5 and COD: Not Available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not Available.

### SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### SECTION 14: TRANSPORT INFORMATION

DOT Classification: Toxic Solid Class 6.1

Identification: UN2811 Toxic Solid, Organic N.O.S. (Diphenhydramine Hydrochloride) Class 6.1 PG III.

Special Provisions for Transport: Not Applicable.

### SECTION 15: REGULATORY INFORMATION

Federal and State Regulations: TSCA 8(b) inventory: No products were found.

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): Not Available.



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R25- Toxic if swallowed. R36/37/38-Irritating to eyes, respiratory system and skin. R41 - Risk of serious damage to eyes. R45- May cause cancer. R63 - Possible risk of harm to the unborn child. S20 - When using do not eat or drink. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37- Wear suitable protective clothing and gloves. S45- In case of accident or if you feel unwell, seek medical advice immediately. S60- This material and its container must be disposed of as hazardous waste.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves, lab coat, splash goggles and dust respirator. Be sure to use an approved/certified respirator or equivalent when ventilation is inadequate.

### SECTION 16: OTHER INFORMATION

References: Not Available.

Other Special Considerations: Not Available.

### DISCLAIMER:

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