



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 05/09/2008
Date Updated: 08/13/2007
Version 1.50

Section 1 - Product and Company Information

Product Name	Amitriptyline hydrochloride, minimum 98% TLC		
Product Number	A8404		
Brand	Sigma Chemical		
Company	Sigma-Aldrich		
Address	3050 Spruce Street		
City, State, Zip, Country	SAINT LOUIS, MO 63103 US		
Technical Phone:	800-325-5832	Emergency Phone:	314-776-6555
Fax:	800-325-5052		

Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
AMITRIPTYLINE HYDROCHLORIDE	549-18-8	No	208-964-6	

Formula C20H23N.ClH
Synonyms Amitriptyline chloride, Amitriptyline hydrochloride, Damlen hydrochloride, Deprex, Domical, 10,11-Dihydro-N,N-dimethyl-5H-dibenzo(a,d)cycloheptene delta(sup 5, gamma)propylamine HCl, 5-(3-Dimethylaminopropylidene)dibenzo(a,d)(1,4)cycloheptadiene hydrochloride, Elavil hydrochloride, Endep, Etrafon, Laroxyl, Lentizol, Limbitrol DS, Miketonin, Proheptadien monohydrochloride, 1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cyclohepten-5-ylidene)-N,N-dimethyl-, hcl, Rantoron, Saroten, SK-Amitriptyline, Triavil, Tryptizol, Yamanouchi

Section 3 - Hazards Identification

Emergency Overview

Highly Toxic (USA) Toxic (EU).
Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. Possible risk of harm to the unborn child.
Target organ(s): Heart, Central nervous system.

HMS Rating			
Health: 3	Flammability: 0	Reactivity: 0	
NFPA Rating			
Health: 3	Flammability: 0	Reactivity: 0	

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media Suitable

Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill

Evacuate area.

Procedure(s) of Personal Precaution(s)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Do not breathe the dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep tightly closed. Store at 2-8°C

Section 8 - Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Use only in a chemical fume hood.

Personal Protective Equipment

Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand

Compatible chemical-resistant gloves.

Eye

Chemical safety goggles.

General Hygiene Measures

Wash contaminated clothing before reuse. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	
Physical State	Solid
Molecular Weight 313.87 AMU	
pH N/A	
BP/BP Range N/A	
MP/MP Range 198 - 200 °C	
Freezing Point N/A	
Vapor Pressure N/A	
Vapor Density N/A	
Saturated Vapor Conc. N/A	
SG/Density N/A	
Bulk Density N/A	
Odor Threshold N/A	
Volatile% N/A	
VOC Content N/A	
Water Content N/A	
Solvent Content N/A	
Evaporation Rate N/A	
Viscosity N/A	
Partition Coefficient N/A	
Decomposition Temp. N/A	
Flash Point °F N/A	
Flash Point °C N/A	
Explosion Limits N/A	
Flammability N/A	
Autoignition Temp N/A	
Solubility N/A	
N/A = not available	

RECEIVED
MAY 16 2008
Safety & Environmental Health

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Materials to Avoid
Strong oxidizing agents

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen chloride gas

Hazardous Polymerization
Hazardous Polymerization
Will not occur.**Section 11 - Toxicological Information****Route of Exposure****Skin Contact**

May cause skin irritation.

Skin Absorption

Toxic if absorbed through skin.

Eye Contact

May cause eye irritation.

Inhalation

Toxic if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion

Toxic if swallowed.

Sensitization**Sensitization**

May cause allergic reaction. May show photosensitizing activity.

Target Organ(s) or System(s)

Central nervous system. Heart.

RTECS Number: HO9450000**Toxicity Data**

- Oral - Child: 62.5 mg/kg (LDLO)
Remarks: Behavioral: Convulsions or effect on seizure threshold.
Vascular: BP lowering not characterized in autonomic section.
Lungs, Thorax, or Respiration: Respiratory depression.
- Oral - Child: 62.5 mg/kg (LDLO)
Remarks: Behavioral: Convulsions or effect on seizure threshold.
Lungs, Thorax, or Respiration: Cyanosis.
- Oral - Woman: 19 mg/kg (LDLO)
Remarks: Behavioral: Coma
Lungs, Thorax, or Respiration: Dyspnea.
- Oral - Rat: 240 mg/kg (LD50)
Remarks: Behavioral: Convulsions or effect on seizure threshold.
Behavioral: Ataxia
Lungs, Thorax, or Respiration: Dyspnea.
- Intraperitoneal - Rat: 67 MG/KG (LD50)
- Subcutaneous - Rat: 385 MG/KG (LD50)
Remarks: Behavioral: Convulsions or effect on seizure threshold.
Lungs, Thorax, or Respiration: Cyanosis.
- Intravenous - Rat: 14 MG/KG (LD50)
- Oral - Mouse: 140 mg/kg (LD50)
- Intraperitoneal - Mouse: 65 MG/KG (LD50)
Remarks: Behavioral: Somnolence (general depressed activity).
Behavioral: Convulsions or effect on seizure threshold.
Lungs, Thorax, or Respiration: Dyspnea.
- Subcutaneous - Mouse: 80 MG/KG (LD50)
Remarks: Behavioral: Convulsions or effect on seizure threshold.
Behavioral: Ataxia.
Lungs, Thorax, or Respiration: Cyanosis.
- Intravenous - Mouse: 21 MG/KG (LD50)
- Intravenous - Dog: >27 MG/KG (LD50)

Intramuscular - Dog: >23 MG/KG (LD50)

Oral - Cat: 37 mg/kg (LD50)

Intravenous - Rabbit: 9900 UG/KG (LD50)

Chronic Exposure - Teratogen

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
Mouse	60 MG/KG	Subcutaneous	(9D PREG)
Result: May cause congenital malformation in the fetus.			
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Effects on Embryo or Fetus: Fetal death.			
Specific Developmental Abnormalities: Central nervous system.			
Mouse	60 MG/KG	Subcutaneous	(9D PREG)
Result: Specific Developmental Abnormalities: Craniofacial (including nose and tongue).			
Hamster	60 MG/KG	Intraperitoneal	(8D PREG)
Result: Specific Developmental Abnormalities: Central nervous system.			
Specific Developmental Abnormalities: Body wall.			
Specific Developmental Abnormalities: Musculoskeletal system.			
Hamster	70300 UG/KG	Intraperitoneal	(8D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Specific Developmental Abnormalities: Central nervous system.			
Specific Developmental Abnormalities: Musculoskeletal system.			
Hamster	60 MG/KG	Parenteral	(8D PREG)
Result: Specific Developmental Abnormalities: Central nervous system.			
Specific Developmental Abnormalities: Body wall.			

Chronic Exposure - Mutagen

<u>Species</u>	<u>Dose</u>	<u>Route</u>	<u>Exposure Time</u>	<u>Mutation test</u>
Mouse	70 MG/KG	Oral	5D	sperm

Chronic Exposure - Reproductive Hazard

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
Rat	220 MG/KG	Subcutaneous	(1-22D PREG)
Result: Effects on Newborn: Stillbirth. Effects on Newborn: Behavioral.			
Mouse	70 MG/KG	Oral	(5D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).			

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Toxic solids, organic, n.o.s.
UN#: 2811
Class: 6.1
Packing Group: Packing Group III
Hazard Label: Toxic substances.
PIH: Not PIH

IATA

Proper Shipping Name: Toxic solid, organic, n.o.s.
IATA UN Number: 2811
Hazard Class: 6.1

Packing Group: III

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: T

Indication of Danger

Toxic.

Risk Statements R: 23/24/25 36/37/38 42/43 63

Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. Possible risk of harm to the unborn child.

Safety Statements S: 45 26 36/37/39 22

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. Do not breathe dust.

US Classification and Label Text

Indication of Danger

Highly Toxic (USA) Toxic (EU).

Risk Statements

Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. Possible risk of harm to the unborn child.

Safety Statements

Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements

Target organ(s): Heart, Central nervous system.

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

RECEIVED
MAY 16 2008
Safety & Environment
Health