

MATERIAL SAFETY DATA SHEET

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Version 1.3

Section 1 - Product and Company Information

Product Name CEFAMANDOLE SODIUM
Product Number C7145
Brand SIGMA

Company Sigma-Aldrich
Address 3050 Spruce Street
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
CEFAMANDOLE SODIUM	30034-03-8	No

Formula C18H17N6NaO5S2
Synonyms Cefamandole sodium * Sodium cefamandole
RTECS Number: XI0389000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Harmful.

May cause sensitization by inhalation and skin contact. Irritating to eyes, respiratory system and skin.

Target organ(s): Blood.

HMIS RATING

HEALTH: 3*

FLAMMABILITY: 0

REACTIVITY: 0

NFPA RATING

HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 0

*additional chronic hazards present.

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.

INHALATION EXPOSURE

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

Section 5 - Fire Fighting Measures

EXPLOSION DATA

Dust Potential: This material, like most materials in powder form, is capable of creating a dust explosion.

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

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

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

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

PERSONAL PROTECTIVE EQUIPMENT

Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

Section 9 - Physical/Chemical Properties

Appearance

Physical State: Solid

Property

Value

At Temperature or Pressure

Molecular Weight	484.5 AMU
pH	N/A
BP/BP Range	N/A
MP/MP Range	N/A
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
Surface Tension	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Refractive Index	N/A
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: May discolor on exposure to light.

Materials to Avoid: Alkali metals.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides, Sodium/sodium oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Inhalation: Material is irritating to mucous membranes and upper respiratory tract.

Multiple Routes: Causes eye and skin irritation. May be harmful by inhalation, ingestion, or skin absorption.

SENSITIZATION

Sensitization: May cause allergic reaction.

TARGET ORGAN(S) OR SYSTEM(S)

Blood.

SIGNS AND SYMPTOMS OF EXPOSURE

Headache. Hypotension. Cholestatic jaundice. Dysosmia (distorted smell). Dysgeusia (taste distortion). May cause gastrointestinal

disturbances, hypersensitivity reactions, neutropenia, rise in liver enzymes, rise in blood urea nitrogen. Because of the similarity in structure of the penicillins and cephalosporins, those who are allergic to one class of agents may manifest cross-allergenicity when a member of the other class is encountered. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. May occur in combination with exposure to alcohol Vomiting. Nausea. Associated coagulopathies include: hypoprothrombinemia, platelet abnormalities, immune-mediated thrombocytopenia.

TOXICITY DATA

Oral
Rat
> 16600 mg/kg
LD50

Subcutaneous
Rat
12100 MG/KG
LD50

Intravenous
Rat
4410 MG/KG
LD50

Oral
Mouse
> 19900 mg/kg
LD50

Subcutaneous
Mouse
10300 MG/KG
LD50

Intravenous
Mouse
4460 MG/KG
LD50

CHRONIC EXPOSURE - TERATOGEN

Species: Rat
Dose: 11 GM/KG
Route of Application: Intraperitoneal
Exposure Time: (7-17D PREG)
Result: Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Specific Developmental Abnormalities: Urogenital system. Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rat
Dose: 5500 MG/KG
Route of Application: Intravenous
Exposure Time: (7-17D PREG)
Result: Effects on Newborn: Delayed effects. Effects on Newborn: Growth statistics (e.g., reduced weight gain). Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rat
Dose: 22 GM/KG
Route of Application: Intravenous
Exposure Time: (7-17D PREG)
Result: Specific Developmental Abnormalities: Urogenital system.

Species: Rabbit
Dose: 195 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (6-18D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 11 GM/KG
Route of Application: Intraperitoneal
Exposure Time: (7-17D PREG)
Result: Effects on Newborn: Delayed effects.

Species: Rat
Dose: 5500 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (7-17D PREG)
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Species: Rat
Dose: 13500 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (17-22D PREG/21D POST)
Result: Maternal Effects: Uterus, cervix, vagina. Maternal Effects: Ovaries, fallopian tubes. Effects on Newborn: Physical.

Species: Rat
Dose: 27 GM/KG
Route of Application: Intravenous
Exposure Time: (17-22D PREG/21D POST)
Result: Maternal Effects: Ovaries, fallopian tubes. Maternal Effects: Parturition. Effects on Newborn: Physical.

Species: Rabbit
Dose: 780 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (6-18D PREG)
Result: Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rabbit
Dose: 390 MG/KG
Route of Application: Intravenous
Exposure Time: (6-18D PREG)
Result: Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

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: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn
Indication of Danger: Harmful.
R: 36/37/38-42/43
Risk Statements: Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.
S: 26-36
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.
Risk Statements: May cause sensitization by inhalation and skin contact. Irritating to eyes, respiratory system and skin.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.
US Statements: Target organ(s): Blood.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

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: No
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

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