



Material Safety Data Sheet

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ERYTHROMYCIN

IDENTIFICATION

Common Name: Erythromycin

Chemical Name: Erythromycin

Synonym: Erythromycin A

Formula: C₃₇H₆₇NO₁₃

CAS Number: 114-07-8

RTECS Number: KF4375000

Chemical Family: A Macrolide antibiotic

Therapeutic Category: Antibacterial

INGREDIENT INFORMATION

<u>Principle Components</u>	<u>Percent</u>	<u>Exposure Limits</u>
Erythromycin	100 %	n/f

HEALTH HAZARD INFORMATION

Usual Adult Dose: The usual oral adult dose of erythromycin is 250 to 500 mg per day in divided doses, not to exceed 4 grams daily. Erythromycin is also administered topically to the eye as a 0.5 to 1% ointment and to the skin as a 2 to 4% solution.

Adverse Effects: Adverse effects may include skin rash, redness, or itching; liver toxicity (fever, nausea, skin rash, severe stomach pain, unusual tiredness or weakness, yellow eyes or skin, vomiting); abdominal or stomach cramping or discomfort; diarrhea; nausea; vomiting; sore mouth or tongue; white patches in mouth or on tongue; and genital itching or discharge. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

Overdose Effects: Symptoms of overdose include ringing in ears, severe gastrointestinal discomfort, transient auditory impairment, and irregular heartbeat.

Acute: Possible eye, skin, gastrointestinal and/or respiratory tract irritation.

Chronic: Possible hypersensitization, hepatotoxicity, hearing loss, and superinfection.

Inhalation: May cause irritation. Remove to fresh air.

Eye: Causes mild irritation. Flush with copious quantities of water.

Skin: Causes irritation. Flush with copious quantities of soap and water.

n/f = not found

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HEALTH HAZARD INFORMATION CONTINUED

Ingestion: May cause irritation and bitter taste. Flush out mouth with water. This material is variably absorbed from the gastrointestinal tract.

Medical Conditions Aggravated by Exposure: Hypersensitivity to material, impaired liver function, acute porphyria, and a history of cardiac arrhythmias or QT prolongation.

Cross Sensitivity: Persons sensitive to other erythromycins or macrolides may be sensitive to this material also.

Pregnancy Comments: Adequate and well-controlled pregnancy studies have not been done in humans. Erythromycin showed no evidence of birth defects or any other adverse effects on reproduction in studies in female rats.

Pregnancy Category: B

FIRST AID MEASURES

General: Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

Overdose Treatment: Overdose treatment may include the following:

1. Evacuate the stomach to eliminate unabsorbed material.
2. Administer epinephrine, corticosteroids, and antihistamines for allergic reactions.
3. Use supportive measures as needed.
4. Hemodialysis or peritoneal dialysis does not remove erythromycins. [USP DI 2001]

TOXICOLOGICAL INFORMATION

Oral Rat: LD50: 4600 mg/kg

Oral Mouse: LD50: 2580 mg/kg

Irritancy Data: n/f

Target Organ(s): Liver and gastrointestinal system

Listed as a Carcinogen? NTP: No
Other: No

IARC: No

OSHA: No

FIREFIGHTING MEASURES

Flash Point: n/f

Upper Flammable Limit: n/f

Auto-Ignition Temperature: n/f

Lower Flammable Limit: n/f

Extinguisher Media: Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.

n/f = not found

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FIREFIGHTING MEASURES CONTINUED

Fire and Explosion Hazards: This material is assumed to be combustible. As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.

Firefighting Procedures: As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

PHYSICAL HAZARDS

Conditions to Avoid: Avoid exposure to heat and moisture.

Incompatibilities: Volatile organic solvents and acids.

Decomposition Products: When heated to decomposition material emits toxic fumes of NOx. Emits toxic fumes under fire conditions.

Stable? Yes

Hazardous Polymerization? No

HANDLING / SPILL / DISPOSAL MEASURES

Handling: As a general rule, when handling USP Reference Standards avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

Storage: Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity. Store in a freezer.

Spill Response: Wear approved respiratory protection, chemically compatible gloves and protective clothing. Wipe up spillage or collect spillage using a high efficiency vacuum cleaner. Avoid breathing dust. Place spillage in appropriately labeled container for disposal. Wash spill site.

Disposal: Dispose of waste in accordance with all applicable Federal, State and local laws.

EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: When working with small quantities in a well-ventilated area, respiratory protection may not be required. The use of an approved dust mask is recommended.

Ventilation: No special ventilation requirements.

Gloves: Rubber

Eye Protection: Safety Glasses

Protective Clothing: Protect exposed skin.

n/f = not found

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PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: White to pale yellow crystalline powder; odorless or practically odorless.

Melting Point: 135 - 140° C (resolidifies w/second m.p. @ 190 - 193° C)

Solubility in Water: Very slightly soluble

Vapor Density: n/f

Solubility in Water: n/f

Evaporation Rate: n/f

Boiling Point: n/f

Evaporation Rate: n/f

Specific Gravity: n/f

Reactivity in Water: n/f

Vapor Pressure: n/f

% Volatile by Volume: n/f

n/f = not found

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