



MATERIAL SAFETY DATA SHEET

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First Issue: October 28, 2009
Revised: N/A
Prepared by: Greg Baker

Section 1 Chemical Product and Company Identification

Product Name	Eribulin Mesylate Injection
Drug Substance Name	Eribulin Mesylate
Synonyms	E7389, BOLD, NSC-707389
Eisai Material Numbers	190232
Manufacturer/Supplier	Eisai Inc. Woodcliff Lake, NJ 07677
Telephone Number	877-873-4724
24 Hour Emergency Number	CHEMTREC 800-424-9300 Internationally 703-527-3887
Fax Number	201-746-3207

Section 2 Hazards Identification

Eribulin is a synthetic derivative of halichondrin B, a potent microtubule inhibitor isolated from marine sponges. Eribulin blocks mitosis by binding to the ends of microtubules, forming abnormal, shortened mitotic spindles that do not pass the spindle checkpoint when dividing cells attempt to transition from metaphase to anaphase. It also reduces the degree of dynamic interaction between microtubules and centromeres during cell division, and inhibits tubulin polymerization. Eribulin is for the treatment of a variety of solid tumors.

Effects seen in clinical trials as a monotherapy were neutropenia/febrile neutropenia, fatigue, and neuropathy. When given to patients with refractory to other chemotherapies, adverse effects included asthenia/fatigue, neutropenia, alopecia, nausea, vomiting, anorexia, fever, leucopenia, anemia, diarrhea, and neuropathy. Mechanism of action suggests a potential to cause adverse effects on fertility; in addition, mechanism as well as positive genotoxicity suggest a potential for oncogenicity.

Occupational Exposure Limit (OEL) for the active ingredient: 0.1 $\mu\text{g}/\text{m}^3$
Acceptable Surface Limit (ASL) for the active ingredient: 0.05 $\mu\text{g}/\text{cm}^2$

Potential Health Effects:

Routes of Entry	Ingestion, Inhalation, Skin contact/absorption, Injection, Eye Contact
Inhalation	No information regarding inhalation



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Eye Contact	No information regarding eye irritation
Skin Contact	No information regarding skin irritation
Ingestion	No information regarding ingestion

Section 3 Composition/ Information on Ingredients

Chemical Composition	% Composition	Exposure Limits
Eribulin Mesylate	0.05%	0.1 µg/m ³
Dehydrated Alcohol	4%	1000 ppm
Water for Injection	95.8%	

CAS #	44105-17-6 (Eribulin Mesylate)
NIOSH/RTECS NO.	Not established
Molecular Formula	C ₂₂ H ₂₂ N ₂ O ₆
Molecular Weight	826.0

Section 4 First Aid Measures

The following general precautions should be observed.

Ingestion	Consult a physician immediately. Never give anything by mouth to someone who is unconscious or convulsing.
Inhalation	Move victim to fresh air and keep them warm and quiet. If not breathing, administer artificial respiration. Get immediate medical attention.
Injection	For accidental injection, consult a physician immediately
Eye contact	Flush eyes with clean running water for at least 15 minutes. Contact a physician.
Skin contact	Flush skin with water for at least 15 minutes. Remove and discard contaminated clothing and shoes. Contact a physician

Section 5 Fire Fighting Measures

Flash Point (Closed Cup)	Not established (NE)
Flammable Limits	Upper - NE % Lower - NE %
Autoignition Temperature	Not established
Extinguishing Media	Non-flammable. Use dry chemical, carbon



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	dioxide, foam or water spray as appropriate for the surrounding fire and materials.
Special Fire Fighting Procedures	Wear protective clothing and self-contained breathing apparatus as appropriate for surrounding fire. Firefighters Should Wear Proper Protective Equipment And Self-Contained Breathing Apparatus With Full Facepiece Operated In Positive Pressure Mode.

Section 6 Accidental Release Measures

Prevent migration into the environment. Absorb material and place waste into appropriate container, being careful to prevent contact with broken glass (e.g., utilize a tool to pick up broken glass). Wipe the spill area several times (3 times minimum) with 100% Ethanol. Appropriately discard all clean up materials per local, state, and federal regulations.

For significant liquid spills or spills in a dried state, appropriately trained personnel must use Level B protective safety gear as well as a Powered Air Purifying Respirator (PAPR) or a Self Contained Breathing Apparatus (SCBA) with full facepiece operated in positive pressure mode. Clean up spills in a manner that does not aerosolize the spilled material. Utilize the same methods as described above for absorbing spills, utilizing 100% Ethanol, and discarding of waste.

Section 7 Handling and Storage

Handling Practices	Observe all precautions contained on product label and package insert. Aerosol generating activities must be done within an appropriate engineering control. Wet wipe any potentially contaminated surfaces with a suitable solvent. See Section 8 for additional Exposure Controls and Personal Protection guidance.
Storage Practices	This drug should be stored at ≤ 25 degrees C.

Section 8 Exposure Controls/Personal Protection

Ventilation	If the procedures have a potential for aerosolization, they
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	should be handled in an appropriate engineering control (e.g., Containment System and/or Local Exhaust Ventilation).
Respiratory Protection	None required when aerosolization potential does not exist or if there are adequate engineering controls. Use an appropriate respirator to compliment the effectiveness of engineering controls as needed.
Eye/Skin Protection	As appropriate, wear chemically resistant gloves, safety glasses, and lab coats or body covering to minimize potential for skin contact. If there is the potential for splashes to the face/eyes, safety goggles and/or face shield may be needed in place of safety glasses.

Section 9 Physical and Chemical Properties

Boiling Point	Not Established
Vapor Pressure(Mm Hg)	Not Established
Melting Point	N/A
Density	0.99 g/ml at 25 degrees C
Evaporation Rate	Not Established
Hygroscopicity	Hygroscopic
Ph (Aqueous)	6.0 – 9.0
Solubility	Ethyl Alcohol readily at room temperature. Water: 10.4 mg/ml
% Volatiles By Volume	Not Established
Appearance & Odor	Clear colorless solution

Section 10 Stability and Reactivity Data

Stability	Decomposes in acidic conditions
Hazardous Polymerization	Unknown
Conditions To Avoid	Hygroscopic. Moisture, Acidity, Temperatures above 25 degrees C
Decomposition Products	Unknown
Incompatible materials	Unknown



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at each drain or whether a facility's dilution waters may be used to achieve this concentration. If this ADL can not be achieved, the facility should send the collected water discharge to an appropriately permitted incinerator for disposal.

Section 13 Disposal Considerations

Disposal Procedure: Dispose in accordance with all applicable federal, state, and local environmental regulations.

Section 14 Transportation Data and Additional Information

Not a hazardous material for transport, and therefore not subject to any domestic, international, or modal transportation regulations.

Section 15 Regulatory Information

Non-regulated

Section 16 Other Information

In case of overexposure, please contact CHEMTREC 800-424-9300,
Internationally 703-527-3887

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