

Safety Data Sheet

SAFETY DATA SHEET - LC LABORATORIES REVISION DATE: JULY 1, 2019

SECTION 1. IDENTIFICATION:

Trade name: Etoposide
Product Number: [E-4488](#)
Manufacturer/Supplier:
LC Laboratories
165 New Boston Street
Woburn, MA 01801 USA
1-781-937-0777 Fax: 1-781-938-5420

SECTION 2. HAZARD(S) IDENTIFICATION:

Hazard Description: Toxic
RTECS Substance category: Tumorigen; Drug; Mutagen; Natural Product;
Human Data; Reproductive Effector
Harmful if swallowed; may be harmful if inhaled or absorbed through the skin
May cause cancer
May impair fertility, cause heritable genetic damage, and harm to the unborn child
Ingestion may result in leukopenia/neutropenia (abnormally low white blood cell counts), thrombocytopenia (low platelet count), myelosuppression (decreased bone marrow activity), anemia, nausea, vomiting, anorexia (loss of appetite), mucositis (inflammation/ulceration of the mucous membranes lining the digestive tract, especially mouth sores), constipation, abdominal pain, diarrhea, dysgeusia (distortion of the sense of taste), asthenia (lack of muscle strength), malaise, alopecia (hair loss), pyrexia (fever), chills, dizziness, headache, extravasation/phlebitis (inflammation and leakage from the veins)
Exposure may cause irritation of the respiratory tract, digestive tract, skin, and eyes
Signal Word: Danger

GHS Hazard Statements:

H302+312+332 - Harmful if swallowed, in contact with skin or if inhaled

GHS Precautionary Statements:

P2562 - Do not get in eyes, on skin or on clothing

WARNING: For Laboratory Research Use Only



SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Chemical Name: 4'-demethylepipodophyllotoxin-9-[4,6-O-(R)-ethylidene-β-D-glucopyranoside]

Synonyms: BMY-40481, Eposin, Etopofos, Etophos, Etopophos, Etoposide 4'-

Dihydrogenphosphate, Lastet, Novaplus, Toposar, Vepesid, VP-16, VP-16-213, Zuyeyidal

Hazardous Ingredient: Etoposide

CAS Registry Number: 33419-42-0

Molecular Weight: 588.56

Molecular Formula: $C_{29}H_{32}O_{13}$

SECTION 4. FIRST-AID MEASURES:

After Inhalation: If inhaled, remove to fresh air; if breathing is difficult, give oxygen; if breathing stops, give artificial respiration

After skin contact: flush with copious amounts of water; remove contaminated clothing and shoes; call a physician

After eye contact: check for and remove contact lenses; flush with copious amounts of water; assure adequate flushing by separating the eyelids with fingers; call a physician

After swallowing: if swallowed, wash out mouth with copious amounts of water; call a physician

SECTION 5. FIRE-FIGHTING MEASURES:

Suitable extinguishing agents: water spray, carbon dioxide, dry chemical powder or foam

Protective equipment: wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Unusual fire hazard: may emit toxic fumes under fire conditions such as carbon monoxide, etc.

SECTION 6. ACCIDENTAL RELEASE MEASURES:

Person-related safety precautions: cordon off area of spill; wear self-contained breathing apparatus, protective clothing and heavy rubber gloves

Measures for cleaning/collecting: absorb solutions with finely- powdered liquid-binding material (diatomite, universal binders); decontaminate surfaces and equipment by scrubbing with alcohol; dispose of contaminated material according to Section 13

SECTION 7. HANDLING AND STORAGE:

Information for safe handling: avoid contact with skin, eyes and clothing; material may be an irritant

Storage: store solid and solutions at -20 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Personal protective equipment as follows:

Breathing equipment: NIOSH/MSHA-approved respirator

Protection of hands: handle with Nitrile rubber gloves with minimum thickness

of 0.11 mm (4.3 mil). This recommendation should not be interpreted as offering an approval for any specific use conditions. Please review this recommendation with a safety officer to evaluate if it is appropriate for the anticipated use.

Eye protection: chemical safety goggles

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:

Form: crystalline solid; granular or powder

Color: white

Odor: none

Melting point/Melting range: 259-273 °C

Danger of explosion: none

Solubility in / Miscibility with water: very poorly soluble in water; maximum solubility in plain water is estimated to be 20-50 µM; buffers, serum or other additives may increase or decrease the aqueous solubility

Solvent content:

Organic solvents: soluble in DMSO at 100 mg/mL; very poorly soluble in ethanol

SECTION 10. STABILITY AND REACTIVITY:

Stability: avoid acids and bases

Thermal decomposition / conditions to be avoided: protect from light and heat

Dangerous products of decomposition: thermal decomposition may produce toxic gases such as carbon monoxide and carbon dioxide, and nitrogen oxides

SECTION 11. TOXICOLOGICAL INFORMATION:

RTECS #: KC0190000

Acute toxicity: oral toxicity (LD50): 1784 mg/kg (rat), 215 mg/kg (mouse), 147 mg/kg (rabbit); intraperitoneal (LD50): 39 mg/kg (rat), 64 mg/kg (mouse); subcutaneous (LD50): >200 mg/kg (rat), 143 mg/kg (mouse); intravenous (LD50): 58 mg/kg (rat), 15.07 mg/kg (mouse), 37 mg/kg (rabbit)

Primary irritant effect:

On the skin: may be an irritant; may be harmful if absorbed through the skin

On the eye: may be an irritant

Inhalation: harmful if inhaled

Ingestion: harmful if swallowed

SECTION 12. ECOLOGICAL INFORMATION:

General notes: no data available

Treat as potentially toxic if released into the environment

SECTION 13. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with prevailing country, federal, state and local 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 class:

Proper shipping name: none

Non-Hazardous for transport: this substance is considered to be non-hazardous for transport

SECTION 15. REGULATORY INFORMATION:

Code letter and hazard designation of product:

T: Toxic

EU Risk And Safety phrases:

T: Toxic

EU Risk And Safety phrases:

S22: Do not breathe dust

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection

S45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)

S53: Avoid exposure - obtain special instructions before use

R22: Harmful if swallowed

R45: May cause cancer

R46: May cause heritable genetic damage

R48: Danger of serious damage to health by prolonged exposure

R60: May impair fertility

R61: May cause harm to the unborn child

R62: Possible risk of impaired fertility

SECTION 16. OTHER INFORMATION:

The above information is believed to be correct based on our present knowledge but does not purport to be complete. For research use only by trained personnel. The burden of safe use of this material rests entirely with the user. LC Laboratories disclaims all liability

Reviewed: July 1, 2019