

Printing date 06/20/2019

Reviewed on 06/20/2019

## 1 Identification

- **Product identifier**
- **Trade name:** *Etoposide*
- **Article number:** 193918
- **CAS Number:**  
33419-42-0
- **EC number:**  
251-509-1
- **Molecular Formula** C<sub>29</sub> H<sub>32</sub> O<sub>13</sub>
- **Molecular Weight** 588.6
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 1B    H350 May cause cancer.

Repr. 2    H361 Suspected of damaging fertility or the unborn child.



GHS07

Acute Tox. 4    H302 Harmful if swallowed.

- **Label elements**

- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
*Etoposide*
- **Hazard statements**  
*Harmful if swallowed.*  
*May cause cancer.*  
*Suspected of damaging fertility or the unborn child.*
- **Precautionary statements**  
*Obtain special instructions before use.*

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/20/2019

Reviewed on 06/20/2019

**Trade name: Etoposide**

(Contd. of page 1)

*Do not handle until all safety precautions have been read and understood.*

*Wash thoroughly after handling.*

*Do not eat, drink or smoke when using this product.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*If swallowed: Call a poison center/doctor if you feel unwell.*

*Rinse mouth.*

*IF exposed or concerned: Get medical advice/attention.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*2

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

33419-42-0 Etoposide

· **Identification number(s)**

· **EC number:** 251-509-1

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

· **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*

· **After skin contact:** *Generally the product does not irritate the skin.*

· **After eye contact:** *Flush eyes with running water as a precaution.*

· **After swallowing:**

*Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.*

· **Information for doctor**

· **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

· **Indication of any immediate medical attention and special treatment needed**

*No further relevant information available.*

US  
(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 06/20/2019

Reviewed on 06/20/2019

Trade name: Etoposide

(Contd. of page 2)

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Pick up mechanically, dispose contaminated material as waste according to Section 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· <b>PAC-1:</b>
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Substance is not listed.
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· <b>PAC-2:</b>
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Substance is not listed.
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· <b>PAC-3:</b>
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Substance is not listed.
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### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace. Avoid direct contact with skin and eyes.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/20/2019

Reviewed on 06/20/2019

Trade name: *Etoposide*

(Contd. of page 3)

· **Additional information:** *The lists that were valid during the creation were used as basis.*

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

*Keep away from foodstuffs, beverages and feed.*

*Wash hands before breaks and at the end of work.*

*Store protective clothing separately.*

· **Breathing equipment:**

*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*

· **Protection of hands:**



Protective gloves

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.*

*Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.*

*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

· **Material of gloves**

*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.*

· **Penetration time of glove material**

*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Powder

**Color:** White

· **Odor:** Indeterminate

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

**Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Not determined.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/20/2019

Reviewed on 06/20/2019

Trade name: Etoposide

(Contd. of page 4)

· <b>Danger of explosion:</b>	See section 10
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not Applicable
<b>Upper:</b>	Not Applicable
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density:</b>	Not Applicable
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with</b>	Not Determined
· <b>Water:</b>	Not determined. Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	100.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**  
No further relevant information available.  
Avoid contact with acids. Contact liberates a toxic gas.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>
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<b>ATE (Acute Toxicity Estimate)</b>
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Oral LD50	1,784 mg/kg (rat)
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<b>33419-42-0 Etoposide</b>
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Oral LD50	1,784 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritant and potentially harmful
- **Sensitization:** No sensitizing effects known.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/20/2019

Reviewed on 06/20/2019

Trade name: *Etoposide*

(Contd. of page 5)

· **Additional toxicological information:**· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

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· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

## 12 Ecological information

· **Toxicity**· **Aquatic toxicity:** No further relevant information available.· **Persistence and degradability** No further relevant information available.· **Behavior in environmental systems:**· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Additional ecological information:**· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**· **Recommendation:**

Can not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**· **Recommendation:** Discard must be made according to official regulations.

## 14 Transport information

· **UN-Number**· **DOT, ADR, ADN, IMDG, IATA** Not regulated· **UN proper shipping name**· **DOT, ADR, ADN, IMDG, IATA** Not regulated· **Transport hazard class(es)**· **DOT, ADR, ADN, IMDG, IATA**· **Class** Not regulated

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/20/2019

Reviewed on 06/20/2019

Trade name: *Etoposide*

(Contd. of page 6)

- |  |                 |
|--|-----------------|
| <b>· Packing group</b>   |                 |
| <b>· DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| <b>· Environmental hazards:</b>  |                 |
| <b>· Marine pollutant:</b>   | No              |
| <b>· Special precautions for user</b>  | Not applicable. |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| <b>· UN "Model Regulation":</b>  | Not regulated   |

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

<b>· Section 355 (extremely hazardous substances):</b>
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Substance is not listed.
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<b>· Section 313 (Specific toxic chemical listings):</b>
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Substance is not listed.
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<b>· TSCA (Toxic Substances Control Act):</b>
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Substance is not listed.
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<b>· Hazardous Air Pollutants</b>
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Substance is not listed.
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<b>· Proposition 65</b>
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<b>· Chemicals known to cause cancer:</b>
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Substance is listed.
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<b>· Chemicals known to cause reproductive toxicity for females:</b>
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Substance is not listed.
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<b>· Chemicals known to cause reproductive toxicity for males:</b>
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Substance is not listed.
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<b>· Chemicals known to cause developmental toxicity:</b>
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Substance is listed.
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<b>· Carcinogenic categories</b>
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<b>· EPA (Environmental Protection Agency)</b>
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Substance is not listed.
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<b>· TLV (Threshold Limit Value established by ACGIH)</b>
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Substance is not listed.
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<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
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Substance is not listed.
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- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/20/2019

Reviewed on 06/20/2019

Trade name: *Etoposide*

(Contd. of page 7)

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** *Danger*

- **Hazard-determining components of labeling:**

*Etoposide*

- **Hazard statements**

*Harmful if swallowed.**May cause cancer.**Suspected of damaging fertility or the unborn child.*

- **Precautionary statements**

*Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Wear protective gloves/protective clothing/eye protection/face protection.**If swallowed: Call a poison center/doctor if you feel unwell.**Rinse mouth.**IF exposed or concerned: Get medical advice/attention.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **National regulations:**

- **Additional classification according to Decree on Hazardous Materials:**

*Carcinogenic hazardous material group I (extremely dangerous).**Carcinogenic hazardous material group II (very dangerous).**Carcinogenic hazardous material group III (dangerous).*

- **Information about limitation of use:**

*Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.*

- **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** *Quality Control Dept.*

- **Date of preparation / last revision** *06/20/2019 / -*

- **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**ACGIH: American Conference of Governmental Industrial Hygienists**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent*

(Contd. on page 9)



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 06/20/2019

Reviewed on 06/20/2019

**Trade name: Etoposide**

(Contd. of page 8)

*LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Acute Tox. 4: Acute toxicity – Category 4**Carc. 1B: Carcinogenicity – Category 1B**Repr. 2: Reproductive toxicity – Category 2*

US