

## Safety Data Sheet

### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier:

Product name: Caspase-9 inhibitor Z-LEHD-FMK  
Product code: 4810-510

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Research Use Only

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer and Supplier (Asia): Medical & Biological Laboratories (MBL) Co., Ltd.  
Address: 1018-1 Terasawaoka, Ina, Nagano 396-0002, Japan  
Division: SDS Support  
Telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)  
e-mail address: sds-support@mbl.co.jp  
Supplier: MBL International Corporation.  
Address: 15A Constitution Way, Woburn, MA 01801, USA  
Telephone number: +1-800-200-5459, option 3.  
FAX: +1-781-939-6963  
e-mail address: tech@mblintl.com  
Contact person: Technical Service  
Emergency telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)

### 2. Hazards identification

GHS classification and label elements of the product

#### 2.1 Classification of the substance or mixture

Classification according to Hazard Communication Standard-2012 (29 CFR 1910.1200)

PHYSICAL AND CHEMICAL HAZARDS

Flammable liquids: Category 4

#### 2.2 Label elements

Labelling according to Hazard Communication Standard-2012 (29 CFR 1910.1200)

No GHS label element

Signal word: Warning

HAZARD STATEMENT

H227 Combustible liquid

PRECAUTIONARY STATEMENT

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P370 + P378 In case of fire: Use appropriate media other than water for extinction.

Storage

P403 Store in a well-ventilated place. P235 Keep cool.

Disposal

P501 Dispose of contents/container in accordance with local/national regulation.

Specific Physical and Chemical hazards

Heating may cause fire.

### 3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	CAS No.	Content (%)	ECNO	HAZCODE_EU
Dimethyl sulfoxide	67-68-5	90=<-<100	200-664-3	-

#### 4. First-aid measures

##### 4.1 Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair)

Gently wash with plenty of soap and water.

Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.

##### 4.2 Most important symptoms and effects, both acute and delayed

(Symptoms when skin and/or eye contact)

Irritation

Eye irritation

##### 4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment (see ... on this label)( ... reference to supplemental first aid instruction)(may include a cleansing agent specified by the manufacturer/supplier or the competent authority).

#### 5. Fire-fighting measures

##### 5.1 Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

##### 5.2 Specific hazards arising from the substance or mixture

Specific hazards arising from the substance or mixture is not available.

##### 5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

#### 6. Accidental release measures

##### 6.1 Personnel precautions, protective equipment and emergency procedures

Wear proper protective equipment.

##### 6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

##### 6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

#### 6.4 Reference to other sections

Refer to section 8

### 7. Handling and storage

#### 7.1 Precautions for safe handling

Preventive measures

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

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

Any incompatibilities data is not available.

Advice on general occupational hygiene

Wash hands thoroughly after handling.

#### 7.2 Storage

Conditions for safe storage

Store in a well-ventilated place.

(Incompatible storage condition)

Protect from sunlight.

Container and packaging materials for safe handling data is not available.

#### 7.3 Specific end use(s)

Research use only.

### 8. Exposure controls/personal protection

#### 8.1 Control parameters

Adopted value

Adopted value in ACGIH is not available.

#### 8.2 Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Individual protection measures

Eye protection

Wear eye/face protection.

Skin and body protection

Wear protective clothing.

### 9. Physical and Chemical Properties

#### 9.1 Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless

Odor data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point: (Tag closed cup method)(87°C)

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: Neutral

Kinematic viscosity data is not available.

**Solubility:**

Solubility in water data is not available.

Solubility in solvent data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density data is not available.

No Particle characteristics data is not available.

**10. Stability and Reactivity****10.1 Reactivity**

Reactivity data is not available.

**10.2 Chemical stability**

Stable under normal storage/handling conditions.

**10.3 Possibility of hazardous reactions**

Possibility of hazardous reactions data is not available.

**10.4 Conditions to avoid**

Conditions to avoid data is not available.

**10.5 Incompatible materials**

Incompatible materials data is not available.

**10.6 Hazardous decomposition products**

Hazardous decomposition products data is not available.

**11. Toxicological Information****11.1 Information on toxicological effects****Acute toxicity****Acute toxicity (Oral)**

[Company proprietary data]

Rat LD50: 14,500mg/kg (HSDB(Access on September 2019))

Rat LD50: >20,000mg/kg (SIDS(2008))

**Acute toxicity (Dermal)**

[Company proprietary data]

Rat LD50: 40,000mg/kg(DFGOT vol.3(1992))

Rat LD50:>40,000mg/kg (SIDS(2008))

**Irritant properties**

Skin corrosion/irritation data is not available.

Serious eye damage/irritation data is not available.

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

**STOT**

STOT-single exposure data is not available.

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

**12. Ecological Information****12.1 Ecotoxicity**

Ecotoxicity data is not available.

**Water solubility**

(Dimethyl sulfoxide)

miscible (ICSC, 2000)

**12.2 Persistence and degradability**

Persistence and degradability data is not available.

**12.3 Bioaccumulative potential**

(Dimethyl sulfoxide)

log Pow=-1.35 (calculated) (ICSC, 2000)

**12.4 Mobility in soil**

Mobility in soil data is not available.

**12.7 Other adverse effects**

Ozone depleting chemical data is not available.

**Additional data**

Data on the preparation itself is not available.

**13. Disposal considerations**

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

**13.1 Waste treatment methods**

Dispose of contents/container in accordance with local/national regulation.

**Contaminated packing**

Dispose of container after using the contents completely.

**14. Transport Information****UN No., UN CLASS**

14.1 UN No. or ID No.: Not applicable

14.2 UN Proper Shipping Name: Not applicable

14.3 Class or division (Transport hazard class): Not applicable

14.4 Packing group: Not applicable

Not applicable to IMDG Code

Not applicable to IATA Dangerous Goods Regulations

**14.5 Environmental hazards**

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

**14.6 Special precautions for user**

Special precautions for user is not applicable.

**15. Regulatory Information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Chemicals listed in TSCA Inventory

Dimethyl sulfoxide

Other regulatory information

US regulations

This product is not hazardous according to OSHA 29CFR 1910.1200

California Proposition 65 – Carcinogens & Reproductive Toxicity (CRT): Not listed.

EU Regulations

REACH 1907/2006 EC –Annex XIV– list of substance subject to authorization.

Not ingredients listed.

**15.2 Chemical safety assessment**

No chemical safety assessment has been carried out for this product.

**16. Other information**

Reference Book

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN  
IMDG Code, 2018 Edition (Incorporating Amendment 39-18)  
IATA Dangerous Goods Regulations (62nd Edition) 2021  
EU REGULATION (EC) No. 1272/2008 (CLP), amended by COMMISSION REGULATION (EU) 2019/521  
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2020 TLVs and BEIs. (ACGIH)  
Supplier's data/information  
Hazard Communication Standard – 2012 (29 CFR 1910.1200)

Revision information

Issue date: 01/30/2016

Most modern edition: 11/15/2021

General Disclaimer

This information is provided without warranty. The information is believed to be correct.

This information should be used to make an independent determination of the methods to safeguard workers and the environment.

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.