



The Power to Question

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 17-Sep-2018

Version 1.7

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

| | |
|------------------------|-------------|
| Product Name | Z-VAD-FMK |
| Product Code | SC-3067 |
| CAS No | 187389-52-2 |
| Pure substance/mixture | Substance |

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

For research use only. Not intended for diagnostic or therapeutic use.

1.3. Details of the supplier of the safety data sheet

Santa Cruz Biotechnology, Inc.
10410 Finnell Street
Dallas, TX 75220
831.457.3800
800.457.3801
scbt@scbt.com

Santa Cruz Biotechnology, Inc.
Bergheimer Str. 89-2
69115 Heidelberg, Germany
+49.6221.4503 0
+1.800.457.3801
europe@scbt.com

1.4. Emergency telephone number

Chemtrec
1.800.424.9300 (Within USA)
+1.703.527.3887 (Outside USA)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label Elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

| | |
|--------------------|----------------|
| Signal word | Not classified |
| Symbols/Pictograms | Not classified |
| Hazard statements | Not classified |

2.3. Other Hazards

| | |
|-----------------|----------------|
| General Hazards | Not applicable |
|-----------------|----------------|

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight 467.49
Formula $C_{22}H_{30}FN_3O_7$

3.1 Substances

3.2 mixtures

| Chemical name | EC No | CAS No. | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|----------------|-------|-------------|----------|---|
| Z-VAD(OMe)-FMK | - | 187389-52-2 | 100 | - |

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

| | |
|------------------------------------|--|
| General advice | If symptoms persist, call a physician. |
| Inhalation | Remove to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. |
| Ingestion | Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. |
| Self-protection of the first aider | Use personal protective equipment as required. |

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

Symptoms No information available.

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

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available

Hazardous combustion products Carbon oxides. Nitrogen oxides (NOx).

5.3. Advice for firefighters

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

| | |
|--------------------------|--|
| Personal precautions | Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. |
| For emergency responders | Use personal protection recommended in Section 8. |

6.2. Environmental precautions

| | |
|---------------------------|--|
| Environmental precautions | Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information. |
|---------------------------|--|

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|---|
| Methods for containment | Prevent further leakage or spillage if safe to do so. |
| Methods for cleaning up | Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges. |

6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

| | |
|--------------------------------|---|
| Advice on safe handling | Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. |
| General Hygiene Considerations | When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|--------------------|---|
| Storage Conditions | Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. |
|--------------------|---|

7.3. Specific end use(s)

| | |
|-------------------------------|---|
| Risk Management Methods (RMM) | The information required is contained in this Material Safety Data Sheet. |
|-------------------------------|---|

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

| | |
|--|---|
| Exposure Limits | This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
| Derived No Effect Level (DNEL) | No information available |
| Predicted No Effect Concentration (PNEC) | No information available. |

8.2. Exposure controls

| | |
|---------------------------------|---|
| Engineering Controls | Showers Eyewash stations Ventilation systems |
| Eye/face protection | Tight sealing safety goggles. Face protection shield. |
| Skin and Body Protection | Suitable protective clothing. Apron. Gloves made of plastic or rubber. |
| Respiratory protection | If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |
| Environmental exposure controls | Do not allow into any sewer, on the ground or into any body of water. |

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------|--------------------------|
| Physical State | Solid |
| Appearance | No information available |
| Odor | No information available |

Property

| | |
|------------------------------|--------------------------|
| pH | No information available |
| Melting point/freezing point | No information available |
| Boiling point | No information available |
| Flash point | No information available |
| Liquid Density | No information available |
| Evaporation rate | No information available |
| Upper flammability limits | No information available |
| Lower flammability limit | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Specific gravity | No information available |
| Water solubility | No information available |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Kinematic viscosity | No information available |
| Explosive properties | No information available |
| Oxidizing properties | No information available |

Values**Section 10: STABILITY AND REACTIVITY****10.1. Reactivity**

| | |
|------------|----------------|
| Reactivity | Not applicable |
|------------|----------------|

10.2. Chemical stability

| | |
|----------------------------------|--|
| Stability | Stable under recommended storage conditions. |
| Sensitivity to Mechanical Impact | No information available. |
| Sensitivity to Static Discharge | No information available. |

10.3. Possibility of hazardous reactions

| | |
|------------------------------------|-------------------------------|
| Hazardous polymerization | No information available. |
| Possibility of Hazardous Reactions | None under normal processing. |

10.4. Conditions to avoid

| | |
|---------------------|---|
| Conditions to avoid | Exposure to air or moisture over prolonged periods. |
|---------------------|---|

10.5. Incompatible materials

| | |
|------------------------|--------------------------|
| Incompatible materials | Strong oxidizing agents. |
|------------------------|--------------------------|

10.6. Hazardous decomposition products

| | |
|----------------------------------|---------------------------------------|
| Hazardous Decomposition Products | Carbon oxides. Nitrogen oxides (NOx). |
|----------------------------------|---------------------------------------|

Section 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Acute toxicity**

| | |
|------------------------|---|
| Product Information | Product does not present an acute toxicity hazard based on known or supplied information. |
| Unknown acute toxicity | 0% of the mixture consists of ingredient(s) of unknown toxicity. |

The following values are calculated based on chapter 3.1 of the GHS document mg/kg

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

| | |
|--------------------------|--|
| Ecotoxicity | May cause long lasting harmful effects to aquatic life. |
| Unknown aquatic toxicity | 100% of the mixture consists of components(s) of unknown hazards to the aquatic environment. |

12.2. Persistence and degradability

| | |
|-------------------------------|---------------------------|
| Persistence and degradability | No information available. |
|-------------------------------|---------------------------|

12.3. Bioaccumulative potential

| | |
|-----------------|---------------------------|
| Bioaccumulation | No information available. |
|-----------------|---------------------------|

12.4. Mobility in soil

| | |
|----------|---------------------------|
| Mobility | No information available. |
|----------|---------------------------|

12.5. Results of PBT and vPvB assessment

| | |
|-------------------------|---------------------------|
| PBT and vPvB assessment | No information available. |
|-------------------------|---------------------------|

12.6. Other adverse effects

| | |
|-----------------------|--------------------------|
| Other adverse effects | No information available |
|-----------------------|--------------------------|

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

| | |
|-------------------------------------|---|
| Waste from residues/unused products | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| Contaminated packaging | Do not reuse container. |
| Other Information | Waste codes should be assigned by the user based on the application for which the product was used. |

Section 14: TRANSPORT INFORMATION

| | <u>RID / ADR</u> | <u>IMDG</u> | <u>ICAO (air) / IATA</u> |
|----------------------------------|------------------|---------------|--------------------------|
| | Not regulated | Not regulated | Not regulated |
| 14.1 UN/ID no | - | - | - |
| 14.2 Proper shipping name | - | - | - |
| 14.3 Hazard Class | - | - | - |
| Subsidiary hazard class / Labels | - | - | - |
| 14.4 Packing Group | - | - | - |
| 14.5 14.5 Environmental Hazard | - | - | - |
| 14.6 14.6 Special Provisions | - | - | - |

Section 15: REGULATORY INFORMATION

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

National Regulations

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

International Inventories

All of the components in the product are on the following Inventory lists

No information available

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

Section 16: OTHER INFORMATION

Revision note

No information available.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet