SAFETY DATA SHEET

Revision Date 05/11/2020

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifiers

Product name : Z-Val-OSu Product Number : ZV2576

: Advanced ChemTech Brand

CAS-No. : 3496-11-5

Relevant identified uses of the substance or mixture and uses advised against Identified uses

: Laboratory chemicals, Manufacture of substances 1.2

Details of the supplier of the safety data sheet 1.3

: Creosalus, Inc. Company

5609 Fern Valley Rd, Louisville, KY 40228 USA

: +1 800-456-1403 Telephone : +1 502-968-1000

Emergency telephone number : +1 800-424-9300 Chemtrec 1.4

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture: Not a hazardous substance or mixture.

- GHS Label elements, including precautionary statements: Not a hazardous substance or mixture. 2.2
- 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

> Synonyms : Z-Valine Succinimidyl Ester

Formula $C_{17}H_{20}N_2O_6$ Molecular Weight 348.35a/mole CAS-No 3496-11-5

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

Description of first aid measures 4.1

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Flush eyes with water as a precaution.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- 4.2 Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11
- 4.3 Indication of any immediate medical attention and special treatment needed: No data available

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- 5.2 Special hazards arising from the substance or mixture: Carbon oxides, nitrogen oxides (NOx)
- 5.3 Advice for firefighters: Wear self contained breathing apparatus for fire fighting if necessary.
- 5.4 Further information: No data available

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions, protective equipment, and emergency procedure: Use personal protective equipment. Avoid dust formation. 6.1 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 let product enter drains. 6.2
- Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. 6.3 Keep in suitable, closed containers for disposal.
- 6.4 Reference to other sections: For disposal see section 13.

7. HANDLING AND STORAGE

- Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust 7.1 ventilation at places where dust is formed. Normal measures for preventive fire protection. For precautions, see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place.
- Specific end use(s): Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 **Control parameters**

Components with workplace control parameters Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

1 OF 3

Body Protection Complete suit protecting against chemicals, The type of protective equipment must be selected according to the

concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

no data available

no data available

no data available

no data available

Control of environmental exposure Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

.1 Information on basic physical and cher	nical properties
---	------------------

Form: White to Off-White powder a) Appearance b) Odor no data available c) Odor Threshold no data available d) pH no data available e) Melting point/freezing point no data available f) Initial boiling point and boiling range no data available g) Flash point no data available h) Evaporation rate no data available i) Flammability (solid, gas) no data available j) Upper/lower flammability or explosive limits no data available k) Vapor pressure no data available I) Vapor density no data available m) Relative density no data available n) Water solubility
o) Partition coefficient: n- octanol/water no data available no data available p) Auto-ignition temperature no data available q) Decomposition temperature no data available

t) Oxidizing properties

s) Explosive properties

r) Viscosity

9.2 Other safety information:

10. STABILITY AND REACTIVITY

10.1 Reactivity: No data available

10.2 Chemical stability: Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: No data available

10.5 Incompatible materials: Strong oxidizing agents

10.6 Hazardous decomposition products: Other decomposition products - no data available. In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects 11.1

Acute toxicity: No data available Inhalation: No data available Dermal: No data available

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: No data available Respiratory or skin sensitization: No data available Germ cell mutagenicity: No data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential

carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential

carcinogen by OSHA.

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Additional Information: RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

- 12.1
- Toxicity: No data available
 Persistence and degradability: No data available 12.2
- 12.3 Bioaccumulative potential: No data available
- 12.4 Mobility in soil: No data available
- Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted 12.5
- 12.6 Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US) Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Acute Health Hazard

Massachusetts Right to Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components

Z-Val-OSu Revision Date 3496-11-5

New Jersey Right to Know Components

Revision Date

3496-11-5

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Rating Health hazard: 0 Chronic Health Hazard: Flammability: 0 Physical Hazard
NFPA Rating 0 Health hazard: 0 Fire Hazard: 0 Reactivity Hazard: 0

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. CreoSalus, Inc. shall not be liable for any damage resulting in the handling or from contact with the above product.

FORM: 272C-004F4-00