Safety Data Sheet (SDS)

Section 1: Identification

1.1 Product Identification

Product Name: Phthalimidoperoxycaproic Acid

Product Number: Sigma-1492025181

Brand: Sigma

CAS Number: 128275-31-0

EC Number: Not specified

Molecular Formula: $C_{14}H_{15}NO_5$

Molecular Weight: 277.27 g/mol

Website: Sigma Chemical

1.2 Supplier Details

Company Name: Sigma Chemical Co., Ltd.

Address: Room 2-1-2301, Jiahe Xinxing, No.130, Shandong Road, Shibei District, Qingdao City, Shandong Province, China

Phone Number: +8618661891880

Email: chemweb3@foxmail.com

Business Hours:

Monday to Friday: 9:00AM - 6:00PM

Saturday: 9:00AM - 1:00PM

Sunday: Closed

1.3 Emergency Contact Number

Emergency Contact: +8618661891880

1.4 Recommended Use and Restrictions

Recommended Use: For research and development purposes only. Not for use as a drug, household product, or in any other application without proper authorization.

Section 2: Hazard Identification

2.1 GHS Classification

Acute Toxicity:

Oral: Category 4, H302 (Harmful if swallowed)

Inhalation: Category 4, H332 (Harmful if inhaled)

Specific Target Organ Toxicity (Repeated Exposure):

Inhalation: Category 2, H373 (May cause damage to organs through prolonged or repeated exposure)

2.2 GHS Label Elements

Pictogram: Warning

Signal Word: Warning

Hazard Statements:

H302: Harmful if swallowed

H332: Harmful if inhaled

H373: May cause damage to organs through prolonged or repeated exposure

Precautionary Statements:

Prevention:

P260: Do not breathe dust/fume/gas/mist/vapours/spray

P264: Wash thoroughly after handling

P270: Do not eat, drink, or smoke when using this product

Response:

P301+P312+P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P304+P312: IF INHALED: Call a POISON CENTER/doctor if you feel unwell.

Disposal:P501: Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Physical and Chemical Hazards

Physical and Chemical Hazards: Non-flammable. Ignition sources may release hazardous substances.

2.4 Health Hazards

Health Hazards:

H302: Harmful if swallowed

H332: Harmful if inhaled

H373: May cause damage to organs through prolonged or repeated exposure

2.5 Environmental Hazards

Environmental Hazards: No environmental hazards identified based on current information.

Section 3: Composition/Information on Ingredients

3.1 Substance

Synonyms: Phthalimidoperoxycaproic Acid, PAP, 6-(1,3-dioxoisoindol-2-yl)hexaneperoxoic acid

Molecular Formula: $C_{14}H_{15}NO_5$

Molecular Weight: 277.27 g/mol

CAS Number: 128275-31-0

EC Number: Not specified

Hazardous Components:**Component**: Phthalimidoperoxycaproic Acid

Classification:

Acute Toxicity: Category 4 (Oral), H302

Acute Toxicity: Category 4 (Inhalation), H332

Specific Target Organ Toxicity (Repeated Exposure): Category 2, H373

Section 4: First Aid Measures

4.1 First Aid Measures

Inhalation: Remove victim to fresh air. If feeling unwell, call a POISON CENTER/doctor.

Skin Contact: Immediately wash with plenty of water for at least 15 minutes. Remove contaminated clothing and wash before reuse. Get medical attention if irritation persists.

Eye Contact: Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention if eye irritation persists.

Ingestion: Do NOT induce vomiting. Rinse mouth with water. Call a POISON CENTER/doctor if feeling unwell.

4.2 Most Important Symptoms and Effects

Symptoms: Difficulty in breathing. Symptoms of overexposure may include headache, dizziness, tiredness, nausea, and vomiting.

4.3 Immediate Medical Attention and Special Treatment

Medical Treatment: Treat symptomatically. Ensure the victim is in a well-ventilated area and provide supportive care as needed.

Section 5: Firefighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Agents: Use fire extinguishing methods suitable for the surrounding environment. Solid water stream may be used.

5.2 Specific Hazards Arising from the Chemical

Hazardous Combustion Products: Carbon monoxide (CO), Carbon dioxide (CO_2), Gaseous hydrogen fluoride (HF)

5.3 Firefighting Precautions

Protective Equipment: Wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective clothing.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment as required. Ground all equipment used when handling the product. Avoid contact with skin, eyes, or clothing. Remove all sources of ignition. Take precautionary measures against static discharge.

Environmental Precautions: Prevent seepage into sewage systems, workpits, and surface or ground water.

6.2 Methods and Materials for Containment and Clean-Up

Containment: For small leaks, absorb with inert absorbent material (e.g., sand, diatomite, acid binders, universal binders) or collect in a tightly sealable

container. For large leaks, enclose with banks to prevent outflow and lead the leakage to a safe place for disposal.

Clean-Up: Use appropriate methods to clean up the spill, ensuring all contaminated materials are disposed of in accordance with local regulations.

6.3 Reference to Other Sections

Other Sections: See Section 8 for personal protection equipment and Section 13 for disposal methods.

Section 7: Handling and Storage

7.1 Handling Precautions

Handling: Ensure adequate ventilation. Wear personal protective equipment/face protection. Use spark-proof tools and explosion-proof equipment. Keep away from open flames, hot surfaces, and sources of ignition. Avoid contact with skin, eyes, or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid ingestion and inhalation. Take precautionary measures against static discharge.

7.2 Storage Conditions

Storage: Store in a dry, cool, and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks, and flame. Store in a flammable area. Keep container tightly closed in a dry and well-ventilated place. Incompatible

materials include strong oxidizing agents, strong acids, strong bases, strong reducing agents, and water.

Section 8: Exposure Controls/Personal Protection

8.1 Control Parameters

Exposure Limits: No occupational exposure limits established by regional regulatory authorities.

8.2 Exposure Controls

Engineering Measures: Ensure adequate ventilation, especially in confined areas.

Section 9: Physical and Chemical Properties

9.1 Physical Properties

Appearance: White crystalline solid

Odor: None reported

Melting Point: Not specified

Boiling Point: Not specified

Solubility in Water: Moderately soluble

Solubility in Organic Solvents: More soluble in polar organic solvents

9.2 Chemical Properties

Stability: Stable under normal conditions. Decomposes upon heating.

Reactivity: Reactive with reducing agents, strong acids, and bases.

Section 10: Stability and Reactivity

10.1 Stability

Stable: Under normal conditions

10.2 Reactivity

Reactive with: Reducing agents, strong acids, strong bases, water

10.3 Conditions to Avoid

Heat, sparks, flames, incompatible materials

Section 11: Toxicological Information

11.1 Acute Toxicity

Oral: Category 4, H302 (Harmful if swallowed)

Inhalation: Category 4, H332 (Harmful if inhaled)

11.2 Specific Target Organ Toxicity (Repeated Exposure)

Inhalation: Category 2, H373 (May cause damage to organs through prolonged or repeated exposure)

Section 12: Ecological Information

12.1 Ecotoxicity

No environmental hazards identified based on current information

Section 13: Disposal Considerations

13.1 Disposal Methods

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

Section 14: Transport Information

14.1 Transport Information

UN Number: Not specified

Hazard Class: Not specified

Packing Group: Not specified

Section 15: Regulatory Information

15.1 Regulatory Information

EU Classification: Not specified

Other Regulations: Follow local and national regulations for hazardous substances.