

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product Name: ZenoParticle CH-100

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

Identified uses : Research reagents

Details of the supplier of the safety data sheet

Company: ZENOGEN PHARMA CO., LTD.

1-1 Tairanoue, Sasagawa, Asaka-machi, Koriyama City,
Fukushima 963-0196, Japan

Department in charge: Pharmaceutical&technology Business Division

Telephone: +81-24-947-8503

Fax: +81-24-947-8507

SECTION 2: Hazards identification

GHS classification and label elements, including precautionary statements:

Not applicable

Specific hazards: Wash contaminated areas thoroughly after handling.

Do not breathe mist/vapours.

SECTION 3: Composition/information on ingredients

Uniform product or mixture: Mixture

Product composition:

Ingredients	CAS №	ISHL	Amount (%)
Chitosan	9012-76-4	8-579	≤0.2%
Acetic acid	64-19-7	2-688	≤0.2%
Sodium acetate	6131-90-4	2-692	≤1%
Sodium chloride	7647-14-5	1-236	≤1%
Water	7732-18-5	-	≥97%

Fatty acid ≤0.1%

Hazardous ingredients: Applicable ingredient corresponding to the GHS classification: Acetic acid

SECTION 4: First aid measures

- If inhaled:** If breathed in, move person into fresh air. Keep rest with position for easy breathing.
- In case of skin (or hair) contact:** If skin irritation or rash occurs, get medical advice or treatment.
- In case of eye contact:** Rinse cautiously with water for several minutes. If you wear contact lenses and can easily remove them, remove them. Keep rinsing after removing. If eye irritation persists, get medical advice/attention.
- If swallowed:** If a large amount is ingested, induce vomiting. If there is any abnormality, consult a doctor.

SECTION 5: Firefighting measures

- Extinguishing media:** Suitable extinguishing agent
Use extinguishing media suitable for surrounding equipment.
- Special hazards arising from the substance or mixture:**
May give off irritating or toxic fumes (or gasses) in fires. During firefighting, wear proper protective equipment to avoid smoke inhalation.
- Advice for firefighters**
- Unique extinguishing method:**
Promptly move containers to a safe location. Cool non-movable containers by spraying mist around the area.
- Special protective equipment and precautions for firefighters:**
Perform firefighting activities upwind, avoiding the inhalation of hazardous gasses. Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

- Personal precautions, protective equipment and emergency procedures:**
Avoid contact with skin, eyes and clothing.
- Methods and material for containment and cleaning up:** Sweep up and collect it in an empty container
- Measures to prevent secondary disasters:** Flush the contaminated area with water.

SECTION 7: Handling and storage

Handling

Technical countermeasures

- Handler exposure protection:** Avoid inhalation dust or fumes.

Fire and explosion protection: Avoid handling giving a shock to the container such as turn over or dropping.

Safe handling precautions: Wash hands and contaminated areas thoroughly after handling.
Wear appropriate protective equipment.

Storage

Conditions for safe storage: 2~8 °C

SECTION 8: Exposure controls/personal protection

Control parameters

Control concentration: No data available

Permissible concentration [Acetic acid]

Japan Society for Occupational Health (1978): 10ppm; 25mg/m³

ACGIH (2004) TWA: 10ppm

STEL: 15ppm (upper respiratory tract and eye irritation, pulmonary function)

Exposure Prevention

Facility control: Ensure adequate ventilation, especially in enclosed areas

Protective equipment

Respiratory protection: Wear respirators as appropriate.

Hand protection: Wear protective gloves as appropriate.

Eye protection: Wear safety glasses as appropriate.

Skin and Body protection: Wear protective clothing as appropriate.

Hygiene measures: Wash contaminated areas thoroughly after handling.
Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Form: Liquid
Color: White to pale yellow cloudy color
Odor: Slight acetic acid odor
Odor threshold: No data available
Melting/Freezing point: No data available
Boiling/Initial boiling point: No data available
Boiling range: No data available
Flammability: No data available
Explosive limits (Lower/Upper): No data available

Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Self-accelerating decomposition temperature:	No data available
pH:	5,0~5.5
Dynamic viscosity:	No data available
Viscosity (coefficient of viscosity):	No data available
Solubility	
[water]:	No data available
[other solvent]:	No data available
[solubility of solvent]:	No data available
Octanol/water partition coefficient:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density/Relative density:	No data available
Relative gas density (air=1):	No data available
Relative density of the vapor/air-mixture at 20°C (air = 1):	No data available
Particle characteristics:	No data available
Critical temperature:	No data available
Evaporation rate:	No data available
Volatile organic compounds:	No data available
Other data:	No data available

SECTION 10: Stability and reactivity

Possibility of hazardous reactions:	Relatively stable to heat, but may change color and change physical properties when stored in a humid location.
Conditions to avoid:	Avoid direct sunlight, high temperature and humidity

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity [Acetic acid]

Oral LD50: rat LD50=3310mg/kg (PATTY 5th, 2001)

Skin LD50: rabbit LD50=1060mg/kg (PATTY 5th, 2001)

Local effects [Acetic acid]

Skin corrosive / irritation: rabbit/guinea pig: severe burns (PATTY 5th, 2001 et al)

Serious eyes damage / Eyes irritation: rabbit: permanent corneal damage

Respiratory organs sensitization / Skin sensitization: No data available
Germ cell mutagenicity: No data available
Carcinogenicity: No data available
Teratogenicity: No data available
Reproductive toxicity: No data available
Specific target organ toxicity (single / repeat): No data available
Aspiration hazard: No data available

SECTION 12: Ecological information

Eco toxicity

Aquatic environmental toxicity (acute) [Acetic acid]

Crustacean EC50: EC50=65mg/L/48hr (Aquire, 2010)

Solubility in water [Acetic acid]: Mixing (ICSC, 2000)

Persistence/Degradability [Acetic acid]: BOD resolution 74% (existing inspection)

Biological concentration [Acetic acid]: log Pow= -0.17 (PHYSROP OB, 2005)

Mobility in soil: No data available

Hazardous to the ozone layer: No data available

SECTION 13: Disposal considerations

Information for safe and environmentally desirable disposal/recycling of chemicals contaminated container and packaging

Waste treatment methods

Avoid release to the environment

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

SECTION 14: Transport information

UN number: Not applicable

UN classification: Not applicable

Marine pollutant: Not applicable

Specific precautionary transport measures:

Before loading, make sure that no leakage happened.

Prevent collapse of cargo by loading without overturning, falling, or damage.

Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code:

Hazardous liquid substances (class Z)

Acetic acid

Hazardous liquid substances (equivalent to Z)

Sodium chloride

Non-hazardous substances (class OS)

Water

Ship Safety Law: Not applicable

Civil Aeronautics Law: Not applicable

SECTION 15: Regulatory information

Safety, health and environmental regulations or laws specific to the product

Poisonous and Deleterious Substances Control Law: Not applicable

Industrial Safety and Health Law: Not applicable

PRTR: Not applicable

Fire Service Law: Not applicable

Specified Chemical Substances, monitoring chemicals, Priority Assessment Chemical Substances based on the Japan JCSCCL Japanese Chemical Substances Control Law: Not applicable

Pharmaceuticals and Medical Devices Law: Not applicable

SECTION 16: Other information

References

Globally Harmonized System of classification and labeling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 22th edit., 2021 UN

IMDG Code, 2020 Edition (Incorporating Amendment 40-20)

IATA Dangerous Goods Regulations 64th edit (2023)

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2022 TLVs and BEIs. (ACGIH)

Notification 0111, Article No. 1 of the Director of Chemical Substances Division, Safety and Health Department, Labor Standards Bureau, Ministry of Health, Labor and Welfare, Japan, 11, Jan. 2022.

Supplier's data/information

Responsibilities

This description is based on materials and information data available at this time, and may be revised according to new knowledge. The precautions are intended for normal handling, and in the case of special handling, please use after implementing sufficient safety measures. The calculation basis for the GHS classifications described here is the current data published in Japan (NITE 2021).