

## SAFETY DATA SHEET

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

**Product Name:** STEM-CELLBANKER EX GMP grade  
**Product Code:** 11936  
**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:

##### GHS classification:

**Health hazards** Specific target organ toxicity (single exposure): Category 2

##### GHS label elements:



**Signal word** Warning  
**Hazard information** May cause damage to organs  
**Precautionary statements**  
**Prevention:** Do not breathe dust/fume/mist.  
Wash contaminated area thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
**First aid:** IF exposed or concerned, get medical attention.  
**Disposal:** Dispose of contents/container in accordance with local/national regulations.  
**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 No	EINECS №	RTECS #	Amount (%)
Dimethyl sulfoxide	67-68-5	200-664-3	PV6210000	10%
Inorganic salts	-			≤ 10%

Note: Including others and pH adjusters

**Hazardous ingredients:** Applicable ingredient corresponding to the GHS classification and the health hazards symbol: Dimethyl sulfoxide

**SECTION 4: First aid measures**

- General measures:** If exposed or concerned, get medical attention.
- If inhaled:** If breathed in, move person into fresh air. Keep calm and warm. Consult a physician immediately.
- In case of skin (or hair) contact:** Wash with plenty of water and soap.  
If skin irritation or rash occurs, get medical advice or treatment.
- In case of eye contact:** Immediately flush eyes with running water. Consult a physician immediately.
- If swallowed:** If conscious, give one to two glasses of water or milk. Never give anything by mouth to an unconscious person.

**SECTION 5: Firefighting measures**

- Extinguishing media:** Suitable extinguishing agent
- Use water**
- 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:**  
Extinguish with extinguishing media, cutting off the source of the fire. Promptly move all movable 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:**

Do not allow anyone other than those involved to approach.

Provide adequate ventilation until collection is complete.

**Environmental precautions:** Prevent spilled material from entering sewers, drains and low-lying areas.

**Methods and material for containment and cleaning up:**

Fire is strictly prohibited. Absorb the leaked liquid with a waste cloth, dust, cloth and collect it in an empty container, and then wash it away with a large amount of water.

Always wear protective glasses when working.

Do not work downwind.

**SECTION 7: Handling and storage**

**Handling**

**Technical countermeasures (Handler exposure protection) :**

Do not inhale dust/fume/gas/mist.

Wear proper protective equipment to avoid inhalation and prevent contact with eyes, skin, and clothing.

**Storage:**

**Conditions for safe storage:** 2~8 °C or below -20°C

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

**Control concentration:** No data available

**Permissive concentration**

**Japan Society for Occupational Health:** No data available

**ACGIH:** No data available

**Exposure Prevention**

**Facility control:** Ensure adequate ventilation, especially in confined areas.

**Protective equipment**

<b>Respiratory protection:</b>	Wear respirators as appropriate.
<b>Hand protection:</b>	Wear protective gloves as appropriate.
<b>Eye protection:</b>	Wear safety glasses as appropriate.
<b>Skin and Body protection:</b>	Wear protective clothing as appropriate.
<b>Hygiene measures:</b>	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

<b>Form:</b>	Liquid
<b>Color:</b>	Clear and colorless
<b>Odor:</b>	Slight characteristic odor
<b>Odor threshold:</b>	No data available
<b>Melting/Freezing point:</b>	No data available
<b>Boiling/Initial boiling point:</b>	No data available
<b>Boiling range:</b>	No data available
<b>Flammability:</b>	No data available
<b>Explosive limits (Lower/Upper):</b>	No data available
<b>Flash point:</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Self-accelerating decomposition temperature:</b>	No data available
<b>pH:</b>	7.0~9.2 (20°C)
<b>Dynamic viscosity:</b>	No data available
<b>Viscosity (coefficient of viscosity):</b>	No data available
<b>Solubility</b>	
<b>water:</b>	No data available
<b>other solvent:</b>	No data available
<b>solubility of solvent:</b>	No data available
<b>Octanol/water partition coefficient:</b>	No data available
<b>Vapor pressure:</b>	No data available
<b>Vapor density:</b>	No data available
<b>Density/Relative density:</b>	No data available
<b>Relative gas density (air=1):</b>	No data available
<b>Relative density of the vapor/air-mixture at 20°C (air = 1):</b>	No data available
<b>Particle characteristics:</b>	No data available

<b>Critical temperature:</b>	No data available
<b>Evaporation rate:</b>	No data available
<b>Volatile organic compounds:</b>	No data available
<b>Other data:</b>	No data available

#### SECTION 10: Stability and reactivity

**Reactivity:** No data available

#### SECTION 11: Toxicological information

##### Information on toxicological effects

##### Acute toxicity [Dimethyl sulfoxide]

**Oral LD50:** rat LD50=14500mg/kg

(Risk Assessment vol.13, Ministry of the Environment, Government of Japan, 2015)

**Skin LD50:** rat LD50=40000 mg/kg

(Risk Assessment vol.13, Ministry of the Environment, Government of Japan, 2015)

**Inhalation LD50:** mist: rat LC50 > 5330mg/m<sup>3</sup> (5.33 mg/L) (SIDS, 2008)

##### Local effects:

**Skin corrosive / irritation:** No data available

**Serious eyes damage / Eyes irritation:** No data available

**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 [Dimethyl sulfoxide]

**single:** Category 2, Respiratory (SIDS, 2008)

**repeat:** No data available

**Aspiration hazard:** No data available

#### SECTION 12: Ecological information

##### Eco toxicity

##### Aquatic environmental toxicity (acute) [Dimethyl sulfoxide]

**Crustacean EC50:** EC50=6830 mg/L/24hr

(Risk Assessment vol. 13, Ministry of the Environment, Government of Japan, 2015)

**Solubility in water [Dimethyl sulfoxide]:** Mixing (ICSC, 2000)

**Persistence/Degradability:** No data available  
**Biological concentration [Dimethyl sulfoxide]:**  $\log Pow = -1.35$  (calculated) (ICSC, 2000)  
**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  
**Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code:** Not applicable  
**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 JCSCL 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 64<sup>th</sup> 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).