KACTUS

Chemical Safety Data Sheet MSDS / SDS

DNase I

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: DNase I

Item number: GMP-DNI-EE001

SDS number: W000012803

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

This product is not involved.

1.3 Company Identification

Company: Kactus Biosystems

Address: Room 401, Building 8, No. 188 Xinjunhuan Road, Minhang District, Shanghai, China.

Telephone: 400-614-0008

Email: support@kactusbio.com

2. Hazards identification

2.1 GHS Label elements, including precautionary statements

Classification of the substance or mixture（Eye irritation, Category 2）

2.2 Pictogram(s)

Signal word：Warning

Dangerous ingredients marked on the label： Calcium chloride.

Hazard statement(s)：

H319 Causes severe eye irritation.

Prevention：

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/protective masks.

Response：

P337+P313 If you still feel eye irritation: Seek medical attention/medical attention.

P305+P351+P338

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage :none.

Disposal:none.

Additional information:none.

3. Composition/information on ingredients

CAS No.	Chemical Name
CAS: 77-86-1	Tris
CAS: 10043-52-4	$CaCl_2$
CAS: 56-81-5	Glycerol

4. First aid measures

4.1 Description of first aid measures

If inhaled

After inhalation: fresh air.

Afer skin contact: Transfer to fresh air and rest.

In case of eye contact

After eye contact: Separate eyelids, rinse with running water or normal saline, and seek immediate medical attention.

If swallowed

After swallowing: rinse your mouth with water, do not induce vomiting, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Water Foam Carbon dioxide (CO_2) Dry powder.

Unsuitable extinguishing media:

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods of containment and removal of spilled chemicals and disposal materials used

As far as possible, collect the leaking liquid in a closed container, absorb it with sand, activated carbon or other inert materials, and transfer it to a safe place, and do not flush into the sewer.

6.4 Reference to other sections

For disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Prohibition of open flames;

Operators should be specially trained and strictly abide by operating procedures;

Operation and disposal should be carried out in a place with local ventilation or comprehensive ventilation facilities;

Avoid eye and skin contact and avoid inhalation of vapors;

When handling, it should be loaded and unloaded lightly to prevent damage to packaging and containers;

Empty containers may leave harmful substances;

Wash hands after use, and do not eat or drink in the workplace.

Information on fire and explosion prevention:

Keep away from fire and heat sources, smoking is strictly prohibited in the workplace;

Use explosion-proof ventilation systems and equipment;

Avoid contact with forbidden substances such as oxidants, and equip corresponding varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

7.2 Safe storage conditions such as mixing hazards

Storage precautions

Requirements for warehouses and containers:

Store in a cool, ventilated warehouse; Keep the container tightly sealed.

More information about storage conditions: separate from oxidants, metals, food.

8. Exposure controls/personal protection

Engineering control method: the work site is recommended to be separated from other work sites, strengthen ventilation and provide safe showers and eyewash equipment.

8.1 Occupational exposure limits: There are no known nationally prescribed exposure limits.

8.2 Biological limits: no further information is available.

8.3 Monitoring methods: no further information is available.

8.4 Personal protective equipment

Respiratory protection: ventilation, local exhaust ventilation or respiratory protection;

Hand protection: thermal gloves, protective clothing;

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

Skin and body protection: wear overalls that prevent the penetration of poisons.

9. Physical and chemical properties

9.1 Information about basic physical and chemical properties

Appearance

Shape: liquid.

Color: colourless.

Smell: No odor.

Olfactory threshold: No information.

pH (at 25 °C): 8.0.

Melting point: No information.

Boiling point: No information.

Flash point: No information.

Flammability: No information.

Decomposes the temperature: No information.

Natural temperature: No information.

Danger of explosion: No information.

Explosion limit: No information.

Lower explosion limit: No information.

Upper limit of explosion: No information.

Vapor pressure: No information.

Density (at 25 °C): No information.

Relative density: No information.

Vapor density: No information.

Evaporation rate: No information.

Solubility: No information.

Water: Soluble.

N-octanol/water partition coefficient: No information

Viscosity: No information

Movement: No information

Kinematic: No information

9.2 Additional Information

No other relevant information is available.

10. Stability and reactivity

10.1 Dangerous reaction: stable if stored and used at normal ambient temperature.

10.2 Stability: Thermal decomposition/situations to avoid: no data.

10.3 Conditions to be avoided: electrostatic discharge, heat, moisture, etc.

10.4 Forbidden substances: strong oxidants.

10.5 Dangerous decomposition products: no data.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity: no data available.

Relevant LD/LC50 values:

CAS：77-86-1 Tris

Mouth：LD50 - rat (female) - > 5 000 mg/kg bw.

Inhalation：No data available.

Transdermal：LD50 - rat (male/female) - > 5 000 mg/kg bw.

CAS：10043-52-4 $CaCl_2$

Mouth：No data available.

Inhalation：LC50 - rat - > 160 mg/m³ air.

Transdermal：LD50 - rabbit (male/female) - > 5 000 mg/kg bw.

CAS：56-81-5 Glycerol

Mouth：LD50 Rat oral 12.6 g/kg.

Inhalation：LC50 Rat inhalation > 570 mg/cu m/1hr.

Transdermal：No data available.

Major irritating effects

No information.

Additional data (on experimental toxicity): no further information was available**.**

Subacute to chronic toxicity: no further information available.

Further information on poisons: no further information is available**.**

12. Ecological information

12.1 Ecotoxicity

Aquatic toxicity: harmful to the aquatic environment**.**

12.2 Persistence and degradability: no data available**.**

12.3 Bioconcentration or bioaccumulation: no data available**.**

12.4 Soil mobility: no data.

Effects of ecotoxicity: no data available**.**

12.5 Evaluation results of PBT (residue, bioconcentrate, toxic substances) and vPvB (high residue, high bioconcentration substances):

The PBT/vPvB assessment is not available as the chemical safety assessment is not required/carried out.

PBT (residue, bioconcentrate, toxic): N/A.

12.6 Other side effects:

The evaporation of substances can reach the concentration of particulate pollution in the air.

13. Disposal considerations

13.1 Disposal methods and precautions: recycle as much as possible, if it cannot be recycled,

Use incineration method for disposal; This product shall not be disposed of by discharging it to the sewer.

Recommendation: Return the container to the manufacturer or dispose of it in accordance with national and local regulations.

14. Transport information

14.1 UN Dangerous Goods Number (UN Number) ADR, ADN, IMDG, IATA: void.

14.2 UN Appropriate Shipping Names ADR, ADN, IMDG, IATA: void.

14.3 UN Transport Hazard Classification ADR, ADN, IMDG, IATA: void.

14.4 Packaging Categories ADR, IMDG, IATA: void.

14.5 Harm to the Environment Marine Pollutants: void.

14.6 Special User Precautions: not applicable.

14.7 Annex 2 of MARPOL73/78 (Pact for the Prevention of Marine Pollution Caused by Ships)

And bulk shipments under IBCCode (International Cargo Code): no provision is made.

Transportation/Additional Information: no provision is made.

UN "Standard Specification": no provision is made.

15. Regulatory information

Law of the People's Republic of China on the Prevention of Occupational Diseases:

Classification of occupational disease hazard factors (2015): not included.

Regulations on the Safety Management of Hazardous Chemicals:

Dangerous Goods Chemical Catalogue (2015): not included.

List of Explosive Hazardous Chemicals (2017)": not included.

List of Hazardous Chemicals under Key Regulation:

The first and second batches of key regulated hazardous chemicals list: not included.

Measures for Registration of Environmental Management of Hazardous Chemicals (Trial):

Catalogue of hazardous chemicals for key environmental management:not included.

Regulations on the Administration of Narcotic Drugs and Psychotropic Substances:

List of varieties of narcotic drugs: not included.

List of psychotropic drug varieties: not included.

Environmental management of new chemical substances:

List of Existing Chemical Substances in China (2013): listed.

16. Other Information

The above information is based on the data and information currently available, but all values (content, physical and chemical property data, etc.) are not guaranteed, and all chemical substances may have unforeseen hazards, and the above records do not guarantee that all hazards are covered, so care should be taken when using.