

SAFETY DATA SHEET

No. 29521

Identity

D-Ornithine Monohydrochloride**SECTION 1.** Company identification

Name of Manufacturer : Yoneyama Yakuhin Kogyo Co., Ltd.
 Address : 2-3-11 Doshomachi , Chuo-ku, Osaka, 541-0045, Japan
 Contact for Information : Sales Division
 Telephone : 06-6231-3555 Japan
 FAX : 06-6223-1093 Japan

SECTION 2. Hazards identification**GHS Classification**

Physical hazards

Pyrophoric solids Not classified

Health hazards

— —

Environmental hazards

— —

The item which has not been indicated -- "Not applicable", or " Classification not possible"

Label Elements

Symbol

None

Signal word

No signal word

Hazard statement

None

Precautionary statements

None

SECTION 3. Composition/information on ingredients

Substance/Mixture : Substance
 Chemical Name : D-Ornithine Monohydrochloride
 Composition : 100%
 Chemical Formula : $C_5H_{12}N_2O_2 \cdot HCl$
 CAS No : 16682-12-5
 Dangerous and hazardous ingredients : ———

SECTION 4. First aid measures**INHALATION :**

Remove the victim from the contamination immediately to fresh air. Keep the victim warm and quiet. If breathing is weak irregular or has stopped, give artificial respiration. If you feel unwell, treatment by a physician as soon as possible

SKIN CONTACT :

Gently rinse the affected skin with plenty of water while removing contaminated clothing and shoes. If irritation persists, treatment by a physician as soon as possible.

EYE CONTACT :

Gently rinse the affected eyes with clean water for at least 15 minutes.
Treatment by a physician as soon as possible.

INGESTION :

Do not induce vomiting. If the victim is responsive, give one or two glasses of milk or water. Never give anything by mouth to someone who is unconscious or convulsing. Treatment by a physician as soon as possible.

Anticipated acute and delayed symptoms :

If in eyes: May cause irritation. If on skin: May cause irritation. If ingestion: May cause dizziness and headache if ingested a lot. If inhalation: May cause irritating to upper respiratory tract.

SECTION 5. Fire fighting measures

Suitable extinguishing media :

Water spray, Chemical foam, Dry chemical powder, Carbon dioxide

Unsuitable extinguishing media :

No information found.

Specific hazards arising from chemical :

Gives off irritating or toxic fumes (or gases) in a fire.

Particular fire fighting :

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out.

Special protective actions for fire-fighters :

Wear protective clothing, respirator, chemical safety goggles, rubber boots and heavy rubber gloves.

SECTION 6. Accidental release measure

Personal precautions, protective equipment and emergency procedures :

Restrict access area. Provide adequate protective equipment and ventilation. Remove sources of heat and flame.
Do not touch spilled material. Stop or reduce leak if safe to do so.

Environmental precautions :

Prevent material from entering sewers or confined spaces.

Removal measure :

Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder.

SECTION 7. Handling and storage

Precautions for safe handling :

Prevent contact with skin and eyes by using adequate personal protective equipment.

Conditions for safe storage :

Keep tightly closed. Keep away from incompatible substances. Store in cool dry place.

Incompatible materials :

Strong oxidizing agents.

Packaging compatibilities :

Polypropylene, Polyethylene, Glass.

SECTION 8. Exposure controls/personal protection

Exposure limits :

ACGIH, OSHA: Not established.

Equipment measures :

Use local exhaust ventilation. Eye wash stations and safety showers must be immediately available.

Protective equipment.

Respiratory protection	:	Air – supplied or self – contained NIOSH approved breathing apparatus.
Hand protection	:	Rubber gloves
Eye protection	:	Safety goggles, face shield
Skin protection	:	Protective clothing, rubber boots

SECTION 9. Physical and chemical properties

Appearance	:	White crystalline powder.
Odor	:	No information found.
pH.	:	No information found.
Melting point	:	230°C (Decomposition)
Boiling point	:	No information found.
Flash point	:	No information found.
Upper/lower explosive limits	:	No information found.
Vapor pressure	:	No information found.
Vapor density	:	No information found.
Specific gravity	:	No information found.
Solubility	:	54.5g/100g(25°C water)
Partition coefficient: n-Octanol/water	:	No information found.
Auto-ignition temperature	:	No information found.
Decomposition temperature	:	230°C

SECTION 10. Stability and reactivity

Stability :

Stable under ordinary conditions of use and storage.

Possibility of hazardous reactions :

No information found.

Conditions to avoid :

Sunlight, High temperature, High humidity

Incompatible materials :

Strong oxidizing agents.

Hazardous decomposition products :

Carbon monoxide, carbon dioxide.

SECTION 11. Toxicological information

Acute toxicity	:	No information found. (Classification not possible)
Skin corrosion/irritation	:	No information found. (Classification not possible)
Serious eye damage/eye irritation	:	No information found. (Classification not possible)
Respiratory or skin sensitization	:	No information found. (Classification not possible)
Germ cell mutagenicity	:	No information found. (Classification not possible)
Carcinogenicity	:	Not listed (NTP, IARC, OSHA) (Classification not possible)

Toxic to reproduction : No information found. (Classification not possible)
Specific target organ toxicity (single exposure) : No information found. (Classification not possible)
Specific target organ toxicity (repeated exposure) : No information found. (Classification not possible)
Aspiration hazard : No information found. (Classification not possible)

SECTION 12. Ecological information

Ecotoxicity : No information found.
Persistence and degradability : No information found.
Bioaccumulative potential : No information found.
Mobility in soil : No information found.

SECTION 13. Disposal considerations

It consigns it to the industrial waste disposal trader who has permission.
Consult Waste Management Authority for disposal.

SECTION 14. Transport information

UN number : Not applicable.
Transport hazard class : Not applicable.

SECTION 15. Regulatory information

Please apply to the regulatory control in each country.

SECTION 16. Other information

All information contained herein is given in good faith and no warranty expressed or implied is made to its accuracy.
The recommended industrial hygiene and safe handling procedures are believed to be generally applicable.
However, each user should review these recommendations and determine whether they are appropriate.