

## SAFETY DATA SHEET

According to JIS Z 7253:2019  
Issue Date 30-May-2025  
Revision Number 5.04

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

|              |                     |
|--------------|---------------------|
| Product Name | Guanidine Carbonate |
| Product Code | 075-02735           |

**Supplier** FUJIFILM Wako Pure Chemical Corporation  
1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan  
Phone: +81-6-6203-3741  
Fax: +81-6-6203-2029

**Emergency telephone number** +81-6-6203-3741 / +81-3-3270-8571

**Recommended uses** For research use only

**Restrictions on use** Seek expert judgment when using for purposes other than those recommended.

## Section 2: HAZARDS IDENTIFICATION

## GHS classification

## Classification of the substance or mixture

Acute toxicity - Oral

Category 4

## Pictograms



Signal word

Warning

## Hazard statements

H302 - Harmful if swallowed

## Precautionary statements-(Prevention)

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product

## Precautionary statements-(Response)

- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth

## Precautionary statements-(Storage)

- Not applicable

## Precautionary statements-(Disposal)

- Dispose of contents/container to an approved waste disposal plant

## Others

Other hazards

Not available

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Substance

Formula  $[H_2NC(:NH)NH_2]_2 \cdot H_2CO_3$

| Chemical Name       | Weight-% | Molecular weight | ENCS             | ISHL No. | CAS RN   |
|---------------------|----------|------------------|------------------|----------|----------|
| Guanidine carbonate | 98.0     | 180.17           | (1)-310,(2)-1773 | *        | 593-85-1 |

**Note on ISHL No.:** \* in the table means announced chemical substances.

## Section 4: FIRST AID MEASURES

### Inhalation

Remove to fresh air. If symptoms persist, call a physician.

### Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

### Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

### Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

### Protection of first-aiders

Use personal protective equipment as required.

## Section 5: FIRE FIGHTING MEASURES

### Suitable extinguishing media

Water spray (fog), Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder, Sand

### Unsuitable extinguishing media

No information available

### Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

### Special extinguishing method

No information available

### Special protective actions for fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

## Section 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

### Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated.

### Methods and materials for contaminant and methods and materials for cleaning up

Sweep up and gather scattered particles, and collect it in an empty airtight container.

### Recovery, neutralization

No information available

### Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

## Section 7: HANDLING AND STORAGE

### Handling

#### Technical measures

Avoid contact with strong oxidizing agents. Use with local exhaust ventilation.

#### Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

#### Safety handling precautions

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

#### Storage

##### Safe storage conditions

##### Storage conditions

Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.

##### Safe packaging material

Polyethylene

##### Incompatible substances

Strong oxidizing agents

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

#### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Personal protective equipment

##### Respiratory protection

Dust mask ( JIS T 8151 )

##### Hand protection

chemical protective gloves ( JIS T 8116 )

##### Eye protection

protective eyeglasses or chemical safety goggles (JIS T 8147)

##### Skin and body protection

Long-sleeved work clothes

#### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

If this product is classified as "Chemical Substances Hazardous to Skin, etc.", use appropriate protective equipment to them.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

#### Form

##### Color

White - slightly yellow

##### Appearance

crystals - crystalline powder

#### Odor

no data available

#### Melting point/freezing point

241 °C

#### Boiling point, initial boiling point and boiling range

no data available

#### Flammability

no data available

#### Evaporation rate:

no data available

#### Flammability (solid, gas):

no data available

#### Upper/lower flammability or explosive limits

##### Upper:

no data available

##### Lower:

no data available

#### Flash point

no data available

#### Auto-ignition temperature:

no data available

#### Decomposition temperature:

no data available

#### pH

10 - 13 ( 50g/L, 25°C )

#### Viscosity (coefficient of viscosity)

no data available

#### Dynamic viscosity

no data available

#### Solubilities

water : soluble . Ethanol , acetone : practically insoluble, or insoluble .

#### n-Octanol/water partition coefficient:(log Pow)

no data available

|                                     |                   |
|-------------------------------------|-------------------|
| Vapour pressure                     | no data available |
| Specific Gravity / Relative density | 1.25              |
| Vapour density                      | no data available |
| Particle characteristics            | no data available |

## Section 10: STABILITY AND REACTIVITY

### Stability

|                                  |                                                                                             |
|----------------------------------|---------------------------------------------------------------------------------------------|
| Reactivity                       | no data available                                                                           |
| Chemical stability               | May be altered by light.                                                                    |
| Hazardous reactions              | None under normal processing                                                                |
| Conditions to avoid              | Extremes of temperature and direct sunlight                                                 |
| Incompatible materials           | Strong oxidizing agents                                                                     |
| Hazardous decomposition products | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Nitrogen oxides (NO <sub>x</sub> ) |

## Section 11: TOXICOLOGICAL INFORMATION

\*NITE: National Institute of Technology and Evaluation (JAPAN)  
[https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/srhInput](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput)

### Acute toxicity

| Chemical Name       | Oral LD50                 | Dermal LD50          | Inhalation LC50 |
|---------------------|---------------------------|----------------------|-----------------|
| Guanidine carbonate | 1045 - 1089 mg/kg ( Rat ) | > 2000 mg/kg ( Rat ) | N/A             |

| Chemical Name       | Acute toxicity -oral- source information      | Acute toxicity -dermal- source information    | Acute toxicity -inhalation gas- source information |
|---------------------|-----------------------------------------------|-----------------------------------------------|----------------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results.      |

| Chemical Name       | Acute toxicity -inhalation vapor- source information | Acute toxicity -inhalation dust- source information | Acute toxicity -inhalation mist- source information |
|---------------------|------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results.        | Based on the NITE GHS classification results.       | Based on the NITE GHS classification results.       |

### Skin irritation/corrosion

| Chemical Name       | Skin corrosion/irritation source information  |
|---------------------|-----------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results. |

### Serious eye damage/ irritation

| Chemical Name       | Serious eye damage/irritation source information |
|---------------------|--------------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results.    |

### Respiratory or skin sensitization

| Chemical Name       | Respiratory or Skin sensitization source information |
|---------------------|------------------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results.        |

### Reproductive cell mutagenicity

| Chemical Name       | germ cell mutagenicity source information     |
|---------------------|-----------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results. |

### Carcinogenicity

| Chemical Name       | Carcinogenicity source information            |
|---------------------|-----------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results. |

### Reproductive toxicity

| Chemical Name       | Reproductive toxicity source information      |
|---------------------|-----------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results. |

### STOT-single exposure

| Chemical Name       | STOT -single exposure- source information     |
|---------------------|-----------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results. |

**STOT-repeated exposure**

| Chemical Name       | STOT -repeated exposure- source information   |
|---------------------|-----------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results. |

**Aspiration hazard**

| Chemical Name       | Aspiration Hazard source information          |
|---------------------|-----------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results. |

**Section 12: ECOLOGICAL INFORMATION**

\*NITE: National Institute of Technology and Evaluation (JAPAN)

[https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/srhInput](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput)

**Ecotoxicity**

| Chemical Name       | Algae/aquatic plants | Fish                                         | Crustacea |
|---------------------|----------------------|----------------------------------------------|-----------|
| Guanidine carbonate | N/A                  | LC50 : <i>Danio rerio</i><br>> 100 mg/L 96 h | N/A       |

**Other data**

| Chemical Name       | Short-term (acute) hazardous to the aquatic environment source information | Long-term (chronic) hazardous to the aquatic environment source information |
|---------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Guanidine carbonate | Based on the NITE GHS classification results.                              | Based on the NITE GHS classification results.                               |

**Persistence and degradability** No information available

**Bioaccumulative potential** No information available

**Mobility in soil** No information available

**Hazard to the ozone layer** No information available

**Section 13: DISPOSAL CONSIDERATIONS****Waste from residues**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated container and contaminated packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Section 14: TRANSPORT INFORMATION**

**ADR/RID** Not regulated

UN number

-

Proper shipping name:

UN classification

Subsidiary hazard class

Packing group

Marine pollutant

Not applicable

**IMDG** Not regulated

UN number

-

Proper shipping name:

UN classification

Subsidiary hazard class

Packing group

Marine pollutant (Sea)

Not applicable

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

No information available

**IATA** Not regulated

UN number

-

Proper shipping name:

UN classification  
 Subsidiary hazard class  
 Packing group  
 Environmentally Hazardous Substance Not applicable

## Section 15: REGULATORY INFORMATION

### Japanese regulations

Fire Service Act Not applicable  
 Poisonous and Deleterious Substances Control Law Not applicable  
 Industrial Safety and Health Act Not applicable  
Industrial Safety and Health Act (2026~) 【2026.4.1~】 Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57)  
【2026.4.1~】 Notifiable Substances (Law Art.57-2)  
 Regulations for the carriage and storage of dangerous goods in ship Not applicable  
 Civil Aeronautics Law Not applicable  
 Pollutant Release and Transfer Register Law (2023.4.1-) Not applicable

### Industrial Safety and Health Law

| Law Name                             | Chemical Name in Regulation                     | Weight % | Scheduled enforcement date |
|--------------------------------------|-------------------------------------------------|----------|----------------------------|
| Notifiable Substances (Law Art.57-2) | Guanidine hydrochloride, nitrate, and carbonate | 98.0     | 2026/4/1                   |

## Section 16: OTHER INFORMATION

### Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)  
[https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/srhInput](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput)  
 IATA dangerous Goods Regulations  
 RTECS:Registry of Toxic Effects of Chemical Substances  
 Japan Industrial Safety and Health Association GHS Model SDS  
 Dictionary of Synthetic Organic Chemistry, SSOCJ, Koudansha Scientific Co.Ltd.  
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.  
 etc

### Record of SDS revisions

The following contents were revised. Product and company Identification. Exposure controls/personal protection. Toxicological information. Ecological information. Regulatory information.

### Disclaimer

This SDS is according to JIS Z 7253: 2019. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z 7252:2019. \*JIS: Japanese Industrial Standards

End of Safety Data Sheet