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**Safety Data Sheet****1. Chemical product and company identification**

|   |   |   |
|---|---|---|
| <b>Product name</b>                       | : | 0.5mol/L(N/2) Sodium hydroxide solution, ethanolic  |
| <b>SDS code</b>                           | : | Z8-09   |
| <b>Company/undertaking identification</b> | : | HAYASHI PURE CHEMICAL IND.,LTD.<br>Address : 3-2-12 Uchihiranomachi, Chuo-ku, Osaka, Osaka, Japan<br>Telephone : 06-6910-7305<br>E-mail : shiyaku_kikaku@hpc-j.co.jp<br>URL : <a href="https://www.hpc-j.co.jp/">https://www.hpc-j.co.jp/</a> |
| <b>Emergency number</b>                   | : | 06-6910-7305  |
| <b>Recommended use</b>                    | : | For research and experimental use only.   |
| <b>Restrictions on use</b>                | : | Do not use on a human body or for animal medicines, foods, household products, cosmetics, etc.  |

**2. Hazards identification****GHS classification**

|  |  |                                 |                             |
|--|--|---------------------------------|-----------------------------|
| Physical hazards                                 | Explosives   | classification not possible     |                             |
|  | Flammable gases  | No classification               |                             |
|  | Aerosol  | classification not possible     |                             |
|  | Oxidizing gases  | No classification               |                             |
|  | Gases under pressure   | No classification               |                             |
|  | Flammable liquids  | Category 2                      |                             |
|  | Flammable solids   | No classification               |                             |
|  | Self-reactive substances and mixtures                                    | classification not possible     |                             |
|  | Pyrophoric liquids   | classification not possible     |                             |
|  | Pyrophoric solids  | No classification               |                             |
|  | Self-heating substances and mixtures                                     | classification not possible     |                             |
|  | Substances and mixtures which in contact with water emit flammable gases | classification not possible     |                             |
|  | Oxidizing liquids  | classification not possible     |                             |
|  | Oxidizing solids   | No classification               |                             |
|  | Organic peroxides  | classification not possible     |                             |
|  | Corrosive to metals  | Category 1                      |                             |
|  | Desensitized explosives  | classification not possible     |                             |
|  | Health hazards   | Acute toxicity (oral)           | classification not possible |
|  |  | Acute toxicity (dermal)         | classification not possible |
|  |  | Acute toxicity (inhalation:gas) | No classification           |
| Acute toxicity (inhalation:vapors)               |  | classification not possible     |                             |
| Acute toxicity (inhalation:dust/mist)            |  | classification not possible     |                             |
| Skin corrosion/irritation                        |  | Category 1                      |                             |
| Serious eye damage/eye irritation                |  | Category 1                      |                             |
| Respiratory sensitization                        |  | classification not possible     |                             |
| Skin sensitization                               |  | classification not possible     |                             |
| Germ cell mutagenicity                           |  | classification not possible     |                             |
| Carcinogenicity                                  | Category 1A  |                                 |                             |
| Reproductive toxicity                            | Category 1A  |                                 |                             |
| Specific target organ toxicity (single exposure) | Category 2 (respiratory system)  |                                 |                             |

|                                   |   |  |
|-----------------------------------|---|--|
|                                   | Specific target organ toxicity (single exposure)  | Category 3 (Narcosis)                      |
|                                   | Specific target organ toxicity (single exposure)  | Category 3 (Respiratory tract irritation.) |
|                                   | Specific target organ toxicity (repeated exposure)  | Category 1 (liver)                         |
|                                   | Specific target organ toxicity (repeated exposure)  | Category 2 (central nervous system)        |
| Environmental hazards             | Aspiration hazard   | classification not possible                |
|                                   | Hazardous to the aquatic environment, short-term (acute)  | No classification                          |
|                                   | Hazardous to the aquatic environment, long-term (chronic)   | No classification                          |
|                                   | Hazardous to the ozone layer  | classification not possible                |
| Hazard pictograms (GHS JP)        |    |  |
|                                   |    |  |
|                                   |    |  |
|                                   |   |  |
|                                   | GHS02   | GHS05                                      |
|                                   | GHS07   | GHS08                                      |
| Signal word (GHS JP)              | : Danger  |  |
| Hazard statements (GHS JP)        | : Highly flammable liquid and vapor (H225)<br>May be corrosive to metals (H290)<br>Causes severe skin burns and eye damage (H314)<br>May cause respiratory irritation (H335)<br>May cause drowsiness or dizziness (H336)<br>May cause cancer (H350)<br>May damage fertility or the unborn child (H360)<br>May cause damage to organs (respiratory system) (H371)<br>Causes damage to organs (liver) through prolonged or repeated exposure (H372)<br>May cause damage to organs (central nervous system) through prolonged or repeated exposure (H373)  |  |
| Precautionary statements (GHS JP) |   |  |
| Prevention                        | : Obtain special instructions before use. (P201)<br>Do not handle until all safety precautions have been read and understood. (P202)<br>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)<br>Keep only in original container. (P234)<br>Ground and bond container and receiving equipment. (P240)<br>Use explosion-proof electrical/ventilating/lighting equipment. (P241)<br>Use only non-sparking tools. (P242)<br>Take action to prevent static discharges. (P243)<br>Do not breathe dust/fume/gas/mist/vapors/spray. (P260)<br>Wash hands, forearms and face thoroughly after handling. (P264)<br>Do not eat, drink or smoke when using this product. (P270)<br>Use only outdoors or in a well-ventilated area. (P271)<br>Wear protective gloves/protective clothing/eye protection/face protection. (P280) |  |
| Response                          | : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. (P301+P330+P331)<br>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)<br>IF INHALED: Remove person to fresh air and keep comfortable for breathing (P304+P340)<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)<br>IF exposed or concerned: Call a POISON CENTER or doctor. (P308+P311)<br>Immediately call a POISON CENTER or doctor. (P310)<br>Get medical advice/attention if you feel unwell. (P314)<br>Wash contaminated clothing before reuse. (P363)<br>In case of fire: Use specify appropriate media to extinguish. (P370+P378)<br>Absorb spillage to prevent material-damage. (P390)   |  |

- Storage : Store in a well-ventilated place. Keep container tightly closed.  
(P403+P233)  
Store in a well-ventilated place. Keep cool. (P403+P235)  
Store locked up. (P405)  
Store in corrosive resistant container with a resistant inner liner. (P406)
- Disposal : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

### 3. Composition/information on ingredients

Distinction of substance or mixture : Mixture

| Name             | Concentration or Concentration range | Formula                          | Kanpo number |                             | CAS RN    |
|------------------|--------------------------------------|----------------------------------|--------------|-----------------------------|-----------|
|                  |                                      |                                  | CSCl no      | ISHL no                     |           |
| Sodium hydroxide | About 2.4%                           | NaOH                             | (1)-410      | Existing Chemical Substance | 1310-73-2 |
| Ethanol          | About 94.2%                          | C <sub>2</sub> H <sub>5</sub> OH | (2)-202      | Existing Chemical Substance | 64-17-5   |
| Water            | About 3.4%                           | H <sub>2</sub> O                 | -            | -                           | 7732-18-5 |

The above concentration or concentration range are not product specification.

All percentages listed in the above concentration or concentration range are wt%, unless otherwise specified.

### 4. First aid measures

#### First aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
Get immediate medical advice/attention.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing.  
Gently wash with plenty of soap and water.  
Get immediate medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Get immediate medical advice/attention.
- First-aid measures after ingestion : Do NOT induce vomiting.  
Drink plenty of water.  
Rinse mouth.  
Get immediate medical advice/attention.

### 5. Fire fighting measures

- Suitable extinguishing media : Water spray, Alcohol-resistant foam, Dry powder, Carbon dioxide, Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.
- Fire hazard : Highly flammable liquid and vapor.
- Explosion hazard : Danger of the steam explosion in indoor, outdoor, sewer.  
May induce explosion of containers by heating.
- Hazardous decomposition products in case of fire : In case of fire, product may produce irritative or toxic fumes/gases.
- Firefighting instructions : If ignited, for the initial fire-fighting, cut off combustion sources, extinguish fire at a stroke using appropriate fire-extinguishers.  
In the case of peripheral fire, quickly remove movable containers to safe places.  
If unable to be moved containers, sprinkle water to containers and surrounding equipment, etc. to cool.  
Even after extinguishing fire, thoroughly cool containers by using plenty of water.
- Protection during firefighting : Wear appropriate fire-resistant clothing including self contained-compressed air breathing apparatus.

## 6. Accidental release measures

### Personal Precautions, Protective Equipment and Emergency Procedures

- General measures : Before entering, ventilate the area.  
Do not let unauthorized persons come close to the area.  
Immediately place the leakage area in isolation, with taking proper distances for all directions.  
Wear appropriate personal protective devices to prevent inhalation and contact with eye, skin, and clothing, and never attempt to work on the lee.

### Environmental precautions

- Environmental precautions : Avoid release to the environment.  
Prevent entry to sewers and public waters.

### Methods and Equipment for Containment and Cleaning up

- Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.  
Collect leaking and spilled liquid in sealable containers as far as possible.  
Wash out the spilled area with large amounts of water.

## 7. Handling and storage

### Handling

- Technical measures : Work with appropriate personal protective equipment to prevent inhalation or contact to eyes, skin, and clothing.  
Handle with care to prevent leakage, overflowing, or scattering, minimize generation of mist or vapor, and thoroughly ventilate.
- Precautions for safe handling : Do not eat, drink or smoke when using this product.  
Thoroughly wash your hands and gargle after handling.  
Ensure good ventilation of the work station.  
Do not contact, breathe or swallow.  
Take precautionary measures against static discharge.  
Use explosion-proof equipment.
- Prevents handling of incompatible substances or mixtures : Avoid prolonged or repeated exposure.

### Storage

- Storage conditions : Store locked up.  
Store in a well-ventilated place, away from direct sunlight. Keep container tightly closed and keep away from fire and heat sources.  
Store in corrosive resistant container with a resistant inner liner.
- Material used in packaging/containers : Light shielding airtight container.  
Storage prohibition in glass or porcelain container.
- Technical measures : Comply with applicable regulations.
- Storage temperature : Cool and dark place

## 8. Exposure controls / Personal protection equipment

| Exposure limit values   |                      |
|-------------------------|----------------------|
| Sodium hydroxide        |                      |
| Exposure limits (JSOH)  | 【Ceiling】2mg/m3      |
| Exposure limits (ACGIH) | TWA -,STEL C 2 mg/m3 |
| Ethanol                 |                      |
| Exposure limits (ACGIH) | TWA -,STEL 1000 ppm  |

- Appropriate engineering controls : Cover up tightly the generation source at the handling place or install local exhaust equipment or overall ventilation equipment. Install safety showers and eye-fountains near a handling place. Clearly indicate the location.

### Protective equipment

- Respiratory protection : Gas mask for organic gases
- Hand protection : Impervious protective gloves
- Eye protection : Protective glasses (general glasses, glasses with side-shields, goggles)
- Skin and body protection : Impervious aprons, Impervious work clothing, Impervious long boots

## 9. Physical and chemical properties

|   |                                 |
|---|---------------------------------|
| Physical state                                  | : Liquid                        |
| Appearance                                      | : Liquid                        |
| Color   | : colorless transparent         |
| Odor  | : characteristic odor           |
| pH  | : $\geq 13$ (25°C)              |
| Melting point                                   | : No data available             |
| Freezing point                                  | : No data available             |
| Boiling point                                   | : 78.3 °C (as ethanol)          |
| Flash point                                     | : 12.8 °C (as ethanol)          |
| Auto-ignition temperature                       | : No data available             |
| Decomposition temperature                       | : No data available             |
| Flammability (solid, gas)                       | : No data available             |
| Vapor pressure                                  | : No data available             |
| Relative density                                | : No data available             |
| Density   | : 0.84 g/cm <sup>3</sup> (20°C) |
| Relative gas density                            | : No data available             |
| Solubility                                      | : No data available             |
| Partition coefficient n-octanol/water (Log Pow) | : No data available             |
| Explosive limits (vol %)                        | : No data available             |
| Viscosity, kinematic                            | : No data available             |
| Particle characteristics                        | : No data available             |

## 10. Stability and reactivity

|                                    |  |
|------------------------------------|--|
| Reactivity                         | : No data available  |
| Chemical stability                 | : Stable under normal handling conditions. Shows hygroscopicity. Crystal precipitation and solution coloring may occur during storage.   |
| Possibility of hazardous reactions | : Reacts with oxidizing agents to pose a risk of fire and explosion.   |
| Conditions to avoid                | : Sunlight, heat. Ignition sources such as spark, flame and static electricity. Contact with combustible substances, reducing substances, oxidizing agents, strong acids and metals. |
| Incompatible materials             | : Combustible substances, Reducing substances, Oxidizing agents, Strong acids, Metals  |
| Hazardous decomposition products   | : No data available  |

## 11. Toxicological information

The information in this section is based on the "GHS Classification Results" by NITE.

| As a product                  |   |
|-------------------------------|---|
| Acute toxicity (oral)         | classification not possible   |
| Acute toxicity (dermal)       | classification not possible   |
| Acute toxicity (inhalation)   | vapors:classification not possible<br>Gases:No classification<br>dust, mist:classification not possible |
| Skin corrosion/irritation     | Category 1  |
| Serious eye damage/irritation | Category 1  |
| Respiratory sensitization     | classification not possible   |
| Skin sensitization            | classification not possible   |
| Germ cell mutagenicity        | classification not possible   |
| Carcinogenicity               | Category 1A   |
| Reproductive toxicity         | Category 1A   |
| STOT-single exposure          | Category 2 Category 3 (Narcosis) Category 3 (Respiratory tract irritation.)                             |
| STOT-repeated exposure        | Category 1 Category 2   |
| Aspiration hazard             | classification not possible   |
| Sodium hydroxide              |   |
| Acute toxicity (oral)         | classification not possible   |
| Acute toxicity (dermal)       | classification not possible   |
| Acute toxicity (gas)          | No classification   |

| <b>Sodium hydroxide</b>               |  |
|---------------------------------------|--|
| Acute toxicity (vapour)               | classification not possible                                      |
| Acute toxicity (inhalation:dust/mist) | classification not possible                                      |
| Skin corrosion/irritation             | Category 1   |
| Serious eye damage/irritation         | Category 1   |
| Respiratory sensitization             | classification not possible                                      |
| Skin sensitization                    | No classification  |
| Germ cell mutagenicity                | No classification  |
| Carcinogenicity                       | classification not possible                                      |
| Reproductive toxicity                 | classification not possible                                      |
| STOT-single exposure                  | Category 1   |
| STOT-repeated exposure                | classification not possible                                      |
| Aspiration hazard                     | classification not possible                                      |
| <b>Ethanol</b>                        |  |
| Acute toxicity (oral)                 | No classification  |
| Acute toxicity (dermal)               | No classification  |
| Acute toxicity (gas)                  | No classification  |
| Acute toxicity (vapour)               | No classification  |
| Acute toxicity (inhalation:dust/mist) | classification not possible                                      |
| Skin corrosion/irritation             | No classification  |
| Serious eye damage/irritation         | Category 2B  |
| Respiratory sensitization             | classification not possible                                      |
| Skin sensitization                    | classification not possible                                      |
| Germ cell mutagenicity                | classification not possible                                      |
| Carcinogenicity                       | Category 1A  |
| Reproductive toxicity                 | Category 1A  |
| STOT-single exposure                  | Category 3 (Narcosis) Category 3 (Respiratory tract irritation.) |
| STOT-repeated exposure                | Category 1 Category 2  |
| Aspiration hazard                     | classification not possible                                      |
| <b>Water</b>                          |  |
| Acute toxicity (oral)                 | No classification  |
| Acute toxicity (dermal)               | No classification  |
| Acute toxicity (gas)                  | No classification  |
| Acute toxicity (vapour)               | No classification  |
| Acute toxicity (inhalation:dust/mist) | No classification  |
| Skin corrosion/irritation             | No classification  |
| Serious eye damage/irritation         | No classification  |
| Respiratory sensitization             | No classification  |
| Skin sensitization                    | No classification  |
| Germ cell mutagenicity                | No classification  |
| Carcinogenicity                       | No classification  |
| Reproductive toxicity                 | No classification  |
| STOT-single exposure                  | No classification  |
| STOT-repeated exposure                | No classification  |
| Aspiration hazard                     | No classification  |

## 12. Ecological information

The information in this section is based on the "GHS Classification Results" by NITE.

| <b>As a product</b>                                       |                   |
|---|-------------------|
| Hazardous to the aquatic environment, short-term (acute)  | No classification |
| Hazardous to the aquatic environment, long-term (chronic) | No classification |
| Persistence and degradability                             | No data available |
| Bioaccumulative potential                                 | No data available |
| Mobility in soil  | No data available |

| <b>As a product</b>                               |                             |
|---|-----------------------------|
| Ozone   | classification not possible |
| <b>Sodium hydroxide</b>                           |                             |
| Hazardous to Aquatic Environment - Acute Hazard   | Category 3                  |
| Hazardous to Aquatic Environment - Chronic Hazard | No classification           |
| Persistence and degradability                     | No data available           |
| Bioaccumulative potential                         | No data available           |
| Mobility in soil                                  | No data available           |
| Hazardous to the ozone layer                      | classification not possible |
| <b>Ethanol</b>                                    |                             |
| Hazardous to Aquatic Environment - Acute Hazard   | No classification           |
| Hazardous to Aquatic Environment - Chronic Hazard | No classification           |
| Persistence and degradability                     | No data available           |
| Bioaccumulative potential                         | No data available           |
| Mobility in soil                                  | No data available           |
| Hazardous to the ozone layer                      | classification not possible |
| <b>Water</b>                                      |                             |
| Hazardous to Aquatic Environment - Acute Hazard   | No classification           |
| Hazardous to Aquatic Environment - Chronic Hazard | No classification           |
| Persistence and degradability                     | No data available           |
| Bioaccumulative potential                         | No data available           |
| Mobility in soil                                  | No data available           |
| Hazardous to the ozone layer                      | classification not possible |

### 13. Disposal considerations

|                                      |   |   |
|--------------------------------------|---|---|
| Ecology - waste materials            | : | With the detail information of the waste, subcontract its disposal to a waste disposer authorized by a Prefectural Governor.                              |
| Contaminated container and packaging | : | Empty the packaging completely prior to disposal.<br>Empty containers should be taken for recycle, recovery or waste in accordance with local regulation. |

### 14. Transport information

#### International Regulations

##### Transport by sea(IMDG)

|                                    |   |  |
|------------------------------------|---|--|
| UN-No. (IMDG)                      | : | 2924   |
| Proper Shipping Name (IMDG)        | : | FLAMMABLE LIQUID, CORROSIVE, N.O.S.              |
| Packing group (IMDG)               | : | II   |
| Transport hazard class(es) (IMDG)  | : | 3 (8)  |
| Hazard labels (IMDG)               | : | 3,8  |
| Class (IMDG)                       | : | 3  |
| Subsidiary hazard (IMDG)           | : | 8  |
| Special provision (IMDG)           | : | 274  |
| Packing instructions (IMDG)        | : | P001   |
| IBC packing instructions (IMDG)    | : | IBC02  |
| Tank instructions (IMDG)           | : | T11  |
| Tank special provisions (IMDG)     | : | TP2, TP27  |
| Stowage category (IMDG)            | : | B  |
| Properties and observations (IMDG) | : | Causes burns to skin, eyes and mucous membranes. |
| MFAG-No                            | : | 132  |

##### Air transport(IATA)

|                                   |   |                                     |
|-----------------------------------|---|-------------------------------------|
| UN-No. (IATA)                     | : | 2924                                |
| Proper Shipping Name (IATA)       | : | Flammable liquid, corrosive, n.o.s. |
| Packing group (IATA)              | : | II                                  |
| Transport hazard class(es) (IATA) | : | 3 (8)                               |

|  |  |
|--|--|
| Hazard labels (IATA)                         | : 3, 8   |
| Class (IATA)                                 | : 3  |
| Subsidiary hazards (IATA)                    | : 8  |
| PCA Excepted quantities (IATA)               | : E2   |
| PCA Limited quantities (IATA)                | : Y340   |
| PCA limited quantity max net quantity (IATA) | : 0.5L   |
| PCA packing instructions (IATA)              | : 352  |
| PCA max net quantity (IATA)                  | : 1L   |
| CAO packing instructions (IATA)              | : 363  |
| CAO max net quantity (IATA)                  | : 5L   |
| Special provision (IATA)                     | : A3, A803   |
| ERG code (IATA)                              | : 3CH  |
| <b>Marine pollutant</b>                      | : Not applicable   |
| <b>Regulations in Japan</b>                  |  |
| Regulatory information by sea                | : Conform to the provisions of the Ship Safety Law.  |
| Regulatory information by air                | : Conform to the provisions of the Civil Aeronautics Law.  |
| MFAG-No                                      | : 132  |
| <b>Special transport precautions</b>         | : When transporting, load containers so that they do not tip over, damage, drop or collapse. Make sure there is no leak in containers. |

## 15. Regulatory information

### National law

|   |  |
|---|--|
| Industrial Safety and Health Law                                      | : Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18 Item 1, Item 2, Attached Table No.9)<br>Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Item 1, Item 2, Attached Table No.9)<br>Ethanol (Ordinance number : 61)<br>Sodium hydroxide (Ordinance number : 319)<br>Dangerous Substances - Flammable Substance (Enforcement Order Attached Table 1 Item 4)<br>Corrosive Liquids (Ordinance on Industrial Safety and Health Law Art. 326) |
| Japanese Poisonous and Deleterious Substances Control Law             | : Not applicable   |
| Water Pollution Prevention Law  | : Designated Chemical Substances (Law Article 2, Paragraph 4, Enforcement Order Article 3-3)   |
| Fire Service Law  | : Group 4 - Flammable liquids - Alcohols (Law Art.2 Para.7, Attached Table 1, Group 4)   |
| Air Pollution Control Law   | : Volatile Organic Compounds (Law Art.2 Para.4) (MOE Official Notice to Prefectures)   |
| Law Relating to Prevention of Marine Pollution and Maritime Disasters | : Noxious Liquid Substances - Category Z (Law Art.3(3), Enforcement Order, Art.1-2, Attached Table No.1 Item 3)  |
| Foreign Exchange and Foreign Trade Control Act                        | : Export Trade Control Ordinance appendix 1-16   |
| Ship Safety Act   | : Flammable liquids (Dangerous Goods Notification Schedule first second and third Article Dangerous Goods Regulations)   |
| Civil Aeronautics Law   | : Flammable liquids (Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)   |
| Port Regulation Law   | : Flammable liquids (Article 21, Paragraph 2 of Law, Article 12 rule, notice attached table that defines the type of dangerous goods)  |
| Road Act  | : Restriction for Vehicle Traffic (Enforcement Order Art.19-13, Publication of Japan Highway Public Corp.)   |
| Waste Management on Public Cleansing Law                              | : Specially Controlled Industrial Wastes (Act Art.2, para 5, Enforcement Order Art.2-4)  |
| Waterworks Law  | : Hazardous Substances (Act Article 4 paragraph 2), Standard for Water Quality (Ministry Order No.101 of 2003)   |
| Japanese Pollutant Release and Transfer Register Law (PRTR Law)       | : Not applicable   |
| Labor Standards Act   | : Chemical Substances Causing Occupational Illnesses (Act Art.75, Para.2, Ordinance Attached Table 1-2, Item 4-1, MHLW Notification No.36 of 1978)   |



## 16. Other information

- Data sources : Handbook of 17423 Chemical Products, The Chemical Daily Co, Ltd.  
International Chemical Safety Cards.  
National Institute of Technology and Evaluation (NITE).  
2020 Emergency Response Guidebook (ERG 2020).
- Other information : The SDS is copyrighted material of Hayashi Pure Chemical Ind, Ltd.  
This Safety Data Sheet is intended to be provided for business operators who handle chemical substance products of the relevant product and is not intended to assure safety in any way. The Safety Data Sheet does not verify all the information on the applicable chemical substance in the present time. With the recognition in that unknown danger constantly exists in the relevant chemical substance, the product shall be used in the principle of self-responsibility of the user with the highest priority to safety from transport and unpacking to disposal. When the relevant chemical substance is used, the user him/herself shall collect safety information and shall investigate laws and regulations at the place, organizations, countries, etc. where the substance is actually used and give the highest priority to them. The Company shall take no responsibility for investigating state and local regulations and the user shall handle this problem on his/her own responsibility. In the event that SDS in Japanese and SDS translated into other languages exist, the document described in Japanese is prior to all other documents whether or not there is any difference in contents, and documents in other languages shall be references.