

## Safety Data Sheet

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

Product identifier:

Product name: Paraformaldehyde

Product code(SDS NO): 58295jis\_J\_E1-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-Cho, Koshigaya, Saitama 343-0844, Japan

Competent section: Quality Assurance Department

Telephone number: +81-48-986-6161

FAX: +81-48-989-2787

e-mail address: shiyaku-t@junsei.co.jp

### 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable solids: Category 2

HEALTH HAZARDS

Acute toxicity Oral: Category 4

Acute toxicity Inhalation: Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2A

Specific target organ toxicity – single exposure: Category 1

Specific target organ toxicity – single exposure: Respiratory tract irritation Category 3

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment – acute hazard: Category 3

Hazardous to the aquatic environment – long-term hazard: Category 3

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

Label elements



Signal word: Danger

HAZARD STATEMENT

Flammable solid

Harmful if swallowed

Harmful if inhaled

Causes skin irritation

Causes serious eye irritation

Causes damage to organs after single exposure

May cause respiratory irritation

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting equipment.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
Wash contaminated parts thoroughly after handling.  
Wear protective gloves and face protection.  
Wear eye protection/face protection.  
Do not eat, drink or smoke when using this product.

#### Response

In case of fire: Use appropriate media.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
IF exposed or concerned: Call a POISON CENTER or doctor/physician.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
Rinse mouth.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

#### Storage

Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

#### Disposal

Dispose of contents/container in accordance with local/national regulation.

#### Physical and Chemical hazards

Flammable solid. Vapor/air mixture may explode.

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### 3. Composition/information on ingredients

#### Substance/Mixture:

##### Substance

Ingredient name: Paraformaldehyde  
Content(%): 91 <  
Chemical formula:  $\text{HO}(\text{CH}_2\text{O})_n\text{H}$   $n=8\sim 100$   
Chemicals No, Japan: 9-1941  
CAS No.: 30525-89-4

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### 4. First-aid measures

#### Descriptions of first-aid measures

##### General measures

Call a POISON CENTER or doctor/physician if you feel unwell.  
IF exposed or concerned: Call a POISON CENTER or doctor/physician.

##### IF INHALED

Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor/physician if you feel unwell.

##### IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
If skin irritation occurs: Get medical advice/attention.

**IF IN EYES**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

**IF SWALLOWED**

Rinse mouth. Do NOT induce vomiting.

Call a POISON CENTER or doctor/physician if you feel unwell.

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**5. Fire-fighting measures**

## Extinguishing media

## Suitable extinguishing media

In case of fire, use water mist, foam, dry powder, CO<sub>2</sub>.

## Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

## Advice for firefighters

## Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

## Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear cold insulating gloves/face shield/eye protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

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**6. Accidental release measures**

## Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

## Environmental precautions

Avoid release to the rivers, lakes, ocean, groundwater.

## Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

## Preventive measures for secondary accident

Collect spillage.

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**7. Handling and storage**

## Precautions for safe handling

## Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire & explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

## Exhaust/ventilator

Exhaust/ventilator should be available.

## Safety treatments

Avoid contact with skin.

Avoid contact with eyes.

Avoid breathing dust, vapor, mist, or gas.

**Safety Measures/Incompatibility**

- Use only outdoors or in a well-ventilated area.
- Wear protective gloves, protective clothing or face protection.
- Wear protective gloves and face protection.
- Wear eye protection/face protection.
- Use personal protective equipment as required.
- When using do not eat, drink or smoke.

**Conditions for safe storage, including any incompatibilities****Recommendation for storage**

- Store in a well-ventilated place. Keep container tightly closed.
- Keep cool. Protect from sunlight.
- Store locked up.

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**8. Exposure controls/personal protection****Exposure controls****Appropriate engineering controls**

- Do not use in areas without adequate ventilation.
- Eye wash station should be available.
- Washing facilities should be available.

**Individual protection measures****Respiratory protection**

- Wear positive pressure self-contained breathing apparatus (SCBA).

**Hand protection**

- Wear protective gloves.

**Eye protection**

- Wear eye/face protection.

**Safety and Health measures**

- Wash ... thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Take off contaminated clothing and wash it before reuse.

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**9. Physical and Chemical Properties****Information on basic physical and chemical properties****Physical properties**

Appearance: Powder~Solid

Color: White

Odor: Irritant odor

pH data N.A.

**Phase change temperature**

Initial Boiling Point/Boiling point data N.A.

Melting point/Freezing point: 120~180°C

Decomposition temperature: 120~180°C

Flash point: (c.c.)71°C

Auto-ignition temperature: 300°C

Explosive properties: Flammability or explosive limit

lower limit: 7.0 vol %

upper limit: 73.0 vol %

Vapor pressure: <0.16 kPa (25°C)

Vapor density data N.A.

Relative Vapor Density (Air=1): 1.03

Specific gravity/Density: 1.46(15°C)

Solubility

Solubility in water: 200 g/L (18°C)

n-Octanol /water partition coefficient data N.A.

## 10. Stability and Reactivity

### Chemical stability

Stable under normal storage/handling conditions.

### Possibility of hazardous reactions

May form explosive dust-air mixtures.

Decomposes on heating and on contact with acids, bases and oxidants. This produces flammable formaldehyde.

### Conditions to avoid

Contact with incompatible materials.

Open flames. Heat.

### Incompatible materials

Acids, Bases, Oxidizing agents

### Hazardous decomposition products

Carbon oxides, Formaldehyde

## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50 =800 mg/kg (RTECS, 2005)

##### Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

mist : rat LC50=1.07 mg/L (RTECS, 2005)

#### Irritant properties

##### Skin corrosion/irritation

[GHS Cat. Japan, base data]

rabbit : severe irritation (RTECS, 2005)

human : irritation (HSDB, 2005 et al.)

##### Serious eye damage /irritation

[GHS Cat. Japan, base data]

rabbit : severe irritation (RTECS, 2005)

human : irritation\* (HSDB, 2005 et al.)

\*...No description that the irreversible pathological change was observed.

No Allergenic and sensitizing effects data available

No Teratogenic effects data available

No Carcinogenic effects data available

No reproductive toxicity data available

Delayed and immediate effects and also chronic effects from short- and long-term exposure

#### STOT

##### STOT-single exposure

[cat.1]

[Japan published data]

lung ( HSFS, 2000 )

[cat.3(resp. irrit.)]

[Japan published data]

Respiratory tract irritation ( HSDB, 2005 )

No Aspiration hazard data available

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**12. Ecological Information****Toxicity****Aquatic toxicity**

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

**Aquatic acute toxicity component(s) data**

[GHS Cat. Japan, base data]

Fish (rainbow trout) LC50=60mg/L/96hr (AQUIRE, 2003)

**Water solubility**

200 g/L (18°C) (HSDB)

No Persistence and degradability data available

No Bioaccumulative potential data available

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**13. Disposal considerations****Waste treatment methods**

Avoid release to the environment (- if this is not the intended use).

Dispose of contents/container in accordance with local/national regulation.

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**14. Transport Information****UN No, UN CLASS**

UN number: 2213

UN proper shipping name: PARAFORMALDEHYDE

Transport hazard class(es): 4.1

Packing group: III

ERG GUIDE NO.: 133

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**15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

**US major regulations****TSCA**

Paraformaldehyde

**Other regulatory information**

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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**16. Other information****GHS classification and labelling**

Flam. Sol. 2: H228 Flammable solid

Acute Tox. 4: H302 Harmful if swallowed

Acute Tox. 4: H332 Harmful if inhaled

Skin Irrit. 2: H315 Causes skin irritation

Eye Irrit. 2A: H319 Causes serious eye irritation

STOT SE 1: H370 Causes damage to organs after single exposure

STOT SE 3: H335 May cause respiratory irritation

Aquatic Acute 3: H402 Harmful to aquatic life

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Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 18th edit., 2013 UN Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012) 2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2014 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

Chemical Risk Information Platform (CHRIP)(NITE) <http://www.safe.nite.go.jp/japan/db.html>

GHS Classification Guidance for Enterprises 2013 Revised Edition (August, 2013, METI)

Other information

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data.