Safety Data Sheet

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

Product identifier:

Product name: Benzaldehyde

Product code(SDS NO): 68110jis_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

Division: 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 liquids: Category 4

HEALTH HAZARDS

Acute toxicity Oral: Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2B

Skin sensitization: Category 1

Specific target organ toxicity - single exposure: Category 2(nervous system)

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

Specific target organ toxicity - single exposure: Narcosis Category 3

Specific target organ toxicity - repeated exposure: Category 1(nervous system)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment - acute hazard: Category 2

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

Label elements

Signal word: Danger

HAZARD STATEMENT

Combustible liquid

Harmful if swallowed

Causes skin irritation

Causes eye irritation

May cause an allergic skin reaction

May cause damage to organs after single exposure

May cause respiratory irritation

May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure

Toxic to aquatic life

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wash contaminated parts thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves and face protection.
Do not eat, drink or smoke when using this product.

Response

In case of fire: Use appropriate media.
Get medical advice/attention if you feel unwell.
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 or rash 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.
IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

Storage

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

Disposal

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

Physical and Chemical hazards

Heating may cause fire.

3. Composition/information on ingredients

Substance/Mixture:

Substance

Ingredient name:Benzaldehyde
Content(%):97.0 <
Chemical formula:C7H6O
Chemicals No, Japan:3-1142
CAS No.:100-52-7
MW:106.12
ECNO:202-860-4

4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

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 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.

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

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use water mist, foam, dry powder, CO2.

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 protective gloves/protective clothing/eye protection/face protection.

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

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

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

Collect spillage.

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.

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.
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.
Keep cool. Protect from sunlight.
Store locked up.

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 respiratory protection.

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.
Contaminated work clothing should not be allowed out of the workplace.
Take off contaminated clothing and wash it before reuse.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid
Color: Colorless～Yellow
Odor: Characteristic odor
pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point: 179℃
Melting point/Freezing point: -26℃
Decomposition temperature data N.A.
Flash point: (c.c.) 63℃
Auto-ignition temperature: 192℃
Explosive properties: Flammability or explosive limit

lower limit: 1.4 vol %
upper limit: 13.5 vol %

Vapor pressure: 133 Pa (26℃)
Relative Vapor Density (Air=1): 3.7
Specific gravity/Density: 1.041～1.050g/ml (20℃)
Solubility

Solubility in water: 6.55g/liter(25℃)

n-Octanol /water partition coefficient: log Pow1.48

10. Stability and Reactivity

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

The substance can form explosive peroxides under special conditions.

Reacts violently with aluminium, bases, iron, oxidants and phenol. This generates fire and explosion hazard.

Conditions to avoid

Contact with incompatible materials.

Open flames. Heat.

Incompatible materials

Bases, Oxidizing agents, Aluminium, Iron, Phenol.

Hazardous decomposition products

Carbon oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50 = 1500 mg/kg (cal.)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

rabbit : moderate (CERI hazard data book 99-21, 2000et al)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

rabbit : slightly irritative (DFGOT Vol.17, 2002)

Sensitization

Skin sensitization

[GHS Cat. Japan, base data]

cat.1; DFGOT Vol.17, 2002

Germ cell mutagenicity

[GHS Cat. Japan, base data]

in vivo data N.A.

Reverse-mutation assay in bacteria(mouse lymphoma assay) :Positive (SIDS,1996 et al.)

Chromosome aberration test :Positive(SIDS,1996 et al.)

No Carcinogenic effects data available

No Teratogenic 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.2]

[Japan published data]

nerve/nervous system (RTECS, 2006)

[cat.3(resp. irrit.)]

[Japan published data]

Respiratory tract irritation (RTECS, 2006)

[cat.3(drow./dizz.)]

[Japan published data]

Narcosis (RTECS, 2006)

STOT-repeated exposure

[cat.1]

[Japan published data]

nerve/nervous system (CERI hazard data book 99-21, 2000)

No Aspiration hazard data available

12. Ecological Information

Toxicity

Aquatic toxicity

Toxic to aquatic life

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Fish(bluegill) LC50=1.07mg/L/96hr (EPA_Japan, 2003)

Water solubility

6.55 g/L (25℃) (SIDS, 1996)

Persistence and degradability

BOD_Degradation : 66% (Registered chemicals data check & review, Japan)

Bioaccumulative potential

log Pow=1.48 (PHYSPROP Database, 2005)

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.

14. Transport Information

UN No, UN CLASS

UN number: 1990

UN proper shipping name: BENZALDEHYDE

Transport hazard class(es): 9

Packing group: III

ERG GUIDE NO.: 129

15. Regulatory Information

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

US major regulations

TSCA

Benzaldehyde

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.

16. Other information

GHS classification and labelling

Flam. Liq. 4: H227 Combustible liquid

Acute Tox. 4: H302 Harmful if swallowed
Skin Irrit. 2: H315 Causes skin irritation
Eye Irrit. 2B: H320 Causes eye irritation
Skin Sens. 1: H317 May cause an allergic skin reaction
STOT SE 2: H371 May cause damage to organs after single exposure
STOT SE 3: H335 May cause respiratory irritation
STOT SE 3: H336 May cause drowsiness or dizziness
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure
Aquatic Acute 2: H401 Toxic to aquatic life

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)
2015 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)

General Disclaimer

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 are advised to make their own tests to determinate 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.