

## Safety Data Sheet

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

**Product identifier:**

Product name: 2-Chlorophenol

Reference number(SDS):28440jis\_J\_E1-3

**Product type:**

Reagent

**Details of the supplier of the safety data sheet**

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, 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 AND CHEMICAL HAZARDS**

Flammable liquids: Category 4

**HEALTH HAZARDS**

Acute toxicity (Oral): Category 4

Acute toxicity (Dermal): Category 4

Acute toxicity (Inhalation): Category 2

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

Reproductive toxicity: Category 1B

Specific target organ toxicity – single exposure: Category 1(respiratory system, central nervous system)

**ENVIRONMENT HAZARDS**

Hazardous to the aquatic environment (Acute): Category 2

Hazardous to the aquatic environment (Long-term): Category 2

(Note) GHS classification without description: Not classified/Classification not possible

**Label elements**

Signal word: Danger

**HAZARD STATEMENT**

H227-Combustible liquid

H302-Harmful if swallowed

H312-Harmful in contact with skin

H330-Fatal if inhaled

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

H360-May damage fertility or the unborn child

H370-Causes damage to organs

H401-Toxic to aquatic life

H411-Toxic to aquatic life with long lasting effects

**PRECAUTIONARY STATEMENT****Prevention**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid release to the environment.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- In case of inadequate ventilation wear respiratory protection.
- Use only outdoors or in a well-ventilated area.
- Wash contaminated parts thoroughly after handling.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use personal protective equipment as required.
- Do not eat, drink or smoke when using this product.

**Response**

- In case of fire: Use water mist,foam,dry powder,CO2 to extinguish.
- Collect spillage.
- IF exposed or concerned: Get medical advice/attention.
- Immediately call a POISON CENTER/doctor/physician.
- Call a POISON CENTER/doctor/physician if you feel unwell.
- IF exposed or concerned: Call a POISON CENTER/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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- Wash contaminated clothing before reuse.
- 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 SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**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.

**Specific Physical and Chemical hazards**

- Heating may cause fire.

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**3. Composition/information on ingredients****Mixture/Substance selection:****Substance**

- Ingredient name:2-chlorophenol
- Content (%):98.0 <
- Chemical formula:C6H5ClO
- Chemicals No, Japan:3-895
- CAS No.:95-57-8
- MW:128.56
- ECNO:202-433-2

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**4. First-aid measures****Descriptions of first-aid measures****General measures**

- IF exposed or concerned: Get medical advice/attention.

Immediately call a POISON CENTER/doctor/physician.

Keep victim warm and quiet.

Call emergency medical service.

Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

#### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult.

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

#### IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Remove and isolate contaminated clothing and shoes.

For minor skin contact, avoid spreading material on unaffected skin.

#### 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/doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Abdominal pain. Drowsiness. Cough. Shortness of breath. Sore throat. Weakness. Convulsions.

(Symptoms when skin and/or eye contact)

Conjunctival redness of the eyes. Blurred vision. Redness of the skin. Pain

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## 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media

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

#### Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

### 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.

Cool container with water spray.

#### Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face 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

Keep unauthorized personnel away.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

PUBLIC SAFETY: Ventilate closed spaces before entering.

EVACUATION : Spill: See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

### Environmental precautions

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Fire or Explosion : Runoff may pollute waterways.

### 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.

Stop leak if you can do it without risk.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Prevent entry into waterways, sewers, basements or confined areas.

Do not get water inside containers.

Keep out of low areas.

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## 7. Handling and storage

### Precautions for safe handling

#### Preventive measures

(Exposure Control for handling personnel)

Do not breathe vapors/fume.

(Protective measures against fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

#### Safety Measures

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Use only outdoors or in a well-ventilated area.

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

Use personal protective equipment as required.

When using do not eat, drink or smoke.

#### Any incompatibilities

Strong bases, Oxidizing agents, Acid anhydrides, Acid chlorides should not be mixed with the chemicals.

#### Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Take off contaminated clothing and wash it before reuse.

### Storage

#### Conditions for safe storage

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

Keep cool. Protect from sunlight.

Store in accordance with local/national regulation.

Store locked up.

Container and packaging materials for safe handling data is not available.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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## 8. Exposure controls/personal protection

Control parameters

Control value in MHLW is not available.

Adopted value

Adopted value in JSOH is not available.

Adopted value in ACGIH is not available.

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. Recommended material(s): butyl rubber, viton

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear chemical safety goggle.

Wear eye/face protection.

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

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## 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless~Yellow brown

Odor: Characteristic odor

Odor threshold: 0.18 µg/L(gas)

Melting point/Freezing point: 9.3~9.8°C

Boiling point or initial boiling point: 175°C

Boiling range data is not available.

Flammability (gases, liquids and solids): Ignitable

Lower and upper explosion limit/flammability limit data is not available.

Flash point: (c.c.) 85°C

Auto-ignition temperature: 550°C

Decomposition temperature data is not available.

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH: Slightly acidic

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 2.85 g/100 ml (20°C)

Solubility in solvent: Freely soluble in alcohol, ether.

n-Octanol/water partition coefficient: log Pow2.15

Vapor pressure: 230 Pa (20°C)

Density and/or relative density: 1.260~1.265 g/ml (20°C)

Relative vapor density (Air=1): 4.4

Relative density of the Vapor/air – mixture at 20°C (Air = 1): 1.08

Particle characteristics data is not available.

#### Other information

Critical temperature data is not available.

Evaporation rate data is not available.

VOC data is not available.

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## 10. Stability and Reactivity

### Reactivity

Reactivity data is not available.

### Chemical stability

Stable under normal storage/handling conditions.

### Possibility of hazardous reactions

The vapour is heavier than air.

Decomposes on burning. This produces toxic and corrosive fumes of hydrochloric acid and chlorine.

Reacts with oxidants.

### Conditions to avoid

Contact with incompatible materials.

Open flames. Heat. Sparks. Light. Air.

### Incompatible materials

Strong bases, Oxidizing agents, Acid anhydrides, Acid chlorides

### Hazardous decomposition products

Carbon oxides, Hydrochloric acid, Chlorine.

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## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50=670mg/kg (MOE risk assessment vol.6, 2008)

##### Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

rabbit LD50=1000~1580mg/kg (ATSDR, 1999)

##### Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

vapor: rat LC50=390ppm/4hr (IUCLID, 2000)

#### Irritant properties

##### Skin corrosion/irritation

[GHS Cat. Japan, base data]

rabbit : corrosive (ATSDR, 1999)

##### Serious eye damage/irritation

[GHS Cat. Japan, base data]

rabbit : corrosive (ATSDR, 1999)

Allergenic and sensitizing effects data is not available.

#### Germ cell mutagenicity

[GHS Cat. Japan, base data]

in vivo mutagenicity test in the body cell (mouse) : negative (IUCLID, 2000)

in vivo genotoxicity test in the body cell (mouse) : negative (IUCLID, 2000)

Chromosome aberration test :Positive(OECD TG 473, GLP) (MHLW reports, Access on October 2008)

Carcinogenic effects data is not available.

Reproductive toxicity

[GHS Cat. Japan, base data]

cat. 1B; rat : MOE risk assessment vol.6, 2008

Teratogenic effects

rats (drinking water administration study) : No teratogenicity (EHC 93, 1989)

STOT

STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

central nervous system,respiratory system (MOE risk assessment vol.6, 2008)

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

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## 12. Ecological Information

Ecotoxicity

Aquatic toxicity

H401-Toxic to aquatic life

H411-Toxic to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

Crustacea (Daphnia magna) EC50=3.9mg/L/48hr (Hazard Assessment Report, 2008)

Water solubility

2.85 g/100 ml (20°C) (ICSC, 1999)

Persistence and degradability

BOD\_Degradation : 0% [METI existing chemical safety inspections, 1980]

Bioaccumulative potential

log Pow=2.15 (ICSC, 1999)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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## 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Avoid release to the environment.

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

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## 14. Transport Information

UN No., UN CLASS

UN No. or ID No.: 2021

UN Proper Shipping Name : CHLOROPHENOLS, LIQUID

Class or division (Transport hazard class) : 6.1

Packing group : III

ERG GUIDE No.: 153

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 2021

Proper Shipping Name : CHLOROPHENOLS, LIQUID

Class or division : 6.1

Packing group : III

IATA Dangerous Goods Regulations

UN No.: 2021

Proper Shipping Name : CHLOROPHENOLS, LIQUID

Class or division : 6.1

Hazard labels : Toxic

Packing group : III

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : yes

MARPOL Annex V – Prevention of pollution by garbage discharge

Reproductive toxicity: cat.1, 1A, 1B

2-chlorophenol

Hazardous to the aquatic environment – long-term hazard: cat.1, 2

2-chlorophenol

Maritime transport in bulk according to IMO instruments

Not applicable to Maritime transport in bulk according to IMO instruments

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## 15. Regulatory Information

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

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

95-57-8

All components are listed or exempted.

Superfund Amendments and Reauthorizations Act (SARA), Title III

SARA 313 (TRI)

2-chlorophenol

Other regulatory information

We are not able to check up the regulatory information with 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.

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

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## 16. Other information

GHS classification and labelling

H227-Flam. Liq. 4: H227 Combustible liquid

H302-Acute Tox. 4: H302 Harmful if swallowed

H312-Acute Tox. 4: H312 Harmful in contact with skin

H330-Acute Tox. 2: H330 Fatal if inhaled

H314-Skin Corr. 1: H314 Causes severe skin burns and eye damage

H318-Eye Dam. 1: H318 Causes serious eye damage

H360-Repr. 1B: H360 May damage fertility or the unborn child

H370-STOT SE 1: H370 Causes damage to organs

H401-Aquatic Acute 2: H401 Toxic to aquatic life

H411-Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN  
IMDG Code, 2018 Edition (Incorporating Amendment 39-18)  
IATA Dangerous Goods Regulations (62nd Edition) 2021  
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2022 TLVs and BEIs. (ACGIH)  
JIS Z 7252 : 2019  
JIS Z 7253 : 2019  
2021 Recommendation on TLVs (JSOH)  
Supplier's data/information  
Chemicals safety data management system "GHS Assistant" Version 4.18 (<https://www.asahi-ghs.com/>)  
NITE Chemical Risk Information Platform "NITE-CHRIP"  
([https://www.nite.go.jp/en/chem/chrip/chrip\\_search/systemTop](https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop))  
GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.0) (Mar. 2020, METI)

#### Definitions and Abbreviations

SDS (Safety Data Sheet)  
LD50 (Lethal Dose, 50%)  
LC50 (Lethal Concentration, 50%)  
IARC (International Agency for Research on Cancer)  
ACGIH (American Conference of Governmental Industrial Hygienists)  
EPA (US Environmental Protection Agency)  
NTP (US National Toxicology Program)  
JSOH (Japan Society for Occupational Health)  
EU (European Union)  
EC50 (Effective Concentration, 50%)  
NOEC (No Observed Effect Concentration)  
BOD (Biochemical Oxygen Demand)  
COD (Chemical Oxygen Demand)  
BCF (Bioconcentration Factor)  
anh (anhydride)

#### General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

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 (NITE published in 2020).