

## Chemical Safety Data Sheet MSDS / SDS

## 3,4-dichlorophenol SDS

Revision Date:2024-04-25 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: 3,4-dichlorophenol

CAS: 95-77-2

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

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**SECTION 2: Hazards identification****Classification of the substance or mixture**Acute toxicity - Category 4, Oral  
Skin irritation, Category 2

Serious eye damage, Category 1

### GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

### Hazard statement(s)

H302 Harmful if swallowed

H315 Causes skin irritation

H318 Causes serious eye damage

### Precautionary statement(s)

### Prevention

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

### Response

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P321 Specific treatment (see ... on this label).

P332+P317 If skin irritation occurs: Get medical help.

P362+P364 Take off contaminated clothing and wash it before reuse.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P317 Get medical help.

### Storage

none

### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### Other hazards which do not result in classification

no data available

### SECTION 3: Composition/information on ingredients

#### Substance

Chemical name:	3,4-dichlorophenol
Common names and synonyms:	3,4-dichlorophenol
CAS number:	95-77-2
EC number:	202-450-5
Concentration:	100%

### SECTION 4: First aid measures

#### Description of necessary first-aid measures

##### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

##### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

##### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

##### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

#### Most important symptoms/effects, acute and delayed

**SYMPTOMS:** Symptoms of exposure to this compound may include irritation of the skin, eyes, mucous membranes and upper respiratory tract. Prolonged contact can cause damage to the eyes, severe irritation and burns. Exposure to this class of compounds may cause profuse sweating, intense thirst, abdominal pain, nausea, vomiting, diarrhea, cyanosis from methemoglobinemia, hyperactivity, stupor, blood pressure fall, hyperpnea, hemolysis, convulsions, collapse, coma and pulmonary edema followed by pneumonia. If death from respiratory failure is not immediate, jaundice and oliguria or anuria may occur. Other symptoms of exposure to this class of compounds may include headache, dizziness, rapid and difficult breathing, weakness, severe burns and internal damage. Chronic exposure may result in digestive disturbances, nervous disorders, skin eruptions and liver and kidney damage. Skin contact with this type of compound may result in softening and whitening of the skin, followed by the development of painful burns. Prolonged contact may lead to dermatitis. Local contact may also result in painless blanching or erythema and corrosion of the skin. Skin sensitivity reactions occur occasionally. **ACUTE/CHRONIC HAZARDS:** This compound may be harmful by inhalation, ingestion or skin absorption. It is an irritant of the skin, eyes, mucous membranes and upper respiratory tract; and prolonged contact may result in severe irritation or burns. When heated to decomposition it emits toxic fumes of carbon monoxide, carbon dioxide and hydrogen chloride gas. It is rapidly absorbed through the skin. (NTP, 1992)

**Indication of immediate medical attention and special treatment needed, if necessary**

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Phenols and related compounds

**SECTION 5: Firefighting measures**

**Suitable extinguishing media**

Extinguish fire using agent suitable for type of surrounding fire. Material itself does not burn or burns with difficulty. Trichlorophenol

**Specific hazards arising from the chemical**

Flash point data for this chemical are not available. It is probably combustible. (NTP, 1992)

**Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### **Methods and materials for containment and cleaning up**

Land Spill: Dig a pit, pond, lagoon, or holding area /SRP: If time permits, pits, ponds, lagoons, soak holes, or holding areas should be sealed with an impermeable flexible membrane liner. / to contain liquid or solid material. Cover solids with plastic sheet to prevent dissolving in rain or fire fighting water. Trichlorophenol

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

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

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

## **SECTION 8: Exposure controls/personal protection**

### **Control parameters**

### **Occupational Exposure limit values**

no data available

### **Biological limit values**

no data available

### Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	PHYSICAL DESCRIPTION: Needles (from benzene, petroleum ether) or light brown and yellow crystals. Odor threshold 100 µg/L. Taste threshold 0.3 µg/L in water. (NTP, 1992)
Colour:	Needles from benzene-petroleum ether
Odour:	no data available
Melting point/freezing point:	65-68°C
Boiling point or initial boiling point and boiling range:	145-146°C
Flammability:	no data available

Lower and upper explosion limit/flammability limit:	no data available
Flash point:	109.1°C
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	less than 1 mg/mL at 68° F (NTP, 1992)
Partition coefficient n-octanol/water:	log Kow = 3.33
Vapour pressure:	1.73X10 <sup>-2</sup> mm Hg at 25 deg C (est)
Density and/or relative density:	1.458 g/cm <sup>3</sup>
Relative vapour density:	no data available
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

no data available

**Possibility of hazardous reactions**

3,4-DICHLOROPHENOL is incompatible with acid chlorides, acid anhydrides and oxidizing agents. (NTP, 1992)

**Conditions to avoid**

no data available

**Incompatible materials**

no data available

**Hazardous decomposition products**

When heated to decomposition it emits toxic vapors of /hydrogen chloride/.

**SECTION 11: Toxicological information****Acute toxicity**

Oral: LD50 Mouse (male CD-1 ICR) oral 1685 mg/kg.

Inhalation: no data available

Dermal: no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available



**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: EC50; Species: *Pseudokirchneriella subcapitata* (Green algae); Conditions: freshwater, static; Concentration: 3200 ug/L for 96 hr; Effect: growth, general

Toxicity to microorganisms: no data available

**Persistence and degradability**

AEROBIC: 3,4-Dichlorophenol, present at 100 mg/L, reached 0% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(1). 3,4-Dichlorophenol, present at 22 ppm in Wiggins, Mississippi acidic sandy loam with a pH of 4.8, reached ca. 90% transformation to unspecified intermediates in 54 days, with a half-life of 18 days(2); 3,4-dichlorophenol, present at 30 ppm in Austin, Texas basic sandy silt loam with a pH of 7.8, reached 90% transformation to unspecified intermediates in ca. 9 days, with a half-life of 3 days(2). 3,4-Dichlorophenol, present at 119 ppm in Waterloo, Ontario, Canada clay loam soil with a pH of 7.1, reached 88% transformation to unspecified intermediates in 160 days(3).

### **Bioaccumulative potential**

A BCF range of 22 to 84 was measured in fish for 3,4-dichlorophenol using carp (*Cyprinus carpio*) which were exposed over a eight week period to a water concentration of 30 ppb, according to the standard test of the Japanese Ministry of Industry and Trade (MITI)(1). According to a classification scheme(2), this BCF suggest the potential for bioconcentration in aquatic organisms is moderate(SRC).

### **Mobility in soil**

The Koc of 3,4-dichlorophenol is estimated as 860(SRC), using a log Kow of 3.33(1), and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that 3,4-dichlorophenol is expected to have low mobility in soil. The pKa of 3,4-dichlorophenol is 8.63(4), indicating that this compound will partially exist in anion form in the environment and anions generally do not adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(5).

### **Other adverse effects**

no data available

## **SECTION 13: Disposal considerations**

### **Disposal methods**

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## **SECTION 14: Transport information**

### **UN Number**

ADR/RID: UN2020 (For reference only, please check.)

IMDG: UN2020 (For reference only, please check.)

IATA: UN2020 (For reference only, please check.)

#### **UN Proper Shipping Name**

ADR/RID: CHLOROPHENOLS, SOLID (For reference only, please check.)

IMDG: CHLOROPHENOLS, SOLID (For reference only, please check.)

IATA: CHLOROPHENOLS, SOLID (For reference only, please check.)

#### **Transport hazard class(es)**

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

#### **Packing group, if applicable**

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (For reference only, please check.)

#### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

#### **Special precautions for user**

no data available

#### **Transport in bulk according to IMO instruments**

no data available

### **SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

**SECTION 16: Other information**

**Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

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