# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.1
Creation Date: July 15, 2019
Revision Date: April 21, 2024

## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** Guaiacol

### 1.2 Other means of identification

**Product number** 90-05-1
**Other names** Guaiacol; Phenol, 2-methoxy-

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** For laboratory and Industrial use only.
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Zhongshan Greenrock Technology Co., Ltd.
**Address** Jinsan Avenue, Sanjiao Town, Zhongshan City, Guangdong Province, China
**Telephone** +86-2087066781

### 1.5 Emergency phone number

**Emergency phone number** +86-2087066781
**Service hours** 'Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral
Skin irritation, Category 2
Eye irritation, Category 2

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**

**Signal word** Warning
**Hazard statement(s)**
H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation

**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+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**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.

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

no data available

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

| Chemical name | Common names and synonyms | CAS number | EC number | Concentration |
|---|---|---|---|---|
| Guaiacol | Guaiacol | 90-05-1 | 201-964-7 | 100% |

## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

**If inhaled**

Fresh air, rest. Refer for medical attention.

**Following skin contact**

Remove contaminated clothes. Rinse and then wash skin with water and soap.

**Following eye contact**

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

**Following ingestion**

Give a slurry of activated charcoal in water to drink. Refer for medical attention . Do NOT induce vomiting.

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

SYMPTOMS: Symptoms of exposure to this compound include pigmentation, skin irritation and inflammation; dermatitis, nausea, vomiting, abdominal pain, headache, vertigo, dizziness, faintness, cyanosis, collapse, difficulty breathing, convulsions, erythema, vesiculation, blistering, ulceration, gangrene, kidney and liver damage; chronic lung disease, hypothermia and coma. Other symptoms include sensation of burning and itching; conjunctivitis with mild hyperemia, photophobia and discharge; and keratoconjunctivitis, involving loss of corneal epithelium, clouding of the cornea, long-lasting irritability, miosis and photophobia. This compound may also cause salivation, respiratory difficulties, thready pulse, loss of pupillary reflexes, keratitis and corneal abrasion. ACUTE/CHRONIC HAZARDS: This compound is irritating to the skin and eyes. (NTP, 1992)
SYMPTOMS: Symptoms of exposure to this compound may include irritation of the skin and eyes, muscular weakness, cardiovascular collapse and paralysis of the vasomotor centers. Ingestion produces burning in the mouth and throat, gastrointestinal distress, tremors and collapse. ACUTE/CHRONIC HAZARDS: This compound is an irritant and is easily absorbed through the skin. When heated to decomposition it emits toxic fumes. (NTP, 1992)

### 4.3 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 if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the 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. Poisons A and B

## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

### 5.2 Specific hazards arising from the chemical

This chemical is combustible. (NTP, 1992)
This chemical is combustible. (NTP, 1992)

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental release measures

### 6.1 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.

### 6.2 Environmental precautions

Personal protection: complete protective clothing, face shield and filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in covered containers as far as possible.

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

Wear approved respiratory protection, chemically compatible gloves and protective clothing. Wipe up spillage or collect spillage using a high efficiency vacuum cleaner. Avoid breathing vapor or dust. Ventilate area and wash spill site. Place spillage in appropriately labelled container for disposal.

## SECTION 7: Handling and storage

### 7.1 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.

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

Provision to contain effluent from fire extinguishing. Separated from food and feedstuffs.Store in tight, light-resistant container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational Exposure limit values**

no data available

**Biological limit values**

no data available

### 8.2 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.

### 8.3 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** | Solid. Crystalline. |
| **Colour** | Colourless to pale yellow. |
| **Odour** | Aromatic odor |
| **Melting point/freezing point** | 28 °C. |
| **Boiling point or initial boiling point and boiling range** | 204 - 206 °C. Atm. press.:1 013 hPa.;53 - 55 °C. Atm. press.:5.33 hPa. |
| **Flammability** | Combustible. |
| **Lower and upper explosion limit/flammability limit** | no data available |
| **Flash point** | 90 °C. Atm. press.:1 006 hPa. |
| **Auto-ignition temperature** | 375 °C. Atm. press.:1 014 hPa. |
| **Decomposition temperature** | no data available |
| **pH** | no data available |
| **Kinematic viscosity** | no data available |
| **Solubility** | 1 to 10 mg/mL at 73° F (NTP, 1992) |
| **Partition coefficient n-octanol/water** | log Pow = 1.36 - 1.57. Temperature:30 °C. |
| **Vapour pressure** | 0.14 hPa. Temperature:25 °C.;1.33 hPa. Temperature:52 °C.;133 hPa. Temperature:144 °C. |
| **Density and/or relative density** | 1.13.;Ca. 1.11. |
| **Relative vapour density** | 4.27 (vs air) |
| **Particle characteristics** | no data available |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

On combustion, forms toxic fumes.

### 10.2 Chemical stability

Darkens on exposure to air and light

### 10.3 Possibility of hazardous reactions

This material is combustible when exposed to heat or flame.Phenols, such as CREOSOTE, do not behave as organic alcohols, as one might guess from the presence of a hydroxyl (-OH) group in their structure. Instead, they react as weak organic acids. Phenols and cresols are much weaker as acids than common carboxylic acids (phenol has pKa = 9.88). These materials are incompatible with strong reducing substances such as hydrides, nitrides, alkali metals, and sulfides. Flammable gas (H2) is often generated, and the heat of the reaction may ignite the gas. Heat is also generated by the acid-base reaction between phenols and bases. Such heating may initiate polymerization of the organic compound. Phenols are sulfonated very readily (for example, by concentrated sulfuric acid at room temperature). The reactions generate heat. Phenols are also nitrated very rapidly, even by dilute nitric acid. This compound is incompatible with acacia, albumin, oxidizers and cupric, ferric, gold and silver salts. (NTP, 1992)

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

When heated to decomposition material emits acrid smoke and irritating fumes.

## SECTION 11: Toxicological information

**Acute toxicity**

- Oral: LD50 - mouse (male/female) - 621 mg/kg bw.
- Inhalation: LC50 - mouse - 3.78 mg/L air.
- Dermal: LD50 - rabbit - 4 600 mg/kg bw.

**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

### 12.1 Toxicity

- Toxicity to fish: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - 230 µmol/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: IC50 - Daphnia magna - 63 mg/L - 24 h.
- Toxicity to algae: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - > 100 mg/L - 72 h.
- Toxicity to microorganisms: EC50 - Shk1 cells - 583 mg/L - 5 min.

### 12.2 Persistence and degradability

AEROBIC: o-Methoxyphenol, present at 100 mg/L, reached 97% of its theoretical BOD in four weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(1).

### 12.3 Bioaccumulative potential

An estimated BCF of 3 was calculated in fish for o-methoxyphenol(SRC), using log Kow of 1.32(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### 12.4 Mobility in soil

A log Koc of 1.60 for o-methoxyphenol, corresponding to a Koc of 40(SRC), was experimentally determined in a Brookston clay loam soil(1). A log Koc of 1.56(2), corresponding to a Koc of 36(SRC) has also been reported. According to a classification scheme(3), these Koc values suggest that o-methoxyphenol is expected to have very high mobility in soil. The pKa of o-methoxyphenol is 9.98(4), indicating that this compound will exist primarily in the undissociated form in the environment(SRC). The adsorption of the phenol occurrs by hydrogen bonding to sites on soil surfaces; ortho-substitution generally results in decreased adsorption compared to para-substitution due to steric hindrance(1).

### 12.5 Other adverse effects

no data available

## SECTION 13: Disposal considerations

### 13.1 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

### 14.1 UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

## SECTION 15: Regulatory information

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

| Chemical name | Common names and synonyms | CAS number | EC number |
|---|---|---|---|
| Guaiacol | Guaiacol | 90-05-1 | 201-964-7 |
| 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 | | | Not Listed. |
| New Zealand Inventory of Chemicals (NZIoC) | | | Listed. |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | | | Listed. |
| Vietnam National Chemical Inventory | | | Listed. |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) | | | Listed. |
| Korea Existing Chemicals List (KECL) | | | Listed. |

## SECTION 16: Other information

**Information on revision**

| | |
|---|---|
| **Creation Date** | July 15, 2019 |
| **Revision Date** | April 21, 2024 |

**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?pageID=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/


**Any questions regarding this SDS, Please send your inquiry to** export@greenrockchem.com

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