



Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

# MATERIAL SAFETY DATA SHEETS

## SECTION I

### PRODUCT AND COMPANY IDENTIFICATION

Product: Eugenol

This MSDS is valid for all grades and catalog #'s

Synonyms: Hydroxy-1-methoxy-2-allyl-4-benzene; 4-Allyl-2-methoxyphenol; 4-Allylguaiacol; caryophyllic acid; Eugenol acid

Formula: C<sub>10</sub>H<sub>12</sub>O<sub>2</sub>

Manufacturer: PHARMCO-AAPER  
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CHEMTREC 1-800-424-9300

## SECTION II

### COMPOSITION / INFORMATION ON INGREDIENTS

% by weight	Material	CAS #	TLV/PE L	LC50/LD50
100	Eugenol	97-53-0	Not available	ORAL (LD50): Acute: 1930 mg/kg [Rat]. 3000 mg/kg [Mouse]. 2130 mg/kg [Guinea pig].

## SECTION III

### HAZARDS IDENTIFICATION

**Potential Acute Health Effects:** Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

**Potential Chronic Health Effects:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**CARCINOGENIC EFFECTS:** Not available.

**MUTAGENIC EFFECTS:** Not available.

**TERATOGENIC EFFECTS:** Not available.

**DEVELOPMENTAL TOXICITY:** Not available.

The substance is toxic to lungs, the nervous system, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

## SECTION IV

### FIRST AID

Obtain medical attention for all cases of over-exposure.

**Eye Contact:** Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

**Skin Contact:** After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Hazardous Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Hazardous Inhalation:** Not available.

**Ingestion:** Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Hazardous Ingestion:** Not available.

## SECTION V

### FIRE FIGHTING MEASURES

#### Fire:

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition temperature: Not available.

Flash point: OPEN CUP: 104°C (219.2°F).

Flammable limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards:** Not available.

**Explosion Hazards:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Extinguishing Media:** SMALL FIRE: Use DRY

chemical powder. **LARGE FIRE:** Use water spray, fog or foam. Do not use water jet.

**Special Information:** Not available.

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## SECTION VI

### SPILL/ACCIDENTAL RELEASE MEASURES

**Small Spill:** Absorb with an inert material and put the spilled material in an appropriate waste disposal.

**Large Spill:** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

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## SECTION VII

### HANDLING AND STORAGE

**Precautions:** Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

**Storage:** Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

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## SECTION VIII

### EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection:** Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

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## SECTION IX

### PHYSICAL AND CHEMICAL PROPERTIES

**Physical State/Appearance:** Liquid.

**Molecular Weight:** 164.2 g/mole

**Odor:** Not available.

**Taste:** Not available.

**Color:** Colorless.

**pH (1% Solution in Water):** Not applicable.

**Boiling Point:** 253.2°C (487.8°F)

**Melting Point:** -7.5°C (18.5°F)

**Critical Temperature:** Not available.

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**Specific Gravity:** 1.055 (Water = 1)

**Vapor Pressure (mm Hg):** 0.03 mm of Hg (@ 20°C)

**Vapor Density (Air=1):** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Water/Oil Dist. Coefficient:** Not available.

**Ionicity (in water):** Not available.

**Dispersion Properties:** Not available.

**Solubility:** Insoluble in cold water.

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## SECTION X

### STABILITY/REACTIVITY INFORMATION

**Stability:** The product is stable

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibilities:** Not available.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Information:** Not available.

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## SECTION XI

### TOXICOLOGICAL INFORMATION

**Routes of Entry:** Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 1930 mg/kg [Rat].

**Chronic Effects on Humans:** The substance is toxic to lungs, the nervous system, mucous membranes.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

**Special Information on Toxicity to Animals:** Not available.

**Special Information on Chronic Effects/Toxicity on Humans:** Not available.

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## SECTION XII

### ECOLOGICAL INFORMATION

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Information on Products of Biodegradation:** May decompose on exposure to moist air and water.

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## SECTION XIII

### DISPOSAL CONSIDERATIONS

**Waste Disposal:** Recycle to process, if possible. Consult your local or regional authorities.

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## SECTION XIV

### TRANSPORTATION INFORMATION

**DOT Classification:** DOT Not a DOT controlled material (United States).

**UN:** Not applicable.

**Special Provisions for Transport:** Not applicable.

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**SECTION XV**  
**REGULATORY INFORMATION**

**Federal and State Regulations:** Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are: **NONE**

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are: **NONE**

Pennsylvania Right-To-Know, Hazardous substance List, Hazardous Substances and Special hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are: **NONE**

Massachusetts Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level which could require reporting under the statute are: **NONE**

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are: **NONE**

**Other Classifications:**

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R22- Harmful if swallowed. R36/38- Irritating to eyes and skin.

**Protective Equipment:** Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles

**References:** Not available.

**Other Special Considerations:** Not available.

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The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.