

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 03/10/2013

Version 1.1

SECTION 1. Identification

Product identifier

Product number 818339

Product name 2-Methoxyphenol for synthesis

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

Identified uses Chemical for synthesis

Details of the supplier of the safety data sheet

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United States of America | SDS Phone Support: +1-978-715-1335 | General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to

4:00 PM Eastern Time (GMT-5)

e-mail: mm_sds@merckgroup.com

Emergency telephone 800-424-9300 CHEMTREC (USA)

+1-703-527-3887 CHEMTREC (International)

24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS Classification

Acute toxicity, Category 4, Oral, H302

Eye irritation, Category 2, H319 Skin irritation, Category 2, H315

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word Warning

Hazard Statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

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H319 Causes serious eye irritation.

Precautionary Statements

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula $CH_3OC_6H_4OH$ $C_7H_8O_2$ (Hill)

CAS-No. 90-05-1 Molar mass 124.14 g/mol

Hazardous ingredients

Chemical Name (Concentration)

CAS-No.

guaiacol (>= 90 % - <= 100 %)

90-05-1

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

After contact with skin: rinse out with polyethylene glycol 400 or a mixture of polyethylene glycol 300/ethanol 2:1 and wash with plenty of water. If neither is available wash with plenty of water. Immediately take off contaminated clothing. Seek medical advice immediately.

Eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist.

Ingestion

After swallowing: immediately make victim drink water (two glasses at most). Subsequently administer: activated charcoal (20 - 40 g in 10% slurry). Consult a physician.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

irritant effects, respiratory arrest, drop in temperature, Diarrhea, Nausea, Vomiting, collapse, CNS disorders, Tremors, Coma

Indication of any immediate medical attention and special treatment needed

No information available.

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SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Water, Carbon dioxide (CO2), Foam, Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of vapors/aerosols or dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Depending on the state of matter, take up dry or with liquid-absorbent material (e.g.

Chemizorb®). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry. Protected from light.

Store at +15°C to +25°C (+59°F to +77°F).

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SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:

protective clothing

Respiratory protection

required when dusts/vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	solid
Color	colorless
Odor	characteristic

Odor Threshold No information available.

pH 5.4

at 10 g/l 68 °F (20 °C)

Melting point 28 - 32 °C

Boiling point/boiling range 401 °F (205 °C)

Flash point 180 $^{\circ}$ F (82 $^{\circ}$ C)

Method: c.c.

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Evaporation rate No information available.

Flammability (solid, gas) No information available.

Lower explosion limit No information available.

Upper explosion limit No information available.

Vapor pressure 0.1 hPa

at 77 °F (25 °C)

Relative vapor density 4.27

Relative density 1.13 g/cm³

at 70 °F (21 °C)

Water solubility 10 g/l

at 86 °F (30 °C)

Partition coefficient: n-

octanol/water

log Pow: 1.32 (experimental)

(Lit.) Bioaccumulation is not expected (log Pow <1).

Autoignition temperature No information available.

Decomposition temperature No information available.

Viscosity, dynamic not applicable

Explosive properties Not classified as explosive.

Ignition temperature 1382 °F (750 °C)

SECTION 10. Stability and reactivity

Reactivity

Forms explosive mixtures with air on intense heating.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Chemical stability

Sensitivity to light Sensitive to air.

Possibility of hazardous reactions

increased reactivity with:

Strong oxidizing agents, alkalines, acids

Conditions to avoid

Strong heating.

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A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Incompatible materials

Aluminum

Hazardous decomposition products

no information available

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact, Ingestion

Acute oral toxicity

LD50 rat: 520 mg/kg (RTECS)

LDLO human: 43 mg/kg (RTECS)

Symptoms: Nausea, Vomiting, Diarrhea

absorption

Acute inhalation toxicity

Symptoms: May cause irritation of respiratory tract.

Acute dermal toxicity
LD50 rabbit: 4,600 mg/kg

(IUCLID)

absorption

Skin irritation

rabbit

Result: Severe irritations

(IUCLID)

Causes skin irritation.

Eye irritation

rabbit

Result: Severe irritations

(External MSDS)

Causes serious eye irritation.

Sensitization
Human experience

Result: negative

(IUCLID)

Genotoxicity in vitro

Ames test

Result: negative

Method: OECD Test Guideline 471

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Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC No ingredient of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

OSHA No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential

carcinogen by OSHA.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

ACGIH No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential

carcinogen by ACGIH.

Further information

After absorption:

Possible symptoms:

CNS disorders, drop in temperature, collapse, Tremors, respiratory arrest, Coma

Damage to: Liver, Kidney Further data:

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to daphnia and other aquatic invertebrates

EC50 Daphnia magna (Water flea): 26 mg/l; 48 h (ECOTOX Database)

Persistence and degradability

Biodegradability

88 %; 28 d

OECD Test Guideline 301C

Readily biodegradable.

95 %; 4 d

OECD Test Guideline 302B

Easily eliminable.

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Theoretical oxygen demand (ThOD)

2,060 mg/g

(Lit.)

Ratio COD/ThBOD

100 %

(Lit.)

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 1.32 (experimental)

(Lit.) Bioaccumulation is not expected (log Pow <1).

Mobility in soil

No information available.

Other adverse effects

Additional ecological information

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

Not classified as dangerous in the meaning of transport regulations.

Air transport (IATA)

Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. Regulatory information

United States of America

OSHA Hazards

Harmful if swallowed.

Skin irritant

Eye irritant

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards

Acute Health Hazard

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SARA 313

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311,

Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311,

Table 117.3.

DEA List I

Not listed

DEA List II

Not listed

Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Ingredients

guaiacol

New Jersey Right To Know

Ingredients

guaiacol

Notification status

TSCA: On TSCA Inventory

DSL: All components of this product are on the Canadian DSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed. H315 Causes skin irritation.

H319 Causes serious eye irritation.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

MATERIAL SAFETY DATA SHEET according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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