

SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

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1. Identification

1.1 GHS Product identifier

Product name 4-Methoxyphenol

1.2 Other means of identification

Product number -

Other names p-Methoxyphenol

1.3 Recommended use of the chemical and restrictions on use

Identified uses For industry use only. Food additives -> Flavoring Agents

Uses advised against no data available

2. Hazard identification

2.1 Classification of the substance or mixture

Acute toxicity - Oral, Category 4

Eye irritation, Category 2

Skin sensitization, Category 1

2.2 GHS label elements, including precautionary statements

Pictogram(s)

Signal word Warning

Hazard statement(s)

H302 Harmful if swallowed

H319 Causes serious eye irritation

H317 May cause an allergic skin reaction

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.

P261 Avoid breathing
dust/fume/gas/mist/vapours/spray.

P272 Contaminated work clothing should not be
allowed out of the workplace.

Response

P301+P312 IF SWALLOWED: Call a POISON
CENTER/doctor/...if you feel unwell.

P330 Rinse mouth.

P305+P351+P338 IF IN EYES: Rinse cautiously with
water for several minutes. Remove contact lenses, if
present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical
advice/attention.

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

P333+P313 If skin irritation or rash occurs: Get medical
advice/attention.

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

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

Storage

none

Disposal

P501 Dispose of contents/container to ...

2.3 Other hazards which do not result in classification

none

3. Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
4-Methoxyphenol	4-Methoxyphenol	150-76-5	none	100%

4. First-aid measures

4.1 Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Fresh air, rest.

In case of skin contact

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

In case of eye contact

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

If swallowed

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

4.2 Most important symptoms/effects, acute and delayed

Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms: Irritation eyes, skin, nose, throat, upper respiratory system; eye, skin burns; central nervous system depression Target Organs: Eyes, skin, respiratory system, central nervous system (NIOSH, 2016)

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 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/

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical

Combustible

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered sealable containers. Carefully collect remainder. Then store and dispose of according to local regulations.

6.3 Methods and materials for containment and cleaning up

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants, strong bases, acid anhydrides and acid chlorides. Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

Recommended Exposure Limit: 10 Hour Time-Weighted Average: 5 mg/cu m.

Biological limit values

no data available

8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique(without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. 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

Wear dust mask when handling large quantities.

Thermal hazards

no data available

9. Physical and chemical properties

Physical state	pink crystals or white waxy solid
Colour	Plates
Odour	Odor of caramel and phenol
Melting point/ freezing point	98°C(lit.)
Boiling point or initial boiling point and boiling range	243°C(lit.)
Flammability	Combustible Solid; under certain conditions, a dust cloud can probably explode if ignited by a spark or flame.Combustible.
Lower and upper explosion limit / flammability limit	no data available
Flash point	40°C(lit.)
Auto-ignition temperature	421.11°C
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	In water:40 g/L (25 °C)

Partition coefficient n- log Kow = 1.41 at 25°C
octanol/water (log
value)
Vapour pressure <0.01 mm Hg (20 °C)
Density and/or relative 1,55 g/cm³
density
Relative vapour density 4.3 (vs air)
Particle characteristics no data available

10. Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Dust explosion possible if in powder or granular form, mixed with
air. HYDROQUINONE MONOMETHYL ETHER can react with oxidizing materials.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Strong oxidizers, strong bases, acid chlorides, acid anhydrides.

10.6 Hazardous decomposition products

When heated to decomposition it emits acrid smoke and fumes.

11. Toxicological information

Acute toxicity

- Oral: LD50 Rat oral 1600 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

12. Ecological information

12.1 Toxicity

- Toxicity to fish: LC50; Species: Pimephales promelas (Fathead minnow); Conditions: freshwater, static, 19-20°C, pH 7.4-7.8; Concentration: 55 mg/L for 96 hr
- Toxicity to daphnia and other aquatic invertebrates: EC50; Species: Daphnia magna (Water flea); Conditions: freshwater, static, 19-20°C, pH 7.4-7.8, dissolved oxygen 7.7-8.6 at test start and 5.5-6.1 at test end; Concentration: 2.2 mg/L for 48 hr; Effect: immobilization
- Toxicity to algae: no data available

- Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: 4-Methoxyphenol, present at 100 mg/L, reached 86% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test which classified the compound as readily biodegradable(1). An acclimated mixed bacterial population reached 57% of the theoretical BOD after 5 days(2). Varying concentrations of an acclimated mixed bacterial population resulted in biodegradation rate constants of 4.2×10^{-2} /day, 5.0×10^{-2} /day, 8.0×10^{-2} /day, 1.9×10^{-1} /day, and 2.5×10^{-1} /day for bacterial concentrations of 2.3×10^4 , 2.3×10^5 , 2.3×10^6 , 2.3×10^7 , and 2.3×10^8 cells/L, respectively(3). 4-Methoxyphenol was biodegraded by three activated sludges with rate constants of 7.88×10^{-4} /hr, 4.03×10^{-4} /hr, and 3.35×10^{-3} /hr for a non-adapted sludge, a phenol-adapted sludge, and a cresol-adapted sludge, respectively(4). Using spectrophotometric evidence, aniline-adapted activated sludge degraded 4-methoxyphenol mainly via an ortho cleavage pathway(5); phenol- and m-cresol-adapted activated sludges degraded 4-methoxyphenol mainly via a meta cleavage pathway(5). 4-Methoxyphenol, at a concentration of 0.27 mg/L was removed 95% in 1 day and 89.6% in 2 days using an activated sludge inoculum(6).

12.3 Bioaccumulative potential

An estimated BCF of 4 was calculated in fish for 4-methoxyphenol(SRC), using a log Kow of 1.41(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

An experimental Koc of 55.7 was determined for adsorption to Brookston clay loam (pH 5.7, 8.8% organic content, 22.22 cation exchange capacity)(1). Using a Lucera-clay sample (0.5% organic carbon, 11 meq/100 g cation exchange capacity), a K value of 0.45 was measured(2) which corresponds to a Koc value of 90(3). According to a classification scheme(4), these Koc values suggest that 4-methoxyphenol is expected to have high mobility in soil(SRC).

12.5 Other adverse effects

no data available

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.

14. Transport information

14.1 UN Number

ADR/RID: UN2920

IMDG: UN2920

IATA: UN2920

14.2 UN Proper Shipping Name

ADR/RID: CORROSIVE LIQUID, FLAMMABLE, N.O.S.

IMDG: CORROSIVE LIQUID, FLAMMABLE, N.O.S.

IATA: CORROSIVE LIQUID, FLAMMABLE, N.O.S.

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packing group, if applicable

ADR/RID: II

IMDG: II

IATA: II

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 Annex II of MARPOL 73/78 and the IBC Code

no data available

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
4-Methoxyphenol	4-Methoxyphenol	150-76-5	none
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.

16. Other information

Information on revision

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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/>

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