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----------ISO 9001: 2015----------

MATERIAL SAFETY DATA SHEET

1.Identification
Hydroquinone mono-methyl ether, 99%
H 1549

2.Hazard identification
2.1Classification of the substance or mixture
Acute toxicity - Oral, Category 4
Eye irritation, Category 2
Skin sensitization, Category 1
2.2GHS 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/\u2026if 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 ...

2.3Other hazards which do not result in classification
none

3.Composition/information on ingredients
3.1Substances

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

4.First-aid measures

4.1Description 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 .

4.2Most 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)

4.3Indication 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

5.1Extinguishing media

Suitable extinguishing media

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

5.2Specific hazards arising from the chemical

Combustible

5.3Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6.Accidental release measures

6.1Personal 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.

6.2Environmental 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.

6.3Methods 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

7.1Precautions 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.

7.2Conditions 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

8.1Control parameters

Occupational Exposure limit values

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

Biological limit values

no data available

8.2Appropriate engineering controls

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

8.3Individual 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\u00b0C(lit.)
Boiling point or initial boiling point and boiling range	243\u00b0C(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\u00b0C(lit.)
Auto-ignition temperature	421.11\u00b0C
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	In water:40 g/L (25 \u00baC)
Partition coefficient n-octanol/water (log value)	log Kow = 1.41 at 25\u00b0C
Vapour pressure	<0.01 mm Hg (20 \u00b0C)
Density and/or relative density	1,55 g/cm3
Relative vapour density	4.3 (vs air)
Particle characteristics	no data available

10.Stability and reactivity
10.1Reactivity
no data available
10.2Chemical stability
Stable under recommended storage conditions.
10.3Possibility of hazardous reactions
Dust explosion possible if in powder or granular form, mixed with air.HYDROQUINONE MONOMETHYL ETHER can react with oxidizing materials.
10.4Conditions to avoid
no data available
10.5Incompatible materials
Strong oxidizers, strong bases, acid chlorides, acid anhydrides.
10.6Hazardous 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
12.1Toxicity
Toxicity to fish: LC50; Species: Pimephales promelas (Fathead minnow); Conditions: freshwater, static, 19-20\u00b0C, 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\u00b0C, 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
12.2Persistence 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 4.2X10-2/day, 5.0X10-2/day, 8.0X10-2/day, 1.9X10-1/day, and 2.5X10-1/day for bacterial concentrations of 2.3X10+4, 2.3X10+5, 2.3X10+6, 2.3X10+7, and 2.3X10+8 cells/L, respectively(3). 4-Methoxyphenol was biodegraded by three activated sludges with rate constants of 7.88X10-4/hr, 4.03X10-4/hr, and 3.35X10-3/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).
12.3Bioaccumulative 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).
12.4Mobility 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).
12.5Other adverse effects
no data available

13.Disposal considerations
13.1Disposal 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
14.1UN Number
ADR/RID: UN2920 IMDG: UN2920 IATA: UN2920
14.2UN 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.
14.3Transport hazard class(es)
ADR/RID: 8 IMDG: 8 IATA: 8
14.4Packing group, if applicable
ADR/RID: II IMDG: II IATA: II
14.5Environmental hazards
ADR/RID: no IMDG: no IATA: no
14.6Special precautions for user
no data available
14.7Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
no data available

15.Regulatory information

15.1Safety, 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.

Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.