

# Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Harmful compound, minimize exposure. Irritating to skin, eyes, and the respiratory system. Light sensitive material. Hygroscopic -- keep container tightly sealed.	

## Section I. Chemical Product and Company Identification

Chemical Name	<b>4-Methoxyphenol</b>		
Catalog Number	M0123	Supplier	TCl America 9211 N. Harbortgate St. Portland OR 1-800-423-8616
Synonym	4-Hydroxyanisole; Hydroquinone Monomethyl Ether		
Chemical Formula	C <sub>7</sub> H <sub>8</sub> O <sub>2</sub>		
CAS Number	150-76-5	In case of Emergency Call	<b>Chemtrec®</b> <b>(800) 424-9300 (U.S.)</b> <b>(703) 527-3887 (International)</b>

## Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
4-Methoxyphenol	150-76-5	Min. 99.0 (GC)	Not available.	Rat LD <sub>50</sub> (oral) 1600 mg/kg Mouse LD <sub>50</sub> (intraperitoneal) 200 mg/kg

## Section III. Hazards Identification

Acute Health Effects	Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	<b>CARCINOGENIC EFFECTS</b> : Not available. <b>MUTAGENIC EFFECTS</b> : Not available. <b>TERATOGENIC EFFECTS</b> : Not available. <b>DEVELOPMENTAL TOXICITY</b> Not available. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

## Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. 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.

## Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	421°C (789.8°F)
Flash Points	132°C (269.6°F).	Flammable Limits	Not available.
Combustion Products	These products are toxic 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 Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.		

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Emergency phone number (800) 424-9300

**Section VI. Accidental Release Measures**

Spill Cleanup Instructions Harmful material. Irritating material. Light sensitive material. Hygroscopic material. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.

**Section VII. Handling and Storage**

Handling and Storage Information HARMFUL. IRRITANT. LIGHT SENSITIVE. HYGROSCOPIC. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. Do not breathe dust. Always store away from incompatible compounds such as oxidizing agents, alkalis (bases).

**Section VIII. Exposure Controls/Personal Protection**

Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection Splash goggles. Lab coat. Dust respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.



Exposure Limits Not available.

**Section IX. Physical and Chemical Properties**

Physical state @ 20°C	Solid. (White ~ light reddish yellow, Crystals to Powder.)	Solubility	Not available.
Specific Gravity	Not available.		
Molecular Weight	124.14	Partition Coefficient	Not available.
Boiling Point	243°C (469.4°F)	Vapor Pressure	<0.01 mmHg @ 20°C
Melting Point	55 to 57°C (131 to 134.6°F)	Vapor Density	4.3 (Air = 1)
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

**Section X. Stability and Reactivity Data**

Stability This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability Avoid excessive heat and light. Hygroscopic; keep container tightly closed.

Incompatibilities Reactive with oxidizing agents, alkalis (bases), acid chlorides, and acid anhydrides.

**Section XI. Toxicological Information**

RTECS Number SL7700000

Routes of Exposure Eye Contact. Ingestion. Inhalation.

Toxicity Data Rat LD<sub>50</sub> (oral) 1600 mg/kg  
Mouse LD<sub>50</sub> (intraperitoneal) 200 mg/kg

Chronic Toxic Effects **CARCINOGENIC EFFECTS** : Not available.  
**MUTAGENIC EFFECTS** : Not available.  
**TERATOGENIC EFFECTS** : Not available.  
**DEVELOPMENTAL TOXICITY** Not available.  
Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Acute Toxic Effects Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.  
Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

**Section XII. Ecological Information**

Ecotoxicity Not available.

Environmental Fate Hydroquinone monomethyl ether's production and use in the manufacture of antioxidants, pharmaceuticals, plasticizers, dyestuffs, as a stabilizer and as an inhibitor may result in its release to the environment through various waste streams. If released to the atmosphere, hydroquinone monomethyl ether will exist mainly in the vapor phase based on an estimated vapor pressure of  $8.3 \times 10^{-3}$  mm Hg at 25 deg C. Vapor-phase hydroquinone monomethyl ether is degraded in the atmosphere by reaction with photochemically produced hydroxyl radicals with an estimated half-life of about 13 hours. Hydroquinone monomethyl ether is expected to have high mobility in soil based on experimental Koc values of 55.7 and 90. Volatilization from dry soil surfaces may occur. An estimated Henry's Law constant of  $5.35 \times 10^{-7}$  atm-cu m/mole suggests that volatilization from moist soil surfaces will be slow. Biodegradation is expected to be a major fate process in both soil and water. Hydroquinone monomethyl ether was completely biodegraded within 8 days using a soil inoculum. Biodegradation rate constants for river and pond water ranged from  $1.1 \times 10^{-11}$  to  $3.5 \times 10^{-11}$  l/organism hr; this compound is oxidized to the corresponding catechol during this process. Anaerobic biodegradation of hydroquinone monomethyl ether was complete within one week using a sludge inoculum. Hydroquinone monomethyl ether may be degraded in natural waters through indirect photolysis; pure water, synthetic natural water, and natural lake water, irradiated by sunlight, had measured rate constants for the oxidation of hydroquinone monomethyl ether of  $1.72 \times 10^{-5}$ /sec,  $7.7 \times 10^{-5}$ /sec, and  $3.0 \times 10^{-5}$ /sec, respectively. Bioconcentration in aquatic organisms and volatilization from water surfaces should not be important fate processes. Exposure to hydroquinone monomethyl ether may occur occupationally during its production or use in the manufacture of other products.

**Section XIII. Disposal Considerations**

Waste Disposal Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

**Section XIV. Transport Information**

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

PIN Number Not applicable.

Proper Shipping Name Not applicable.

Packing Group (PG) Not applicable.

DOT Pictograms

**Section XV. Other Regulatory Information and Pictograms**

TSCA Chemical Inventory (EPA) This compound is **ON** the EPA Toxic Substances Control Act (TSCA) inventory list.

WHMIS Classification (Canada) On DSL

EINECS Number (EEC) Not available.

EEC Risk Statements R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.  
R36/37/38- Irritating to eyes, respiratory system and skin.

Japanese Regulatory Data Not available.

**Section XVI. Other Information**

**Version 1.0**  
**Validated on 6/25/2008.**  
**Printed 6/25/2008.**

**Notice to Reader**

TCL laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.