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## Material Safety Data Sheet

### M-Cresol

#### Section 1: Chemical Product and Company Identification

**Product Name:** M-Cresol

**CAS#:** 108-39-4

**RTECS:** GO6125000

**TSCA:** TSCA 8(b) inventory: Meta-cresol

**CI#:** Not applicable.

**Synonym:** 1-Hydroxy-3-methylbenzene; 3-Cresol; 3-Hydroxytoluene; 3-Methylphenol; m-Cresole; m-Cresylic acid; m-Hydroxytoluene; m-Kresol; m-Methylphenol; m-Oxytoluene; m-Toluol; phenol, 3-methyl-

**Chemical Name:** M-Cresol

**Chemical Formula:** C<sub>7</sub>H<sub>8</sub>O

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#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS # %	By Weight
M-Cresol	108-39-4	≥ 100.0%

**Toxicological Data on Ingredients:** Meta-cresol: ORAL (LD50): Acute: 242 mg/kg [Rat]. 828 mg/kg [Mouse]. DERMAL (LD50): Acute: 2050 mg/kg [Rabbit]. 1100 mg/kg [Rat].

#### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). Slightly hazardous in case of skin contact (sensitizer). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result

in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Classified POSSIBLE by IRIS. MUTAGENIC EFFECTS: Not available. TERATOGENIC

EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, lungs, liver, skin, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

#### Section 4: 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. Cold water may be used. Get medical attention immediately.

**Skin Contact:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:**

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

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

**Ingestion:**

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Serious Ingestion:** Not available.

#### Section 5: Fire and Explosion Data

**Flammability of the Product:** Combustible.

**Auto-Ignition Temperature:** 558°C (1036.4°F)

**Flash Points:** CLOSED CUP: 86°C (186.8°F).

**Flammable Limits:** LOWER: 1.1%

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

**Fire Hazards in Presence of Various Substances:**

Flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:**

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.

**Special Remarks on Fire Hazards:**

When heated to decomposition it emits highly toxic fumes. When heated to decomposition it emits irritating fumes.

**Special Remarks on Explosion Hazards:** Avoid loading together with explosives.

## Section 6: Accidental Release Measures

**Small Spill:**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:**

Combustible material. Corrosive liquid. Poisonous liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. 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. Keep away from incompatibles such as oxidizing agents, acids.

**Storage:**

Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Sensitive to light. Store in light-resistant containers. Air Sensitive  
Hygroscopic

## Section 8: 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:**

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

**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:**

TWA: 5 (ppm) from ACGIH (TLV) [United States] SKIN TWA: 2.3 from NIOSH [United States] TWA: 10 (mg/m<sup>3</sup>) from NIOSH [United States] Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:**

Phenolic-like odor. Odor of coal tar. Sweet, tarry odor

**Taste:** Not available.

**Molecular Weight:** 108.14 g/mole

**Color:** Colorless. Yellowish. Colorless to light yellow.

**pH (1% soln/water):** Not available.

**Boiling Point:** 202°C (395.6°F)

**Melting Point:** 11.5°C (52.7°F)

**Critical Temperature:** 342.6°C (648.7°F)

**Specific Gravity:** 1.034 (Water = 1)

**Vapor Pressure:** 0 kPa (@ 25°C)

**Vapor Density:** 3.72 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** The product is more soluble in oil; log(oil/water) = 2

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

**Dispersion Properties:** See solubility in water, diethyl ether, acetone.

**Solubility:**

Miscible in diethyl ether, acetone. Partially soluble in cold water Soluble in about 40 parts water. Miscible in ethanol..

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Heat, ignition sources, incompatible materials, light, air

**Incompatibility with various substances:** Reactive with oxidizing agents, acids.

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

**Special Remarks on Reactivity:**

Also incompatible with organic peroxides. Avoid loading together with explosives. Crystals or liquid darken with exposure to air or light Air and light sensitive. Hygroscopic; keep container tightly closed.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**

Acute oral toxicity (LD50): 242 mg/kg [Rat]. Acute dermal toxicity (LD50): 1100 mg/kg [Rat]. Acute inhalation toxicity of the mist

(LC50): >710 mg/m 1 hours [Rat]. 3

**Chronic Effects on Humans:**

CARCINOGENIC EFFECTS: Classified POSSIBLE by IRIS. May cause damage to the following organs: kidneys, lungs, liver, skin, central nervous system (CNS).

**Other Toxic Effects on Humans:**

Very hazardous in case of skin contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive), of inhalation (lung corrosive). Slightly hazardous in case of skin contact (sensitizer).

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

**Special Remarks on Chronic Effects on Humans:**

May cause adverse reproductive effects. May affect genetic material (mutagenic). IRIS Carcinogen Assessment: C (Possible human carcinogen)

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: Causes severe irritation and burns. Skin contact with cresols has resulted in skin blanching, skin peeling, burning sensation, erythema, localized anesthesia (numbness), and occasionally, ochronosis, a darkening of the skin. It is also absorbed through the skin. When absorbed through the skin it can produce systemic effects such facial peripheral neuritis, damage to internal organs, including loss of kidney function and necrosis of the liver and kidneys. Serious or even fatal poisoning may result if large areas of the skin are wet with cresol and it is not removed immediately. Hypersensitivity may also occur. Eyes: Causes severe irritation and burns. Inhalation: It is extremely destructive to the tissue of the mucous membrane and upper respiratory tract. Inhalation may result in spasm, inflammation, and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea. Ingestion: Can cause burning pain in mouth and throat. White necrotic lesions in mouth, esophagus, and stomach, abdominal pain, peritonitis, nausea, vomiting, bloody diarrhea, dyspnea, pallor, sweating, central nervous system disturbances (somnolence, convulsions, headache, dizziness), tinnitus. Acute ingestion may lead to shock with cardiovascular disturbances (weak irregular pulse, tachycardia, hypotension), shallow respirations, cyanosis, pallor, profound fall in body temperature, possible fleeting excitement and confusion followed by unconsciousness. Other symptoms of acute ingestion may include stentorous breathing, mucous

## Section 12: 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 Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### Section 14: Transport Information

**DOT Classification:**

CLASS 6.1: Poisonous material. Class 8: Corrosive material

**Identification:** : m-Cresol UNNA: 2076 PG: II

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

### Section 15: Other Regulatory Information

**Federal and State Regulations:**

Connecticut hazardous material survey.: Meta-cresol Illinois chemical safety act: Meta-cresol New York release reporting

list: Meta-cresol Pennsylvania RTK: Meta-cresol Massachusetts RTK: Meta-cresol Massachusetts spill list: Meta-cresol New

Jersey: Meta-cresol New Jersey spill list: Meta-cresol Louisiana spill reporting: Meta-cresol

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. M-Cresol is listed on the Canadian Domestic Substances list. Canada: Disclosure at 1.0% according the the Ingredient Disclosure List4

**Other Classifications:**

**WHMIS (Canada):**

Health Hazard: 3

Fire Hazard: 2

Reactivity: 0

Personal Protection

**National Fire Protection Association(U.S.A)**

Health: 3

Flammability: 2

Specific hazard: 0

**Protective equipment:**

Gloves, full suit,vapor respirator.Be sure to use an approved/certified respirator or equivalent. Wear appropriate when ventilation is inadequate, face shield.

### Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

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