



From: Avantor Performance Materials, Inc.
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24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service, 1-855-AVANTOR (855-282-6867) for assistance.

m-CRESOL

1. Product Identification

Synonyms: m-Cresol practical; phenol, 3-methyl-; 3-hydroxytoluene; meta-Cresylic Acid; 3-Cresol; m-Cresylic Acid

CAS No.: 108-39-4

Molecular Weight: 108.14

Chemical Formula: C7H8O

Product Codes: F842

2. Composition/Information on Ingredients

| Ingredient | CAS No | Percent | Hazardous |
|------------|----------|-----------|-----------|
| m-Cresol | 108-39-4 | 90 - 100% | Yes |

3. Hazards Identification

Emergency Overview

POISON! DANGER! MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. AFFECTS CENTRAL NERVOUS SYSTEM, LIVER, KIDNEYS, PANCREAS AND CARDIOVASCULAR SYSTEM. VAPOR IS IRRITATING TO EYES AND RESPIRATORY TRACT. COMBUSTIBLE LIQUID AND VAPOR.

SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 3 - Severe (Poison)

Flammability Rating: 2 - Moderate

Reactivity Rating: 1 - Slight

Contact Rating: 4 - Extreme (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES;
CLASS B EXTINGUISHER

Storage Color Code: White (Corrosive)

Potential Health Effects

Cresol is toxic via ingestion and skin absorption. Cresol is similar to phenol in its action on the body, but is less severe in its effects.

Inhalation:

Breathing vapor, dust or mist results in digestive disturbances (vomiting, difficulty in swallowing, diarrhea, loss of appetite). Will irritate, possibly burn respiratory tract. Other symptoms listed under ingestion may also occur.

Ingestion:

Poison. Symptoms may include burning pain in mouth and throat, abdominal pain, headache, dizziness, muscular weakness, irregular breathing, weak pulse, lung damage, liver damage, pancreas damage, kidney damage, coma, and possibly death from circulatory or cardiac failure.

Skin Contact:

Corrosive. Causes severe pain followed by numbness. May be absorbed through the skin with systemic poisoning effects to follow. Discoloration and severe burns may occur.

Eye Contact:

Corrosive! Vapors are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.

Chronic Exposure:

Repeated exposure may cause symptoms described for acute poisoning as well as liver damage.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of the substance.

4. First Aid Measures

Inhalation:

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

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician:

Onset of systemic effects may be delayed as long as 72 hours.

5. Fire Fighting Measures

Fire:

Flash point: 86C (187F) CC

Autoignition temperature: 1038C (1900F)

Flammable limits in air % by volume:

l_{el}: 1.1; u_{el}: 1.4

Combustible Liquid and Vapor! Contact with strong oxidizers may cause fire.

Explosion:

Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Sealed containers may rupture when heated.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.

Solid Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

Liquid Spills: Absorb with vermiculite, dry sand, earth or similar material and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer.

Any Spill:

US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

J. T. Baker SOLUSORB® solvent adsorbent is recommended for spills of this product.

7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Protect from light. Outside or detached storage is preferred. Separate from other storage. Do not allow untrained workers to handle cresol. Containers of this material may be hazardous when empty since they retain product residues (dust, solids, vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):

5 ppm (TWA) (skin), cresol, all isomers

-ACGIH Threshold Limit Value (TLV):

5 ppm (TWA) (skin), cresol, all isomers

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a full-face piece respirator with an organic vapor cartridge and particulate filter (NIOSH type P100 or R100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. Please note that N series filters are not recommended for this material. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying

respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

Colorless to yellow liquid.

Odor:

Phenolic odor.

Solubility:

Soluble in water.

Specific Gravity:

1.034 @ 20C/4C

pH:

No information found.

% Volatiles by volume @ 21C (70F):

No information found.

Boiling Point:

202C (396F)

Melting Point:

11 - 12C (52 - 54F)

Vapor Density (Air=1):

3.72

Vapor Pressure (mm Hg):

0.1528 @ 25C (77F)

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. Darkens on exposure to air or light.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Oxidizing agents and bases.

Conditions to Avoid:

Heat, flame, ignition sources, incompatibles, light, and air.

11. Toxicological Information

Toxicological Data:

Rat oral LD50: 242 mg/kg; Rabbit skin LD50: 2050 mg/kg. Irritant (std Draize) rabbit: skin = 517 mg/24H, severe; eye = 103 mg, severe. Investigated as a tumorigen, mutagen, reproductive effector.

Carcinogenicity:

EPA / IRIS classification: Group C - Possible human carcinogen.

-----\Cancer Lists\-----

| Ingredient | ---NTP Carcinogen--- | | IARC Category |
|---------------------|----------------------|-------------|---------------|
| | Known | Anticipated | |
| m-Cresol (108-39-4) | No | No | None |

12. Ecological Information

Environmental Fate:

When released into water, this material is expected to readily biodegrade. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals.

Environmental Toxicity:

The LC50/96-hour values for fish are between 10 and 100 mg/l.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: CRESOLS

Hazard Class: 6.1, 8

UN/NA: UN2076

Packing Group: II

Information reported for product/size: 4L

International (Water, I.M.O.)

Proper Shipping Name: CRESOLS, LIQUID

Hazard Class: 6.1, 8

UN/NA: UN2076

Packing Group: II

Information reported for product/size: 4L

International (Air, I.C.A.O.)

Proper Shipping Name: CRESOLS

Hazard Class: 6.1, 8

UN/NA: UN2076

Packing Group: II

Information reported for product/size: 4L

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

| Ingredient | TSCA | EC | Japan | Australia |
|---------------------|-------|-------|-------|-----------|
| | ----- | ----- | ----- | ----- |
| m-Cresol (108-39-4) | Yes | Yes | Yes | Yes |

-----\Chemical Inventory Status - Part 2\-----

| Ingredient | Korea | --Canada-- | | Phil. |
|---------------------|-------|------------|------|-------|
| | | DSL | NDSL | |
| m-Cresol (108-39-4) | Yes | Yes | No | Yes |

-----\Federal, State & International Regulations - Part 1\-----

| Ingredient | -SARA 302- | | -----SARA 313----- | |
|---------------------|------------|-----|--------------------|----------------|
| | RQ | TPQ | List | Chemical Catg. |
| m-Cresol (108-39-4) | No | No | Yes | No |

-----\Federal, State & International Regulations - Part 2\-----

| Ingredient | CERCLA | -RCRA- | -TSCA- |
|---------------------|--------|--------|--------|
| | | 261.33 | 8(d) |
| m-Cresol (108-39-4) | 100 | No | No |

Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes
 SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
 Reactivity: No (Pure / Liquid)

Australian Hazchem Code: 2X

Poison Schedule: S6

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 3 Flammability: 2 Reactivity: 0

Label Hazard Warning:

POISON! DANGER! MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. AFFECTS CENTRAL NERVOUS SYSTEM, LIVER, KIDNEYS, PANCREAS AND CARDIOVASCULAR SYSTEM. VAPOR IS IRRITATING TO EYES AND RESPIRATORY TRACT. COMBUSTIBLE LIQUID AND VAPOR.

Label Precautions:

- Do not breathe vapor or mist.
- Do not get in eyes, on skin, or on clothing.
- Keep container closed.
- Use only with adequate ventilation.
- Wash thoroughly after handling.
- Keep away from heat and flame.

Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases get medical attention immediately.

Product Use:

Laboratory Reagent.

Disclaimer:

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Prepared by: Environmental Health & Safety