Metacresol (m-Cresol), USP, EP MSDS
Dear Customer,

This File Contains Both The ANSI Material Safety Data Sheet and The GHS Safety Data Sheet For The Same Product

Spectrum is currently transitioning all chemical product labeling from the ANSI format to the GHS format (see note below). In order to ensure that you receive complete labelling during the transition, we have included both the ANSI MSDS and the GHS SDS in a single file. The ANSI MSDS is given first, followed by the GHS SDS. Please use whichever matches the container label.

Why it Matters:

The complete precautionary labeling for this chemical consists of BOTH the label on the container AND the matching Material Safety Data Sheet (for ANSI labels) or Safety Data Sheet (for GHS labels). Both elements of the labeling [Label + (M)SDS] are written to be read and understood together, so as to provide complete precautionary information. It is intended for you to read and understood BOTH before handling or using the chemical.

Picking the Right One: 2 Easy Ways To Tell Whether Your Container Has an ANSI Label or a GHS Label

1) GHS labels: any pictogram displayed in the upper left-hand corner will be inside a red diamond. ANSI labels: pictograms, if present, will be inside individual black boxes.

2) GHS labels: on the bottom of the right-hand panel of the label, locate the Lot Number. Directly to the left will be a string of control characters, followed by a single letter. For GHS labels, the string of characters will end in "GHS:"

---

**Label in ANSI Format**

---

**C O R P O R A T E  O F F I C I E S**

14422 South San Pedro Street
Gardena, California 90248
PHONE 310.516.8000
FAX 310.516.9843

AN ISO 9001:2008 REGISTERED COMPANY www.spectrumchemical.com
Sincerely,

Regulatory Affairs
SAFETY DATA SHEET

Preparation Date: 3/24/2015

Revision Date: 3/24/2015

Revision Number: G1

Product identifier

Product code: C2773
Product Name: METACRESOL, USP

Other means of identification

Synonyms:
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-; Metacresol

CAS #: 108-39-4
RTECS #: GO6125000
Ci#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against: No information available

Supplier:
Spectrum Chemicals and Laboratory Products, Inc.
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: https://www.spectrumchemical.com

Emergency telephone number
Chemtrec 1-800-424-9300

Contact Person:
Martin LaBenz (West Coast)
Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th></th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute toxicity - Dermal</td>
<td>Category 3</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1Sub-category B</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 4</td>
</tr>
</tbody>
</table>

Label elements
Danger

Hazard statements
Toxic if swallowed
Toxic in contact with skin
Causes severe skin burns and eye damage
May cause an allergic skin reaction
May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure
Combustible liquid

Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Not available

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Contaminated work clothing should not be allowed out of the workplace
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep cool

Precautionary Statements - Response
Specific treatment (see .? on this label)
Immediately call a POISON CENTER or doctor/physician
Specific treatment (see .? on this label)
In case of fire: Use CO2, dry chemical, or foam to extinguish.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Do NOT induce vomiting
Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>108-39-4</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures

**General Advice:**
Poison information centers in each State capital city can provide additional assistance for scheduled poisons (131126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

**Skin Contact:**
Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.

**Eye Contact:**
Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

**Inhalation:**
Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Call a physician immediately.

**Ingestion:**
Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**

**Indication of any immediate medical attention and special treatment needed**
Notes to Physician: Treat symptomatically

**Protection of first-aiders**
First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

**Product code:** C2773  **Product name:** METACRESOL, USP
5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon Monoxide. Carbon Dioxide

Specific hazards: Combustible material. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated.

Special Protective Actions for Firefighters

Specific Methods: Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment: Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up: Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:
Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.
Safe Handling Advice:
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:
Hygroscopic. Protect from moisture. Protect from light. Sensitive to light. Store in light-resistant containers. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Store in a segregated and approved area.

Incompatible Materials:

<table>
<thead>
<tr>
<th>8. EXPOSURE CONTROLS/PERSOAL PROTECTION</th>
</tr>
</thead>
</table>

Control parameters

National occupational exposure limits

<table>
<thead>
<tr>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>m-Cresol - 108-39-4</td>
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<table>
<thead>
<tr>
<th>Canada</th>
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<tbody>
<tr>
<td>Components</td>
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<tr>
<td>------------</td>
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<tr>
<td>m-Cresol - 108-39-4</td>
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<table>
<thead>
<tr>
<th>Australia and Mexico</th>
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<tbody>
<tr>
<td>Components</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>m-Cresol 108-39-4</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering measures to reduce exposure:
Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

<table>
<thead>
<tr>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye protection:</td>
</tr>
<tr>
<td>Skin and body protection:</td>
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<tr>
<td>Respiratory protection:</td>
</tr>
<tr>
<td>Hygiene measures:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. PHYSICAL AND CHEMICAL PROPERTIES</th>
</tr>
</thead>
</table>

Product code: C2773  Product name: METACRESOL, USP
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.


Formula: C7-H8-O

Flash Point Tested according to: Not available

Autoignition Temperature (°C/°F): 558°C/1036.4°F

Boiling point/range(°C/°F): 202°C/395.6°F

Specific gravity: 1.034 @ 20°C

Evaporation rate: No information available

Odor threshold (ppm): No information available

Miscibility: Miscible in Chloroform
Miscible with alcohol
Miscible with Ether
Miscible with Acetone

Molecular/Formula weight: 108.14

Flash point (°C): 86

Lower Explosion Limit (%): 1.1%

Decomposition temperature(°C/°F): No information available

Vapor pressure @ 20°C (kPa): 0.0147 kPa @ 25°C

Density (g/cm3): No information available

Partition coefficient (n-octanol/water): 1.96

Solubility: Partially soluble in water

Solubility in water: 22700 mg/L @ 25°C

10. STABILITY AND REACTIVITY

Reactivity
No information available

Chemical stability

Possibility of Hazardous Reactions: Hazardous polymerization does not occur


Hazardous decomposition products: No information available

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation. Skin.

Acute Toxicity

Component Information

m-Cresol - 108-39-4

LD50/oral/rat = 242 mg/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = 1860 mg/kg Dermal LD50 Rabbit (LOLI; EU Commission IUCLID dataset)
620 mg/kg (RTECS)
2050-2830 mg/kg (EU Commission IUCLID dataset)
LD50/dermal/rat = = 1100 mg/kg Dermal LD50 Rat
LC50/inhalation/rat = >710 mg/m³ Inhalation LC50 Rat 1 h
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 242mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = 620mg/kg

LD50/dermal/rat
VALUE -Acute Tox Dermal = 1100mg/kg

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = >710mg/m³ (1-hr)

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: 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 cause somnolence and tetany and 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..

Eye Contact: Severe eye irritation. Causes eye burns.

Product code: C2773
Product name: METACRESOL, USP
Inhalation

Irritating to respiratory system. 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

Irritating to mouth, throat and stomach. Corrosive to the mouth, throat, and stomach. Causes digestive or gastrointestinal tract burns. 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 rales, rhonchi, frothing at nose and mouth and other signs of pulmonary edema, characteristic odor of phenol on the breath, impairment of kidney function (renal necrosis, nephritis, acute renal failure with scanty, dark-colored urine (oliguria, anuria), hematuria), moderately severe renal insufficiency, impairment of liver function, Methemoglobinemia, Heinz body hemolytic anemia, hyperbilirubinemia. Death from respiratory, circulatory or cardiac failure may occur.

Aspiration hazard

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity

Prolonged or repeated exposure by ingestion, skin absorption, or inhalation may cause kidney and liver damage, weight loss and may also affect the skin, gastrointestinal tract, lungs, and central nervous system/nervous system. Symptoms may include vertigo, fainting, fatigue, insomnia, nervousness, tremors, mental disturbances, headache, cough, muscle aches and pain, difficulty swallowing, excess saliva, diarrhea, nausea, vomiting, lack of appetite or anorexia, pallor, partial paralysis, ochronosis, albuminuria, and dark urine, hepatitis, fatty liver degeneration. Prolonged skin contact may cause allergic dermatitis.

Sensitization:

May cause sensitization by skin contact

Mutagenic Effects:

May affect genetic material based on animal test data

No human data found

Carcinogenic effects:

Not classifiable as a human carcinogen.

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH - Carcinogens</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>A4 Not Classifiable as a Human Carcinogen</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)

Reproductive toxicity

No data is available
Reproductive Effects: No information on reproductive toxicity effects on humans was found. Reproductive effects of cresols administered to rats and mice in diet were limited to mild to moderate uterine atrophy and lengthening of estrous cycle at the highest dose levels tested (>2000 mg/kg/day). No adverse effects on sperm motility or concentration were observed.

Developmental Effects: No information on developmental toxicity effects on humans was found. Developmental studies that treated rats and rabbits by oral gavage during gestation observed fetal effects (skeletal variations and delayed ossification) at dose levels that also cause maternal toxicity.

Teratogenic Effects: No information available.

Specific Target Organ Toxicity

<table>
<thead>
<tr>
<th>STOT - single exposure</th>
<th>lungs. respiratory system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOT - repeated exposure</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
</tbody>
</table>


12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

*m*-Cresol - 108-39-4

<table>
<thead>
<tr>
<th>Freshwater Fish Species Data</th>
<th>10 - 13.6 mg/L LC50 Lepomis macrochirus 96 h 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15.9 mg/L LC50 Brachydanio rerio 96 h static 1</td>
</tr>
<tr>
<td></td>
<td>23.12 mg/L LC50 Poecilia reticulata 96 h semi-static 1</td>
</tr>
<tr>
<td></td>
<td>55.9 mg/L LC50 Pimephales promelas 96 h flow-through 1</td>
</tr>
<tr>
<td></td>
<td>8.9 mg/L LC50 Oncorhyncus mykiss 96 h flow-through 1</td>
</tr>
</tbody>
</table>

| Water Flea Data | 18.8 mg/L LC50 Daphnia magna 48 h |

Persistence and degradability: Readily biodegradable.

Bioaccumulative potential: Potential for bioconcentration in aquatic organisms is low.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products: Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging: Empty containers should be taken for local recycling, recovery or waste disposal.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

Product code: C2773  Product name: METACRESOL, USP
14. TRANSPORT INFORMATION

DOT
UN-No: UN2076
Proper Shipping Name: Cresols, liquid
Hazard Class: 6.1
Subsidiary Risk: 8
Packing Group: II
ERG No: 153
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Symbol(s): R3

TDG (Canada)
UN-No: UN2076
Proper Shipping Name: Cresols, liquid
Hazard Class: 6.1
Subsidiary Risk: (8)
Packing Group: II
Description: No information available

ADR
UN-No: UN2076
Proper Shipping Name: Cresols, liquid
Hazard Class: 6.1
Packing Group: II
Subsidiary Risk: 8
Classification Code: No information available
Description: No information available

CEFIC Tremcard No: No information available

IMO / IMDG
UN-No: UN2076
Proper Shipping Name: Cresols, liquid
Hazard Class: 6.1
Subsidiary Risk: 8
Packing Group: II
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID
UN-No: UN2076
Proper Shipping Name: Cresols, liquid
Hazard Class: 6.1
Subsidiary Risk: 8
Packing Group: II
Classification Code: No information available
Description: No information available

ICAO
UN-No: UN2076
Proper Shipping Name: Cresols, liquid
Hazard Class: 6.1
Subsidiary Risk: 8
Packing Group: II

Product code: C2773 Product name: METACRESOL, USP
14. TRANSPORT INFORMATION

Description: No information available

IATA

<table>
<thead>
<tr>
<th>Description</th>
<th>IATA</th>
<th>UN-No:</th>
<th>Proper Shipping Name:</th>
<th>Hazard Class:</th>
<th>Subsidiary Risk:</th>
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<tr>
<td></td>
<td></td>
<td>UN2076</td>
<td>Cresols, liquid</td>
<td>6.1</td>
<td>8</td>
<td>II</td>
<td>6C</td>
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15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>Present</td>
<td>Present KE-24793</td>
<td>Present</td>
<td>Present (4)-57 (3)-499</td>
<td>Present</td>
<td>Present</td>
<td>Present 203-577-9</td>
</tr>
</tbody>
</table>

U.S. Regulations

m-Cresol

- Massachusetts RTK: Present
- New Jersey RTK Hazardous Substance List: Present
- New Jersey (EHS) List: Present
- New Jersey - Discharge Prevention - List of Hazardous Substances: Present
- Pennsylvania RTK: Environmental hazard
- Pennsylvania RTK - Environmental Hazard List Present
- New York Release Reporting - List of Hazardous Substances:
  - 1000 lb RQ
  - 1 lb RQ
- Louisiana Reportable Quantity List for Pollutants: 100lb final RQ
- 45.4kg final RQ
- California Directors List of Hazardous Substances: Present


**Chemicals Known to the State of California to Cause Cancer:**
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
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</tr>
</tbody>
</table>

CERCLA/SARA

<table>
<thead>
<tr>
<th>Components</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>100 lb final RQ, 45.4 kg final RQ</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>1.0 % de minimis concentration</td>
</tr>
</tbody>
</table>

U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>Not Applicable</td>
<td>10/04/1982 10/04/1992</td>
</tr>
</tbody>
</table>

Product code: C2773  Product name: METACRESOL, USP
Canada

WHMIS hazard class:
B3 Combustible liquid
D1A Very toxic materials
E Corrosive material

m-Cresol
  B3  D1A  E

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

<table>
<thead>
<tr>
<th>Components</th>
<th>WHMIS Ingredient Disclosure List -</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>1 %</td>
</tr>
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</table>

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
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<tbody>
<tr>
<td>m-Cresol</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CEPA Schedule I - Toxic Substances</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

EU Classification

R-phrase(s)
R34 - Causes burns.
R24/25 - Toxic in contact with skin and if swallowed.

S -phrase(s)
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 1/2 - Keep locked up and out of the reach of children.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

<table>
<thead>
<tr>
<th>Components</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
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<tr>
<td>m-Cresol</td>
<td>T; R24/25</td>
<td>No information</td>
<td>S1/2  S36/37/39  S45</td>
</tr>
<tr>
<td></td>
<td>C; R34</td>
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<td></td>
</tr>
</tbody>
</table>

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
T - Toxic
C - Corrosive.
Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet
**Section 1. Chemical Product and Company Identification**

**Common Name/Trade Name**
m-cresol

**Catalog Number(s)**
C2773, YY246, C1367

**CAS#**
108-39-4

**Manufacturer**
SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

**Commercial Name(s)**
Not available.

**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-; Metacresol

**Chemical Name**
meta-Cresol

**Chemical Family**
Not available.

**Chemical Formula**
C7H8O

**Supplier**
SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

---

### Section 2. Composition and Information on Ingredients

**Exposure Limits**

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) {Meta-}cresol</td>
<td>108-39-4</td>
<td>22</td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

**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].

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### 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: A4 (Not classifiable for human or animal.) by ACGIH.
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, CO2).

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

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: 20 (mg/m^3) from ACGIH (TLV) [United States]
TWA: 5 (ppm) from OSHA (PEL) [United States]
TWA: 2.3 from NIOSH [United States]
TWA: 10 (mg/m^3) from NIOSH [United States]
TWA: 5 STEL: 10 (ppm) [Canada]
TWA: 20 (mg/m^3) [Canada]

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance
Liquid.

Molecular Weight
108.14 g/mole

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

<table>
<thead>
<tr>
<th>Stability</th>
<th>The product is stable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instability Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Conditions of Instability</td>
<td>Heat, ignition sources, incompatible materials, light, air</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with oxidizing agents, acids.</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>Non-corrosive in presence of glass.</td>
</tr>
<tr>
<td>Special Remarks on Reactivity</td>
<td>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.</td>
</tr>
<tr>
<td>Special Remarks on Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Polymerization</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>

### 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/m³ 1 hours [Rat].

**Chronic Effects on Humans**
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. May cause damage to the following organs: kidneys, lungs, liver, skin, central nervous system (CNS). R68.

**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 based on animal test data. May affect genetic material (mutagenic).

**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 rales, rhonchi, frothing at nose and mouth and other signs of pulmonary edema, characteristic odor of phenol on the breath, impairment of kidney function (renal necrosis, nephritis, acute renal failure with scanty, dark-colored urine (oliguria, anuria), hematuria), moderately severe renal insufficiency, impairment of liver function.

**Continued on Next Page**
function, Methemoglobinemia, Heinz body hemolytic anemia, hyperbilirubinemia. Death from respiratory, circulatory or cardiac failure may occur. Chronic Potential Health Effects: Prolonged or repeated exposure by ingestion, skin absorption, or inhalation may cause kidney and liver damage, weight loss and may also affect the skin, gastrointestinal tract, lungs, and central nervous system/nervous system. Symptoms may include vertigo, fainting, fatigue, insomnia, nervousness, tremors, mental disturbances, headache, cough, muscle aches and pain, difficulty swallowing, excess salivation, diarrhea, nausea, vomiting, lack of appetite or anorexia, pallor, partial paralysis, ochronosis, albuminuria, and dark urine, hepatitis, fatty liver degeneration. Prolonged skin contact may cause allergic dermatitis.

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
UNNA: 2076: Cresol, liquid PG: II

Special Provisions for Transport
Not available.

DOT (Pictograms)

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
New York release reporting list: m-cresol
Pennsylvania RTK: m-cresol
Massachusetts RTK: m-cresol
Massachusetts spill list: m-cresol
New Jersey: m-cresol
New Jersey spill list: m-cresol
Louisiana spill reporting: m-cresol
California Director's List of Hazardous Substances: m-cresol
TSCA 8(b) inventory: m-cresol
TSCA 4(a) proposed test rules: m-cresol
TSCA 8(a) IUR: m-cresol
TSCA 8(d) H and S data reporting: m-cresol: Effective date: 10/04/82; Sunset date: 10/04/92
SARA 313 toxic chemical notification and release reporting: m-cresol
CERCLA: Hazardous substances: m-cresol: 100 lbs. (45.36 kg)

Continued on Next Page
### California Proposition 65Warnings
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.  
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

### Other Regulations
- **EINECS**: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 203-577-9).
- **Canada**: Listed on Canadian Domestic Substance List (DSL).
- **Canada**: Disclosure at 1.0% according the the Ingredient Disclosure List.
- **China**: Listed on National Inventory.
- **Japan**: Listed on National Inventory (ENCS).
- **Korea**: Listed on National Inventory (KECI).
- **Philippines**: Listed on National Inventory (PICCS).
- **Australia**: Listed on AICS.
- **Japan**: Listed on National Inventory (ENCS).
- **Korea**: Listed on National Inventory (KECI).
- **Philippines**: Listed on National Inventory (PICCS).
- **Australia**: Listed on AICS.

### Other Classifications

<table>
<thead>
<tr>
<th>Classification</th>
<th>WHMIS (Canada)</th>
<th>DSCL (EEC)</th>
<th>National Fire Protection Association (U.S.A.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).</td>
<td>R24/25: Toxic in contact with skin and if swallowed.</td>
<td>Flammability: 3</td>
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<tr>
<td></td>
<td>CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).</td>
<td>R34: Causes burns.</td>
<td>Reactivity: 2</td>
</tr>
<tr>
<td></td>
<td>CLASS E: Corrosive liquid.</td>
<td>S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.</td>
<td>Specific hazard: 0</td>
</tr>
</tbody>
</table>

### Protective Equipment
- Gloves.
- Full suit.
- Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

**Continued on Next Page**
Face shield.

**Section 16. Other Information**

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>C4772</th>
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<tbody>
<tr>
<td>References</td>
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<tr>
<td>Other Special</td>
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<tr>
<td>Considerations</td>
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</table>

Validated by Sonia Owen on 8/9/2013.  
Verified by Sonia Owen.  
Printed 8/9/2013.

**Notice to Reader**

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**Contact Distributor**

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