spectrum
chemicals & laboratory products

A Division of Spectrum Chemical Mfg. Corp.

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[1] format to the GHS[2] format (see note below). In order to ensure that you receive complete labeling 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.

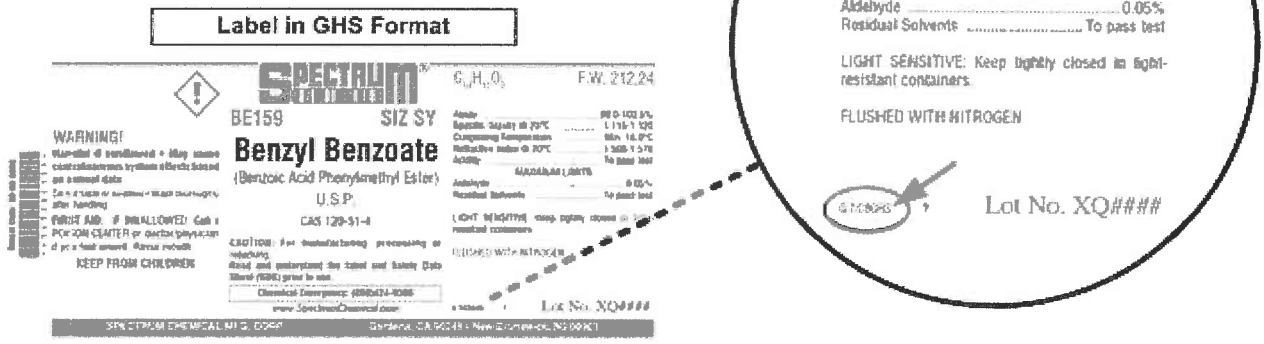
Picking the Right One: 2 Easy Ways To Tell Whether Your Container Has an ANSI Label or a GHS Label

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

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

Label in GHS Format



[1] American National Standards Institute
[2] Globally Harmonized System for Hazard Communication

Sincerely,

Regulatory Affairs

SAFETY DATA SHEET

Preparation Date: 3/31/2015 **Revision Date:** 3/31/2015 **Revision Number:** G1

Product identifier

Product code: CR112
Product Name: CRESOL, CP

Other means of identification

Synonyms: Cresylic acid;
Methyl phenol:
Tricresol:
mixture of o-, m-, p- isomers
CAS #: 1319-77-3
RTECS # GO5950000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: For making synthetic resins; in disinfectants and fumigants; as industrial solvent. In manufacture of tricresyl phosphate; ore flotation; textile scouring agent; organic intermediate, manufacture of salicylaldehyde, coumarin, herbicides and surfactant. Wide use in degreasing compound, paintbrush cleaners, & additives to lubricating oils. Cresol, as a mixture, is used as an ore flotation agent; as a disinfectant; and in the manufacture of synthetic resins, chemicals, dyes, and antioxidants..
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)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

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

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1Sub-category B
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 4

Label elements

Danger

Hazard statements
Harmful if swallowed
Harmful in contact with skin
Causes severe skin burns and eye damage
May cause an allergic skin reaction
May cause respiratory irritation
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
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
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 measures (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.
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
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: Call a POISON CENTER or doctor/physician if you feel unwell
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

Components	CAS-No.	Weight %	Trade Secret
Cresol 1319-77-3	1319-77-3	100	*

4. FIRST AID MEASURES

First aid measures

General Advice: Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126). 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 Severe skin and eye irritation or burns. Characteristic odor of phenol on the breath. May cause gastrointestinal (digestive) tract burns. Can burn mouth, throat, and stomach. Abdominal pain. May cause diarrhea. May cause nausea and headache. Pallor. Sweating. May cause methemoglobinemia and cyanosis. Shallow respiration. Dyspnea (Shortness of breath and difficulty breathing). Coughing and wheezing. May cause build-up of fluid in the lungs (pulmonary edema). May cause inflammation of the lungs (pneumonitis). May cause central nervous system effects. May affect the liver. It may affect the kidneys. May affect the cardiovascular system. May cause allergic contact dermatitis.

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

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. Dike fire-control water for later disposal; do not scatter the material.

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 segrated and approved area.

Incompatible Materials:
Strong oxidizing agents. Acids. Bases. Aluminum. aluminum alloys. Copper alloys. Copper.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Cresol - 1319-77-3	5 ppm TWA 22 mg/m³ TWA	None	20 mg/m³ TWA inhalable fraction and vapor	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Cresol - 1319-77-3	5 ppm TWA 22 mg/m³ TWA	10 mg/m³ TWA	20 mg/m³ TWA inhalable fraction and vapor	5 ppm TWAEV 22 mg/m³ TWAEV

Australia and Mexico

Components	Australia	Mexico
Cresol 1319-77-3	5 ppm TWA 22 mg/m³ TWA	5 ppm TWA 22 mg/m³ TWA

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

Personal Protective Equipment

Eye protection: Goggles. Face-shield.

Skin and body protection: Chemical resistant protective suit. Gloves. boots.

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands and face before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state:
Liquid.

Appearance:
No information available

Color:
Colorless to pale yellow.

Odor:
Phenolic. Sweet, tarry.

Taste
Pungent.

Molecular/Formula weight:
108.14

Formula:
C7H8O

Flash point (°C):
82

Flashpoint (°C/°F):
82°C/179.6°F

Flash Point Tested according to:
Closed cup

Lower Explosion Limit (%):
1.35%

Upper Explosion Limit (%):
No information available

Autoignition Temperature (°C/°F):
599°C/1110.2°F

pH:
No information available

Melting point/range(°C/°F):
11-35°C/52.7-95°F

Boiling point/range(°C/°F):
191-203°C/375-397.4°F

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

Bulk density:
No information available

Specific gravity:
1.034 @ 20°C
1.030-1.038 @ 25°C

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

Density (g/cm3):
No information available

Evaporation rate:
No information available

Vapor density:
3.72

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

Partition coefficient (n-octanol/water):
1.94-1.96

Viscosity:
No information available

Miscibility:
Miscible in Chloroform
Miscible with alcohol
Miscible with Ether
Miscible with Benzene
Miscible with Petroleum Ether
Miscible with Glycerol

Solubility:
Soluble in about 50 parts water
Soluble in Vegetable oils

10. STABILITY AND REACTIVITY

Reactivity
Reactive with oxidizing agents
Reactive with acids
Reacts with bases

Chemical stability

Stability: Stable under recommended storage conditions. Hygroscopic. Sensitive to light. Exposure to light accelerates decomposition. Darkens with exposure to air and light.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Exposure to light. Exposure to moist air. Exposure to moisture. Incompatible materials.

Incompatible Materials: Strong oxidizing agents. Acids. Bases. Aluminum. aluminum alloys. Copper alloys. Copper.

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

Cresol - 1319-77-3

LD50/oral/rat = 1454 mg/kg Oral LD50 Rat
LD50/oral/mouse = 760-860 mg/kg
LD50/dermal/rabbit = 2000 mg/kg Dermal LD50Rabbit
LD50/dermal/rat = = 242 mg/kg Dermal LD50 Rat
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No infomation available
Other LD50 or LC50information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 1454mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 760mg/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = 2000mg/kg

LD50/dermal/rat
VALUE -Acute Tox Dermal = 242mg/kg

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

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

Symptoms

Skin Contact: Harmful in contact with 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 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.

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 Harmful if swallowed. 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 unconciousness. 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 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..

Sensitization: May cause sensitization by skin contact

Mutagenic Effects: No information available

Carcinogenic effects: Not classifiable as a human carcinogen.

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Cresol	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed	Not listed

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 unterine atrophy and lengthening of estrus cycle at the highest dose levels tested (>2000 mg/kg/day). No adverse effects on sperm motility or concentration were observed.

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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

STOT - single exposure lungs. respiratory system.
STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.
Target Organs: Central nervous system. Liver. Kidneys. Lungs. Respiratory system. Skin. Eyes.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Cresol - 1319-77-3
Freshwater Fish Species Data: 10 mg/L LC50 Lepomis macrochirus 96 h static 1
12.8 mg/L LC50 Pimephales promelas 96 h flow-through 1

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

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Cresol	None	None	None	U052

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

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

14. TRANSPORT INFORMATION

Packing Group: II
Description: No information available

IATA

UN-No: UN2076
Proper Shipping Name: Cresols, liquid
Hazard Class: 6.1
Subsidiary Risk: 8
Packing Group: II
ERG Code: 6C
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Cresol	Present	Present KE-24791	Present	Present (4)-57 (3)-499	Present	Present	Present 215-293-2

U.S. Regulations

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
RI RTK - Hazardous Substances List: Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
1000 lb RQ
1 lb RQ
Louisana Reportable Quantity List for Pollutants: 100lbfinal RQ
45.4kgfinal RQ
California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

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)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Cresol	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting *de minimis*
Cresol	100 lb final RQ 45.4 kg final RQ	None	None	None	1.0 % de minimis concentration

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Cresol	Not Applicable	Not Applicable

Canada

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

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.

Components	WHMIS Ingredient Disclosure List -
Cresol	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Cresol	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Manditory Reporting
Cresol	Not listed	Not listed

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.

Components	Classification	Concentration Limits:	Safety Phrases
Cresol	T; R24/25 C; R34	No information	S1/2 S36/37/39 S45

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

Indication of danger:
T - Toxic
C - Corrosive.

16. OTHER INFORMATION

Preparation Date: 3/31/2015
Revision Date: 3/31/2015
Prepared by: Sonia Owen

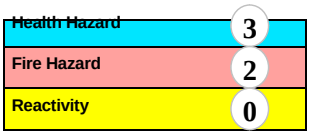
Disclaimer:

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

GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment
		 See Section 15.

Section 1. Chemical Product and Company Identification

Common Name/ Trade Name	**Cresols**
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248
Commercial Name(s)	Not available.
Synonym	Cresylic acid; Methyl Phenol; Tricresol
Chemical Name	
Chemical Family	Not available.
Chemical Formula	C7H8O
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248

Catalog Number(s).	YY1401, CR112
CAS#	1319-77-3
RTECS	GO5950000
TSCA	TSCA 8(b) inventory: Cresols
CI#	Not available.

IN CASE OF EMERGENCY
CHEMTREC (24hr) 800-424-9300

CALL (310) 516-8000

Section 2.Composition and Information on Ingredients

		Exposure Limits			
Name	**CAS #**	**TWA (mg/m^3)**	**STEL (mg/m^3)**	**CEIL (mg/m^3)**	**% by Weight**
1) Cresols	1319-77-3	22			100

Toxicological Data on Ingredients

Cresols:
ORAL (LD50): Acute: 1454 mg/kg [Rat]. 760 mg/kg [Mouse]. 860 mg/kg [Mouse].
DERMAL (LD50): Acute: 2000 mg/kg [Rabbit]. 242 mg/kg [Rat].

Section 3. Hazards Identification

Potential Acute Health Effects

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

Continued on Next Page

Potential Chronic Health Effects	**CARCINOGENIC EFFECTS**: Not available. **MUTAGENIC EFFECTS**: Not available. **TERATOGENIC EFFECTS**: Not available. **DEVELOPMENTAL TOXICITY**: Not available. The substance may be toxic to kidneys, liver, skin. 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	599℃ (1110.2℉)
Flash Points	CLOSED CUP: 82℃ (179.6℉).
Flammable Limits	LOWER: 1.35%
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.
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	Not available.
Special Remarks on Explosion Hazards	Not available.

Continued on Next Page

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 container dry. 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, alkalis.
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.

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. Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
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 OSHA (PEL) [United States] TWA: 5 (ppm) from ACGIH (TLV) [United States] TWA: 5 (mg/m^3) from NIOSH [United States] TWA: 5 (ppm) [Canada] TWA: 22 (mg/m^3) [Canada] TWA: 22 (mg/m^3) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid. (Hygroscopic liquid.)
Molecular Weight	108.14 g/mole
pH (1% soln/water)	Not available.

Odor	Phenolic; Sweet; Tarry
Taste	Pungent.
Color	Colorless to light yellow.

Boiling Point	191℃ (375.8℉) - 203 C.
Melting Point	11℃ (51.8℉) - 35 C.
Critical Temperature	Not available.
Specific Gravity	1.03 - 1.04(Water = 1)
Vapor Pressure	0 kPa (@ 20℃)
Vapor Density	3.72 (Air = 1)
Volatility	Not available.
Odor Threshold	Not available.

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Water/Oil Dist. Coeff.	Not available.
Ionicity (in Water)	Not available.
Dispersion Properties	See solubility in water.
Solubility	Partially soluble in cold water. Sol in about 50 parts water Solubility in Water: 25 g/L at 25 deg. C. Miscible with alcohol, benzene, ether, glycerol, petroleum ether; also sol in solutions of fixed alkali hydroxides SOL IN VEGETABLE OILS

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Heat, ignition sources, incompatible materials
Incompatibility with various substances	Not available.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Sensitive to light. Will darken when exposed to light or air.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Dermal contact. Eye contact. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 760 mg/kg [Mouse]. Acute dermal toxicity (LD50): 242 mg/kg [Rat].
Chronic Effects on Humans	May cause damage to the following organs: kidneys, liver, skin.
Other Toxic Effects on Humans	Very hazardous in case of skin contact (irritant, permeator), of ingestion, . Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive).
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data.
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Corrosive. Causes severe irritation and burns. It can be absorbed through the skin in harmful or letthal amounts and cause system effects and affect behavior/central nervous system (tetany, somnolence) Eyes: Corrosive. Causes severe irritation and burns. It may cause blindness. Inhalation: It can cause severe irritation and/or burns to the respiratory tract. It may cause pulmonary edema, bronchopneumonia, pulmonary hemorrhages and other systemic effects. Ingestion: Cresol is a corrosive and can cause digestive/gastrointestinal tract burns. It is also a systemic poison, similar to phenol, because it can denature proteins. General symptoms of acute cresol poisoning are muscle weakness, gastrointestinal distress, CNS depression, cardiovascular collapse, and kidney, liver, and heart damage. Cresol can induce METHEMOGLOBINEMIA. In cresol poisoning, the induction of methemoglobinemia may be secondary to lysis of the red blood cells. The common appearance of casts in the urine suggests that hemolysis is the primary effect, and that methemoglobin induction occurs intravascularly following red blood cell lysis Chronic Potential Health Effects: Cresol can cause systemic poisoning with repeated exposure to low concentrations. General symptoms are, vomiting, difficulty swallowing, diarrhea, loss of appetite and weight, headache, nervousness, faintness, dizziness, mental disturbances, skin eruptions, jaundice, and liver and kidney damage. Occupational exposure via skin contact has caused eczema or skin allergy. Inhalaing cresol may decrease blood hemoglobin levels, lower red blood cell counts, thrombocytopenia, and leukopenia and may affect the endocrine system.

Continued on Next Page

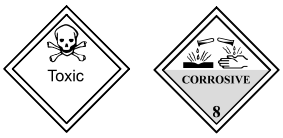
Section 12. Ecological Information

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: Cresols Rhode Island RTK hazardous substances: Cresols Pennsylvania RTK: Cresols Minnesota: Cresols Massachusetts RTK: Cresols New Jersey: Cresols California Director's List of Hazardous Substances: Cresols TSCA 8(b) inventory: Cresols SARA 313 toxic chemical notification and release reporting: Cresols CERCLA: Hazardous substances.: Cresols: 100 lbs. (45.36 kg)
California Proposition 65 Warnings	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	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 (EINECS No. 215-293-2). Canada: Listed on Canadian Domestic Substance List (DSL). 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.

Continued on Next Page

Other Classifications

WHMIS (Canada)

CLASS B-3: Combustible liquid with a flash point between 37.8℃ (100℉) and 93.3℃ (200℉).
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
CLASS E: Corrosive liquid.

DSCL (EEC)

R24/25- Toxic in contact with skin and if swallowed.
R34- Causes burns.

S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.)

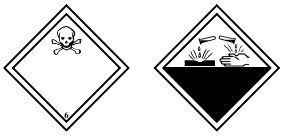
Health Hazard	3
Fire Hazard	2
Reactivity	0
Personal Protection	

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

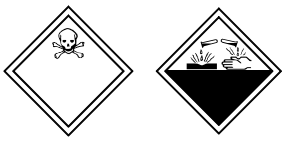
WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

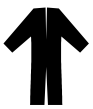


ADR (Europe) (Pictograms)



Protective Equipment

Gloves.



Full suit.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Face shield.

Continued on Next Page

Section 16. Other Information

MSDS Code	**C4770**
References	Not available.
Other Special Considerations	Major Uses: For making synthetic resins; in disinfectants and fumigants; as industrial solvent. In manufacture of tricresyl phosphate; ore flotation; textile scouring agent; organic intermediate, manufacture of salicylaldehyde, coumarin, herbicides and surfactant. Wide use in degreasing compound, paintbrush cleaners, & additives to lubricating oils. Cresol, as a mixture, is used as an ore flotation agent; as a disinfectant; and in the manufacture of synthetic resins, chemicals, dyes, and antioxidants.

Validated by Sonia Owen on 10/6/2009.	**Verified by Sonia Owen.** **Printed 10/9/2009.**

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. 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 MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.