SAFETY DATA SHEET

Issue Date 22-Apr-2015 **Revision Date** 19-Jun-2015 **Version** 2

1. IDENTIFICATION

Product identifier
Product Name ortho-Cresol

Other means of identification
Product Code 4860
UN/ID no. UN3455
Synonyms o-cresol; 2-Methylphenol

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory chemicals.
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address
Harrell Industries, Inc.
2495 Commerce Drive
Rock Hill, SC 29730

www.harrellindustries.com

Emergency telephone number
Company Phone Number 803-327-6335
Fax Number 803-327-7808
24 Hour Emergency Phone Number 800 633-8253 (PERS)

2. HAZARDS IDENTIFICATION

Classification

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

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

Danger

Hazard statements
Toxic if swallowed
Toxic in contact with skin
Fatal if inhaled
Causes severe skin burns and eye damage

For ortho-cresol: Combustible liquid and vapor; Can burn in a fire creating dense smoke. Corrosive chemical, causes burns to skin and eyes. Severe skin, eye and mucous membrane irritant, toxic chemical. Harmful if swallowed, inhaled, or absorbed. Do not breathe vapors. Do not get in eyes, on skin, or on clothing., Keep container closed. Use adequate ventilation. Wash hands thoroughly after handling.

Appearance Clear, colorless to yellow liquid **Physical state** Solid liquid **Odor** Characteristic, ethereal and phenol-like

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.
Use only outdoors or in a well-ventilated area
Wear respiratory protection

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
Vapors cause pain and irritation to eye. Splashes may cause severe irritation and possible eye damage.
Acute dermal irritation/corrosion. Causes severe burns which may not be immediately painful or visible. Repeated or prolonged contact can cause redness, irritation and scaling of the skin (dermatitis). Liver and kidney injuries may occur.
Acts as a relatively potent anesthetic. Irritates respiratory tract and causes central nervous system effects, including headache and drowsiness. Exposure to higher concentrations may result in unconsciousness and even death. May cause liver injury and blood disorders. Prolonged exposure may lead to death due to irregular heart beat and kidney and liver disorders.
Causes severe pain in the mouth and throat. Ingestion leads to burning pain in the mouth and abdominal pain, vomiting, and bloody diarrhea. Victim may go into shock. Possible delirium followed by unconsciousness. If death does not result, kidney damage may occur. Large quantities may cause symptoms similar to inhalation.

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

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Not applicable

Unknown acute toxicity 0.8% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Synonyms o-cresol; 2-Methylphenol.
Formula CH3C6H4OH

Chemical Name	CAS No.	Weight-%
o-Cresol	95-48-7	100

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician immediately.

Skin contact Immediately wash skin with soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation persists.

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

Ingestion Poison! DO NOT INDUCE VOMITING! Give glasses of water as directed by emergency medical personnel. Never give anything by mouth to an unconscious person. Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Symptoms Chronic overexposure may cause central nervous system depression and liver, kidney, pancreas, lung, and/or spleen damage.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray may be used to keep fire exposed containers cool.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
Toxic gases and vapors such as hydrogen chloride, chlorine, phosgene, and carbon monoxide may be released upon heating to decomposition. Also, intense black smoke and heat as well as hydrocarbon fragments may result during the combustion of this material.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions 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 Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal equipment.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Contain and recover liquid when possible. Collect liquid in an appropriate container or

absorb and place into an chemical waste container.

Methods for cleaning up Absorb with inert materials (e.g., vermiculite, dry sand, earth). Do not use combustible materials, such as saw dust. Do not flush to sewer!!.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep in a tightly closed container, stored in a cool, dry, ventilated area away from sources of heat, moisture, and incompatibles. Protect against physical damage. Wear special personal protective equipment for maintenance break-ins or wherever exposures may exceed established levels. Wash hands, face, forearms, and neck when exiting restricted areas. Containers of this material may be hazardous when empty since they retain product residue. Observe all warnings and precautions listed for the product. Odor threshold: 250 mg/m^3. The odor threshold only serves as a warning of exposure; not smelling does not mean you are not being exposed. Employ bonding, grounding, venting, and explosion relief provisions in accord with accepted engineering practices.

Incompatible materials Strong caustics and chemically active metals such as aluminum, magnesium powder, sodium, or potassium; acetone, fluorine, methanol, sodium methoxide and dinitrogen tetroxide, tert-butoxide, triisopropylphosphine. Strong oxidizing agents and halogens. Corrosive to any metal, including aluminum, lead, magnesium, and zinc.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
o-Cresol 95-48-7	TWA: 20 mg/m^3 inhalable fraction and vapor S*	-	IDLH: 250 ppm TWA: 2.3 ppm TWA: 10 mg/m^3

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Use chemical safety goggles and/or full face shield. Maintain eye wash fountain and quick-drench facilities in work area.

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

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid liquid		
Appearance	Clear, colorless to yellow liquid	**Odor**	Characteristic, ethereal and phenol-like
Color	Clear, colorless to yellowish	**Odor threshold**	250 m/mg3

Property	**Values**	**Remarks • Method**
pH	5.5	
Melting point / freezing point	29-31 °C / 84-88 °F	
Boiling point / boiling range	191 °C / 376 °F	
Flash point	81 °C	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	0.3 mmHg@ 20C	
Vapor density	No information available	
Relative density	1.04 @ 25C	
Water solubility	2.5g/100g water @ 20C	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	108.1
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under ordinary conditions of use and storage.
Possibility of Hazardous Reactions
None under normal processing.
Hazardous polymerization Will not occur.

Conditions to avoid
Incompatible materials.
Incompatible materials
Strong caustics and chemically active metals such as aluminum, magnesium powder, sodium, or potassium; acetone, fluorine, methanol, sodium methoxide and dinitrogen tetroxide, tert-butoxide, triisopropylphosphine. Strong oxidizing agents and halogens. Corrosive to any metal, including aluminum, lead, magnesium, and zinc.
Hazardous Decomposition Products
Hydrogen chloride. Chlorine. Phosgene. Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available

Inhalation No data available.

Eye contact No data available.

Skin contact No data available.

Ingestion No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
o-Cresol 95-48-7	= 121 mg/kg (Rat)	= 890 mg/kg (Rabbit)	> 1220 mg/m³ (Rat) 1 h

Information on toxicological effects

Symptoms No information available.

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

Sensitization
Germ cell mutagenicity
Carcinogenicity
Reproductive toxicity
STOT - single exposure
STOT - repeated exposure
Aspiration hazard

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION

This material is expected to be slightly toxic to aquatic life.

Ecotoxicity

Product is expected to undergo biodegradation at the levels anticipated in the environment.

0.8% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
o-Cresol 95-48-7	65: 96 h Pseudokirchneriella subcapitata mg/L EC50	9.72 - 15.92: 96 h Pimephales promelas mg/L LC50 flow-through 24: 96 h Brachydanio rerio mg/L LC50 11.5: 96 h Lepomis macrochirus mg/L LC50 18.37 - 24.21: 96 h Lepomis macrochirus mg/L LC50 static 8.4: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 14.07 - 23.61: 96 h Poecilia reticulata mg/L LC50 static	9.5: 48 h Daphnia magna mg/L EC50 15.8: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability

Bioaccumulation

Chemical Name	Partition coefficient
o-Cresol 95-48-7	1.95

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

Contaminated packaging Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
o-Cresol 95-48-7	-	Included in waste stream: F039 Included in waste stream: K060	200.0 mg/L regulatory level	-

14. TRANSPORT INFORMATION

DOT Regulated
- **UN/ID no.** UN3455
- **Proper shipping name** Cresols, solid
- **Hazard Class** 6.1
- **Subsidiary class** (8),
- **Packing Group** II
- **Reportable Quantity (RQ)** 100 lbs (45.4 kg)
- **Marine pollutant** This material is expected to be slightly toxic to aquatic life.

TDG Regulated
- **UN/ID no.** UN3455
- **Proper shipping name** Cresols, solid
- **Hazard Class** 6.1
- **Subsidiary class** (8),
- **Packing Group** II

MEX Regulated
- **UN/ID no.** UN3455
- **Proper shipping name** Cresols, solid
- **Hazard Class** 6.1
- **Subsidiary class** (8),
- **Packing Group** II

ICAO (air) Regulated
- **UN/ID no.** UN3455
- **Proper shipping name** Cresols, solid
- **Hazard Class** 6.1
- **Subsidiary hazard class** (8),
- **Packing Group** II

IATA Regulated
- **UN/ID no.** UN3455
- **Proper shipping name** Cresols, solid
- **Hazard Class** 6.1
- **Subsidiary hazard class** (8),
- **Packing Group** II

IMDG Regulated
- **UN/ID no.** UN3455
- **Proper shipping name** Cresols, solid
- **Hazard Class** 6.1
- **Subsidiary hazard class** (8),
- **Packing Group** II

RID Regulated
- **UN/ID no.** UN3455

Proper shipping name	Cresols, solid
Hazard Class	6.1
Packing Group	II
ADR	Regulated
UN/ID no.	UN3455
Proper shipping name	Cresols, solid
Hazard Class	6.1
Packing Group	II
ADN	Regulated
UN Number	UN3455
Proper shipping name	Cresols, solid
Hazard Class	6.1
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Chemical Name	SARA 313 - Threshold Values %
o-Cresol - 95-48-7	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
o-Cresol 95-48-7	-	-	-	X

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
o-Cresol 95-48-7	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
o-Cresol 95-48-7	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 3	**Flammability** 0	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 3	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

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Revision Note
No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet