SAFETY DATA SHEET

Creation Date 29-Apr-2010 **Revision Date** 26-Apr-2022 **Revision Number** 5

1. Identification

Product Name **o-Cresol**

Cat No. : **AC110550000; AC110550010; AC110550025; AC110550050; AC110550100; AC110551000; AC110555000**

CAS No 95-48-7
Synonyms 2-Hydroxytoluene; 2-Methylphenol

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

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

Flammable liquids	Category 4
Acute oral toxicity	Category 3
Acute dermal toxicity	Category 3
Skin Corrosion/Irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

Label Elements

Signal Word
Danger

Hazard Statements
Combustible liquid
Causes severe skin burns and eye damage
May cause respiratory irritation
Toxic if swallowed or in contact with skin

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
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep cool
Response
Immediately call a POISON CENTER or doctor/physician
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Skin
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Ingestion
Rinse mouth
Do NOT induce vomiting
Fire
In case of fire: Use CO2, dry chemical, or foam for extinction
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Harmful to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Component	CAS No	Weight %
o-Cresol	95-48-7	<=100
Phenol	108-95-2	>=0.25-<1

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give 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. If not breathing, give artificial respiration.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Most important symptoms and effects	Difficulty in breathing. Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	No information available
Flash Point	81 °C / 177.8 °F
Method -	No information available
Autoignition Temperature	555 °C / 1031 °F

Explosion Limits

Upper	No data available
Lower	1.3 vol %
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical
Combustible material. Containers may explode when heated.

Hazardous Combustion Products
Carbon monoxide (CO). Carbon dioxide (CO_2).
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. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health	Flammability	Instability	Physical hazards
3	2	1	N/A

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid dust formation. Avoid contact with skin and eyes.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment and Clean Up	Remove all sources of ignition. Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and storage

Handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Keep away from open flames, hot surfaces and sources of ignition. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

Storage.

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Corrosives area. Store under an inert atmosphere. Incompatible Materials. Strong oxidizing agents. Bases.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
o-Cresol	TWA: 20 mg/m³ Skin		IDLH: 250 ppm TWA: 2.3 ppm TWA: 10 mg/m³	TWA: 20 mg/m³
Phenol	TWA: 5 ppm Skin	(Vacated) TWA: 5 ppm (Vacated) TWA: 19 mg/m³ Skin TWA: 5 ppm TWA: 19 mg/m³	IDLH: 250 ppm TWA: 5 ppm TWA: 19 mg/m³ Ceiling: 15.6 ppm Ceiling: 60 mg/m³	TWA: 5 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Amber
Odor	phenolic
Odor Threshold	No information available
pH	4.8 2% aq. sol
Melting Point/Range	30 - 32 °C / 86 - 89.6 °F
Boiling Point/Range	191 °C / 375.8 °F @ 760 mmHg
Flash Point	81 °C / 177.8 °F
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available

Flammability or explosive limits	
Upper	No data available
Lower	1.3 vol %
Vapor Pressure	0.168 mmHg @ 20 °C
Vapor Density	Not applicable
Specific Gravity	1.040
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	555 °C / 1031 °F
Decomposition Temperature	> 450°C
Viscosity	Not applicable
Molecular Formula	C7 H8 O
Molecular Weight	108.14

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Air sensitive. Light sensitive.

Conditions to Avoid Incompatible products. Heat, flames and sparks. Avoid dust formation. Exposure to air. Exposure to light. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials Strong oxidizing agents, Bases

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
o-Cresol	LD50 = 121 mg/kg (Rat)	LD50 = 1380 mg/kg (Rabbit)	LC50 > 1220 mg/m³ (Rat) 1 h
Phenol	**Calc. ATE 60 mg/kg (Human evidence)** LD50 = 340 mg/kg (Rat) 650 mg/kg (Rat; OECD 401)	**Calc. ATE 300 mg/kg (Human evidence)** LD50 = 660 mg/kg (Rat) 850 - 1400 mg/kg (Rabbit)	**Calc. ATE 0.5 mg/l (Human evidence)** LC50 >900 mg/m³/8h (Rat)

Toxicologically Synergistic Products No information available

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

Irritation Causes burns by all exposure routes

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
o-Cresol	95-48-7	Not listed	Not listed	Not listed	Not listed	Not listed
Phenol	108-95-2	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects Not mutagenic in AMES Test

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Contains a substance which is:. Toxic to aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
o-Cresol	65 mg/L EC50 = 96 h Chronic NOEC: 1mg/L	LC50: 13 mg/L/96h (Pimephals prome) LC50: 10 mg/L/96h (Leuciscus idus)	EC50 = 22.6 mg/L 5 min EC50 = 25.9 mg/L 15 min EC50 = 26.5 mg/L 30 min	EC50: = 15.8 mg/L, 48h Static (Daphnia magna) EC50: = 9.5 mg/L, 48h (Daphnia magna)
Phenol	EC50: 187 - 279 mg/L, 72h static (Desmodesmus subspicatus) EC50: 0.0188 - 0.1044 mg/L, 96h static (Pseudokirchneriella subcapitata) EC50: = 46.42 mg/L, 96h (Pseudokirchneriella subcapitata)	4-7 mg/L LC50 96 h 32 mg/L LC50 96 h	EC50 21 - 36 mg/L 30 min EC50 = 23.28 mg/L 5 min EC50 = 25.61 mg/L 15 min EC50 = 28.8 mg/L 5 min EC50 = 31.6 mg/L 15 min	EC50: 10.2 - 15.5 mg/L, 48h (Daphnia magna) EC50: 4.24 - 10.7 mg/L, 48h Static (Daphnia magna)

Persistence and Degradability Persistence is unlikely

Bioaccumulation/ Accumulation No information available.

Mobility . Will likely be mobile in the environment due to its water solubility.

Component	log Pow
o-Cresol	1.95
Phenol	1.47

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Phenol - 108-95-2	U188	-

14. Transport information

DOT

UN-No UN3455
Proper Shipping Name CRESOLS, SOLID
Hazard Class 6.1
Subsidiary Hazard Class 8
Packing Group II

TDG

UN-No UN3455
Proper Shipping Name CRESOLS, SOLID
Hazard Class 6.1
Subsidiary Hazard Class 8
Packing Group II

IATA

UN-No UN3455
Proper Shipping Name CRESOLS, SOLID
Hazard Class 6.1
Subsidiary Hazard Class 8
Packing Group II

IMDG/IMO

UN-No UN3455
Proper Shipping Name CRESOLS, SOLID
Hazard Class 6.1
Subsidiary Hazard Class 8
Packing Group II

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
o-Cresol	95-48-7	X	ACTIVE	-
Phenol	108-95-2	X	ACTIVE	-

Legend:
TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT) Not applicable

TSCA 12(b) - Notices of Export Not applicable

International Inventories
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
o-Cresol	95-48-7	X	-	202-423-8	X	X	X	X	X	KE-24792
Phenol	108-95-2	X	-	203-632-7	X	X	X	X	X	KE-28209

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313

Component	CAS No	Weight %	SARA 313 - Threshold Values %
o-Cresol	95-48-7	<=100	1.0
Phenol	108-95-2	>=0.25-<1	1.0

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
o-Cresol	X	-	-	-
Phenol	X	1000 lb	X	X

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
o-Cresol	X		-
Phenol	X		-

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
o-Cresol	100 lb	100 lb
Phenol	1000 lb	1000 lb

California Proposition 65 This product does not contain any Proposition 65 chemicals.

Component	CAS No	California Prop. 65	Prop 65 NSRL	Category
Phenol	108-95-2	Reproductive toxin	-	Developmental

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
o-Cresol	X	X	X	X	-
Phenol	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Moderate risk, Grade 2

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
o-Cresol	95-48-7	-	Use restricted. See item 75. (see link for restriction details)	-
Phenol	108-95-2	-	Use restricted. See item 75. (see link for restriction	-

			details)	

https://echa.europa.eu/substances-restricted-under-reach

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
o-Cresol	95-48-7	Listed	Not applicable	Not applicable	Not applicable
Phenol	108-95-2	Listed	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
o-Cresol	95-48-7	Not applicable	Not applicable	Not applicable	Not applicable
Phenol	108-95-2	Not applicable	Not applicable	Not applicable	Annex I - Y39

16. Other information

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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

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 SDS