

SAFETY DATA SHEET

Creation Date 29-Apr-2010

Revision Date 26-Apr-2022

Revision Number 3

1. Identification

Product Name o-Cresol

Cat No. : A12307

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

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (866) 928-0789.

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

FireIn 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 (CO ₂), 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 (CO₂).

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
3

Flammability
2

Instability
1

Physical hazards
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/m ³ Skin		IDLH: 250 ppm TWA: 2.3 ppm TWA: 10 mg/m ³	TWA: 20 mg/m ³
Phenol	TWA: 5 ppm Skin	(Vacated) TWA: 5 ppm (Vacated) TWA: 19 mg/m ³ Skin TWA: 5 ppm TWA: 19 mg/m ³	IDLH: 250 ppm TWA: 5 ppm TWA: 19 mg/m ³ Ceiling: 15.6 ppm Ceiling: 60 mg/m ³	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/m ³ (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/m ³ /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: 1 mg/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/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDL	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)	-

			details)	
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<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

Prepared By Health, Safety and Environmental Department
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Disclaimer

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End of SDS