

SAFETY DATA SHEET

Version 6.5 Revision Date 04/23/2021 Print Date 07/01/2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Phenols Mix 1

Product Number	:	861253
Brand	:	Supelco

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company	:	Sigma-Aldrich Inc. 3050 SPRUCE ST ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Eye irritation (Category 2A), H319 Skin sensitization (Category 1), H317 Carcinogenicity (Category 2), H351 Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336 Short-term (acute) aquatic hazard (Category 2), H401 Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word

Danger

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Hazard statement(s)	
H225	Highly flammable liquid and vapor.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and
	understood.
P210	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the
	workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated
	clothing. Rinse skin with water/ shower.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable
	for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes.
	Remove contact lenses, if present and easy to do. Continue
	rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant
	foam to extinguish.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal
	plant.

Sensitizing components: 3,5-Dinitro-2-hydroxytoluene 4-Chloro-3-methylphenol-2,6-d2 May produce an allergic reaction.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Component		Classification	Concentration
2-Propanol			
CAS-No. EC-No. Index-No. Registration number	67-63-0 200-661-7 603-117-00-0 01-2119457558-25- XXXX	Flam. Liq. 2; Eye Irrit. 2A; STOT SE 3; H225, H319, H336 Concentration limits: >= 20 %: STOT SE 3, H336;	>= 90 - <= 100 %
2-chlorophenol			
CAS-No. EC-No. Index-No. Registration number	95-57-8 202-433-2 604-008-00-0 01-2120242101-78- XXXX	Flam. Liq. 4; Acute Tox. 4; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 2; Aquatic Chronic 2; H227, H302, H331, H311, H314, H318, H401, H411	>= 0.1 - < 1 %
o-cresol			
CAS-No. EC-No. Index-No.	95-48-7 202-423-8 604-004-00-9	Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 2; Aquatic Chronic 2; H301, H311, H314, H318, H401, H411	>= 0.1 - < 1 %
Pentachlorophenol			
CAS-No. EC-No. Index-No.	87-86-5 201-778-6 604-002-00-8	Acute Tox. 3; Acute Tox. 2; Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2A; Carc. 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 2; H301, H330, H311, H315, H319, H351, H335, H400, H411 M-Factor - Aquatic Acute: 10	>= 0.1 - < 1 %
2,4,5-Trichloropher	nol		
CAS-No. EC-No. Index-No.	95-95-4 202-467-8 604-017-00-X	Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 Concentration limits: >= 5 %: Eye Irrit. 2, H319; $>= 5$ %: Skin Irrit. 2, H315; M-Factor - Aquatic Acute: 10	>= 0.1 - < 1 %
Phenol			
	108-95-2	Acute Tox. 3; Skin Corr.	>= 0.1 - < 1

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EC-No.			
Index-No. Registration number	203-632-7 604-001-00-2 01-2119471329-32- XXXX	1B; Eye Dam. 1; Muta. 2; STOT RE 2; Aquatic Acute 2; Aquatic Chronic 2; H301, H331, H311, H314, H318, H341, H373, H401, H411 Concentration limits: >= 3 %: Skin Corr. 1B, H314; 1 - < 3 %: Skin Irrit. 2, H315; 1 - < 3 %: Eye Irrit. 2, H319;	%
,4-xylenol; 2,4-dir	nethvinhenol		
CAS-No.	105-67-9	Acute Tox. 3; Skin Corr.	>= 0.1 - < 1
EC-No.	203-321-6	1B; Eye Dam. 1; Aquatic	%
Index-No.	604-006-00-X	Acute 2; H301, H311, H314, H318, H401	70
,4-dichlorophenol			•
CAS-No.	120-83-2	Acute Tox. 4; Acute Tox.	>= 0.1 - < 1
EC-No.	204-429-6	3; Skin Corr. 1B; Eye	%
Index-No.	604-011-00-7	Dam. 1; Carc. 2; Aquatic	70
INGEX NO.	004 011 00 /	Acute 2; Aquatic Chronic	
		2; H302, H311, H314,	
		H318, H351, H401, H411	
4-Dinitrophenol			
CAS-No.	51-28-5	Expl. 1.1; Acute Tox. 3;	>= 0.1 - < 1
EC-No.	200-087-7	STOT RE 2; Aquatic Acute	%
Index-No.	609-041-00-4	1; H201, H301, H331,	
		H311, H373, H400	
		M-Factor - Aquatic Acute:	
		1	
,4,6,-Trichlorophe	nol	1	
, 4,6,-Trichlorophe CAS-No.	nol 88-06-2	Acute Tox. 4; Skin Irrit. 2;	>= 0.1 - < 1
		Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; Carc. 2;	>= 0.1 - < 1 %
CAS-No.	88-06-2	Eye Irrit. 2A; Carc. 2;	
CAS-No. EC-No.	88-06-2 201-795-9	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic	
CAS-No. EC-No.	88-06-2 201-795-9	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315,	
CAS-No. EC-No.	88-06-2 201-795-9	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic	
CAS-No. EC-No.	88-06-2 201-795-9	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410	
CAS-No. EC-No.	88-06-2 201-795-9	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute:	
CAS-No. EC-No.	88-06-2 201-795-9	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10	
CAS-No. EC-No. Index-No.	88-06-2 201-795-9 604-018-00-5	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic	
CAS-No. EC-No. Index-No.	88-06-2 201-795-9 604-018-00-5	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic	
CAS-No. EC-No. Index-No. ,5-Dinitro-2-hydro	88-06-2 201-795-9 604-018-00-5 xytoluene	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1	%
CAS-No. EC-No. Index-No. ,5-Dinitro-2-hydro CAS-No.	88-06-2 201-795-9 604-018-00-5 oxytoluene 534-52-1	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1 Acute Tox. 2; Acute Tox. 1; Skin Irrit. 2; Eye Dam.	%
CAS-No. EC-No. Index-No. ,5-Dinitro-2-hydro CAS-No. EC-No.	88-06-2 201-795-9 604-018-00-5 •xytoluene 534-52-1 208-601-1	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1 Acute Tox. 2; Acute Tox. 1; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Muta. 2;	%
CAS-No. EC-No. Index-No. ,5-Dinitro-2-hydro CAS-No. EC-No.	88-06-2 201-795-9 604-018-00-5 •xytoluene 534-52-1 208-601-1	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1 Acute Tox. 2; Acute Tox. 1; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Muta. 2; Aquatic Acute 1; Aquatic	%
CAS-No. EC-No. Index-No.	88-06-2 201-795-9 604-018-00-5 •xytoluene 534-52-1 208-601-1	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1 Acute Tox. 2; Acute Tox. 1; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Muta. 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330,	%
CAS-No. EC-No. Index-No. ,5-Dinitro-2-hydro CAS-No. EC-No.	88-06-2 201-795-9 604-018-00-5 •xytoluene 534-52-1 208-601-1	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1 Acute Tox. 2; Acute Tox. 1; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Muta. 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H315, H318, H317,	%
CAS-No. EC-No. Index-No. ,5-Dinitro-2-hydro CAS-No. EC-No.	88-06-2 201-795-9 604-018-00-5 •xytoluene 534-52-1 208-601-1	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1 Acute Tox. 2; Acute Tox. 1; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Muta. 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H315, H318, H317, H341, H400, H410	%
EC-No. Index-No. 5 ,5-Dinitro-2-hydro CAS-No. EC-No.	88-06-2 201-795-9 604-018-00-5 •xytoluene 534-52-1 208-601-1	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1 Acute Tox. 2; Acute Tox. 1; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Muta. 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H315, H318, H317, H341, H400, H410 M-Factor - Aquatic Acute:	%
CAS-No. EC-No. Index-No. 5 ,5-Dinitro-2-hydro CAS-No. EC-No.	88-06-2 201-795-9 604-018-00-5 •xytoluene 534-52-1 208-601-1	Eye Irrit. 2A; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H351, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1 Acute Tox. 2; Acute Tox. 1; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Muta. 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H315, H318, H317, H341, H400, H410	%

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2,3,4,6-Tetrachloro	phenol		
CAS-No. EC-No. Index-No.	58-90-2 200-402-8 604-013-00-8	Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2A; Aquatic Acute 1; Aquatic Chronic 1; H301, H311, H315, H319, H400, H410 Concentration limits: >= 5 %: Eye Irrit. 2, H319; >= 5 %: Skin Irrit. 2, H315; M-Factor - Aquatic Acute: 10	>= 0.1 - < 1 %
4-Chloro-3-methylp	henol-2,6-d2		
CAS-No. Index-No.	93951-72-5 604-014-00-3	Acute Tox. 4; Eye Dam. 1; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H312, H318, H317, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 10	>= 0.1 - < 1 %
p-cresol CAS-No. EC-No. Index-No. Registration number	106-44-5 203-398-6 604-004-00-9 01-2119448336-36- XXXX	Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 2; H301, H311, H314, H318, H401	>= 0.1 - < 1 %
meta-Cresol		1	1
CAS-No. EC-No. Index-No.	108-39-4 203-577-9 604-004-00-9	Flam. Liq. 4; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 2; Aquatic Chronic 3; H227, H301, H311, H314, H318, H401, H412	>= 0.1 - < 1 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

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In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb \mathbb{R}). Dispose of properly. Clean up affected area.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
2-Propanol	67-63-0	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Not classifia	able as a human	carcinogen
		STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen		

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		TWA	400 ppm	USA. NIOSH Recommended
		07	980 mg/m3	Exposure Limits
		ST	500 ppm 1,225 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	400 ppm 980 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	400 ppm 980 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	500 ppm 1,225 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		PEL	400 ppm 980 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		STEL	500 ppm 1,225 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
o-cresol	95-48-7	TWA	2.3 ppm 10 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	5 ppm 22 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		Skin desigr	nation	•
		TWA	20 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
			able as a humar cutaneous absor	
		TWA	5 ppm 22 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		Skin notati	on	•
		PEL	5 ppm 22 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		
Pentachlorophenol	87-86-5	TWA	0.5 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		humans	animal carcinogo cutaneous absor	en with unknown relevance to ption
		STEL	1 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		humans	animal carcinogo cutaneous absor	en with unknown relevance to
		TWA	0.5 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for	or dermal absorp	

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		TWA	0.5 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		Skin desig	nation	
		PEL	0.5 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin	-	
Phenol	108-95-2	TWA	5 ppm	USA. ACGIH Threshold Limit Values (TLV)
			iable as a huma cutaneous abso	
		TWA	5 ppm 19 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential fo	or dermal absor	
		С	15.6 ppm 60 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for	or dermal absor	
		TWA	5 ppm 19 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		Skin desig		
		PEL	5 ppm 19 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		
2,4-xylenol; 2,4- dimethylphenol	105-67-9	TWA	1 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Dermal Se Confirmed humans		gen with unknown relevance to
2,4- dichlorophenol	120-83-2	TWA	1 ppm	USA. Workplace Environmental Exposure Levels (WEEL)
		Skin		•
3,5-Dinitro-2- hydroxytoluene	534-52-1	TWA	0.2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	1	Danger of	utaneous abso	rption
		TWA	0.2 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for	or dermal absor	
		TWA	0.2 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		Skin desig		
		TWA	0.2 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		Skin notati	ion	

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		PEL	0.2 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		
p-cresol	106-44-5	TWA	2.3 ppm 10 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	5 ppm 22 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		Skin desigi	nation	
		TWA	20 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Not classifi	able as a huma	n carcinogen
		Danger of	cutaneous abso	rption
		PEL	5 ppm 22 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		
meta-Cresol	108-39-4	TWA	2.3 ppm 10 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	5 ppm 22 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		Skin desigi	nation	
		TWA	20 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
			able as a huma cutaneous abso	5
		PEL	5 ppm 22 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

Biological occupational exposure limits					
Component	CAS-No.	Parameters	Value	Biological specimen	Basis
2-Propanol	67-63-0	Acetone	40 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift a	at end of wo	orkweek	
Pentachloropheno l	87-86-5	pentachloro phenol		Urine	ACGIH - Biological Exposure Indices (BEI)
		Prior to last	shift of wor	kweek	
Phenol	108-95-2	Phenol	250mg/g Creatinin e	Urine	ACGIH - Biological Exposure Indices (BEI)
	End of shift (As soon as possible after exposure ceases)				

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8.2 Exposure controls

Appropriate engineering controls

Change contaminated clothing. Wash hands after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

required

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid
b)	Odor	No data available
c)	Odor Threshold	No data available
d)	рН	No data available
e)	Melting point/freezing point	No data available
f)	Initial boiling point and boiling range	No data available
g)	Flash point	12 °C (54 °F)
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	No data available
I)	Vapor density	No data available
m)	Relative density	No data available
n)	Water solubility	No data available
0)	Partition coefficient: n-octanol/water	No data available

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- p) Autoignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available
- 9.2 Other safety information No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

Reacts with air to form peroxides. The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions No data available

10.4 Conditions to avoid Warming.

- **10.5 Incompatible materials** Strong oxidizing agents
- **10.6 Hazardous decomposition products** In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation Mixture causes serious eye irritation.

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Respiratory or skin sensitization

Mixture may cause an allergic skin reaction.

Germ cell mutagenicity

Carcinogenicity

Evidence of a carcinogenic effect.

- IARC: 1 Group 1: Carcinogenic to humans (Pentachlorophenol)
- IARC: 2B Group 2B: Possibly carcinogenic to humans (2,4,5-Trichlorophenol)
- IARC: 2B Group 2B: Possibly carcinogenic to humans (2,4-dichlorophenol)
- IARC: 2B Group 2B: Possibly carcinogenic to humans (2,4,6,-Trichlorophenol)
- IARC: 2B Group 2B: Possibly carcinogenic to humans (2,3,4,6-Tetrachlorophenol)
- NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

Specific target organ toxicity - single exposure Mixture may cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

11.2 Additional Information

Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Kidney - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

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Components

2-Propanol

Acute toxicity

LD50 Oral - Rat - 5,840 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - male and female - 4 h - 37.5 mg/l (OECD Test Guideline 403) LD50 Dermal - Rabbit - 12,800 mg/kg Remarks: (RTECS) No data available

Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Eye irritation (OECD Test Guideline 405) (Regulation (EC) No 1272/2008, Annex VI)

Respiratory or skin sensitization

Buehler Test - Guinea pig Result: negative (OECD Test Guideline 406)

Germ cell mutagenicity

Ames test Salmonella typhimurium Result: negative In vitro mammalian cell gene mutation test Chinese hamster ovary cells Result: negative OECD Test Guideline 474 Mouse - male and female - Bone marrow Result: negative

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation, Oral - May cause drowsiness or dizziness. - Central nervous system Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Acute inhalation toxicity - Central nervous system

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

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2-chlorophenol

Acute toxicity

LD50 Oral - Rat - male and female - 2,000 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - male and female - 4 h - >= 4.77 mg/l (OECD Test Guideline 403) LD50 Dermal - Rat - male and female - 1,000 - 1,580 mg/kg Remarks: (ECHA) No data available

Skin corrosion/irritation

Skin - Rabbit Result: Causes burns. Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Causes serious eye damage. Remarks: (ECHA)

Respiratory or skin sensitization No data available

Germ cell mutagenicity

Ames test Escherichia coli/Salmonella typhimurium Result: negative Remarks: (IUCLID) Mutagenicity (mammal cell test): micronucleus. Chinese hamster lung cells Result: negative

Carcinogenicity

Reproductive toxicity No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

o-cresol

Acute toxicity

LD50 Oral - Rat - 121.0 mg/kg Remarks: Behavioral:Convulsions or effect on seizure threshold.

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Lungs, Thorax, or Respiration:Dyspnea. Gastrointestinal:Ulceration or bleeding from stomach. LC50 Inhalation - Rat - 1 h - > 1,220 mg/m3 Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Behavioral:Somnolence (general depressed activity). LD50 Dermal - Rabbit - 890.0 mg/kg No data available

Skin corrosion/irritation

Skin - Rabbit Result: Severe skin irritation - 24 h (Draize Test)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Severe eye irritation (Draize Test)

Respiratory or skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity

Reproductive toxicity No data available No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

Pentachlorophenol

Acute toxicity

LD50 Oral - Rat - 27 mg/kg Remarks: Vascular:BP elevation not charactertized in autonomic section. Endocrine:Hyperglycemia. Nutritional and Gross Metabolic:Changes in:Body temperature increase. LC50 Inhalation - 4 h - 0.051 mg/l LC50 Inhalation - Rat - 355 mg/m3 Remarks: Behavioral:Excitement. Behavioral:Muscle contraction or spasticity. Lungs, Thorax, or Respiration:Dyspnea. LD50 Dermal - Rat - 96.0 mg/kg Remarks: Behavioral:Excitement. Behavioral:Excitement. Behavioral:Muscle contraction or spasticity.

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Lungs, Thorax, or Respiration:Dyspnea. No data available

Skin corrosion/irritation

Skin - Rabbit Result: Open irritation test - 24.00 h

Serious eye damage/eye irritation Eyes - Rabbit Result: Mild eye irritation - 24.00 h

Respiratory or skin sensitization No data available

Germ cell mutagenicity

No data available

Carcinogenicity

The evidence for carcinogenicity of pentachlorophenol (PCP) is based on assays that utilized less than pure PCP. Contaminants of PCP include: tri- or tetra- chlorophenol, hexachlorobenzene, polychlorinated dibenzo-p-dioxins, or polychlorinated dibenzofurans. Indications are that positive evidence for carcinogenicity is from the contaminant(s) and not the PCP. This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

No data available Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

2,4,5-Trichlorophenol

Acute toxicity

LD50 Oral - Rat - 820.0 mg/kg Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

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Respiratory or skin sensitization No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Reproductive toxicity

No data available No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

Phenol

Acute toxicity

No data available

Inhalation: No data available

LD50 Dermal - Rat - female - 660 mg/kg (OECD Test Guideline 402) No data available

Skin corrosion/irritation

Skin - In vitro study Result: Causes burns. (OECD Test Guideline 431)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Corrosive (OECD Test Guideline 405) Causes serious eye damage. Risk of blindness!

Respiratory or skin sensitization

Sensitisation test: - Guinea pig Result: negative Remarks: (IUCLID)

Germ cell mutagenicity

Suspected of causing genetic defects.

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Mutagenicity (mammal cell test): chromosome aberration. Chinese hamster ovary cells Result: positive Mutagenicity (mammal cell test): micronucleus. Chinese hamster ovary cells Result: positive

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure. - Nervous system, Kidney, Liver, Skin

Aspiration hazard

No data available

2,4-xylenol; 2,4-dimethylphenol

Acute toxicity

LD50 Oral - Rat - 3,200 mg/kg Inhalation: No data available

LD50 Dermal - Rat - 1,040 mg/kg No data available

Skin corrosion/irritation Causes burns.

Serious eye damage/eye irritation Risk of serious damage to eyes.

Respiratory or skin sensitization No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Reproductive toxicity

No data available No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

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2,4-dichlorophenol

Acute toxicity

LD50 Oral - Mouse - male and female - 1,276 - 1,352 mg/kg (OECD Test Guideline 401) Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Inhalation: Corrosive to respiratory system.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract Inhalation: No data available

LD50 Dermal - Rat - male and female - 780 mg/kg (OECD Test Guideline 402) No data available

Skin corrosion/irritation

Skin - Rabbit Result: Causes burns. Remarks: (IUCLID) (Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization No data available

Germ cell mutagenicity

Mutagenicity (mammal cell test): chromosome aberration. Result: negative Remarks: (National Toxicology Program) Mutagenicity (mammal cell test): Result: positive Remarks: (National Toxicology Program)

Carcinogenicity

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure No data available

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

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2,4-Dinitrophenol

Acute toxicity

LDLO Oral - Human - 36.0 mg/kg Remarks: Behavioral:Coma. Cardiac: Change in rate. Nutritional and Gross Metabolic:Changes in:Body temperature increase. LD50 Oral - Rat - 30.0 mg/kg LC50 Inhalation - 4.0 h - 0.51 mg/l Inhalation: No data available

LD50 Dermal - 300.0 mg/kg Dermal: No data available

LD50 Subcutaneous - Rat - 25 mg/kg

Skin corrosion/irritation

Serious eye damage/eye irritation No data available

Respiratory or skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity

Reproductive toxicity No data available No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard No data available

2,4,6,-Trichlorophenol

Acute toxicity

LD50 Oral - Rat - 820.0 mg/kg Remarks: (RTECS) Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

Skin - Rabbit Result: Skin irritation - 24 h Remarks:

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(RTECS)

Serious eye damage/eye irritation Eyes - Rabbit Result: Severe eye irritation - 24 h Remarks: (RTECS)

Respiratory or skin sensitization No data available

Germ cell mutagenicity

Carcinogenicity Limited evidence of carcinogenicity in animal studies

Reproductive toxicity No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

3,5-Dinitro-2-hydroxytoluene

Acute toxicity

LD50 Oral - Rat - 7.0 mg/kg Remarks: (RTECS) Inhalation: No data available

LD50 Dermal - 5 mg/kg Dermal: No data available

No data available

Skin corrosion/irritation

Causes skin irritation. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Risk of serious damage to eyes. - 24 h (Draize Test) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

May cause allergic skin reaction. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Germ cell mutagenicity

Suspected of causing genetic defects.

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Carcinogenicity

Reproductive toxicity No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

2,3,4,6-Tetrachlorophenol

Acute toxicity

No data available

Inhalation: No data available

LD50 Dermal - Rabbit - 250 mg/kg No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

Respiratory or skin sensitization No data available

Germ cell mutagenicity

Hamster Lungs Remarks: Cytogenetic analysis Hamster Lungs Remarks: Mutation in mammalian somatic cells.

Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

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4-Chloro-3-methylphenol-2,6-d2

Acute toxicity

LD50 Oral - 500.1 mg/kg No data available

Inhalation: No data available

Dermal: No data available

LD50 Dermal - 1,100.0 mg/kg No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation

Respiratory or skin sensitization No data available

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity No data available No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

p-cresol

Acute toxicity

LD50 Oral - Rat - male - 207.0 mg/kg Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes. Behavioral: Convulsions or effect on seizure threshold. Gastrointestinal: Ulceration or bleeding from stomach. (ECHA) Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. LC50 Inhalation - Rat - 1 h - > 710 mg/m3 Remarks: (RTECS) LD50 Dermal - Rabbit - 301.0 mg/kg Remarks: Behavioral:Tremor. Gastrointestinal: Changes in structure or function of salivary glands. Kidney, Ureter, Bladder: Other changes.

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(ECHA) No data available

Skin corrosion/irritation

Skin - Rabbit Result: Causes burns. Remarks: (ECHA)

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Draize Test - Guinea pig Result: negative (OECD Test Guideline 406)

Germ cell mutagenicity

Ames test Salmonella typhimurium Result: negative In vitro mammalian cell gene mutation test mouse lymphoma cells Result: negative Mutagenicity (mammal cell test): chromosome aberration. Chinese hamster ovary cells Result: positive OECD Test Guideline 478 Mouse - male Result: negative

Carcinogenicity

Reproductive toxicity No data available

Specific target organ toxicity - single exposure

No data available Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Specific target organ toxicity - repeated exposure No data available

No data available

Aspiration hazard

No data available

meta-Cresol

Acute toxicity

LD50 Oral - Rat - male - 242 mg/kg (OECD Test Guideline 401) Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Inhalation: No data available

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

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Inhalation: Corrosive to respiratory system.

LD50 Dermal - Rabbit - 620 mg/kg Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Tetany. (RTECS) No data available

Skin corrosion/irritation

Skin - Rabbit Result: Causes burns. - 24 h Remarks: (ECHA) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization No data available

Germ cell mutagenicity

Ames test Escherichia coli/Salmonella typhimurium Result: negative Mutagenicity (mammal cell test): chromosome aberration. Chinese hamster lung cells Result: positive In vitro mammalian cell gene mutation test mouse lymphoma cells Result: negative OECD Test Guideline 475 Mouse - male and female - Bone marrow Result: negative

Carcinogenicity

Reproductive toxicity No data available

Specific target organ toxicity - single exposure

No data available Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

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SECTION 12: Ecological information

12.1 Toxicity

Mixture No data available

12.2 Persistence and degradability No data available

- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects No data available

Components

2-Propanol

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 9,640 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 13,299 mg/l - 48 h Remarks: (IUCLID)
Toxicity to algae	IC50 - Desmodesmus subspicatus (green algae) - > 1,000 mg/l - 72 h Remarks: (IUCLID)
Toxicity to bacteria	EC5 - Pseudomonas putida - 1,050 mg/l - 16 h Remarks: (Lit.)

2-chlorophenol

	Toxicity to fish	LC50 - Lepomis macrochirus (Bluegill) - 5.7 - 12 mg/l - 96.0 h Remarks: (ECOTOX Database)
	Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 3.91 mg/l - 48 h Remarks: (ECOTOX Database)
	Toxicity to algae	EC50 - Pseudokirchneriella subcapitata (green algae) - 70.00 mg/l - 96 h Remarks: (ECOTOX Database)
	Toxicity to bacteria	microtox test EC50 - Photobacterium phosphoreum - 6.8 mg/l - 1 h
~	1252	

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o-cresol

Toxicity to fish	LC50 - Leuciscus idus (Golden orfe) - 10.00 mg/l - 96 h
Toxicity to daphr and other aquati invertebrates	
Toxicity to algae	EC50 - SELENASTRUM - 100.00 mg/l - 72 h
Pentachlorophenol	
Toxicity to fish	LC50 - Cyprinodon variegatus (sheepshead minnow) - 0.16 - 0.5 mg/l - 96.0 h
	LC50 - Carassius auratus (goldfish) - 0.16 - 0.38 mg/l - 96.0 h
	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.075 mg/l - 96.0 h
	NOEC - other fish - 0.01 mg/l - 24.0 h
	LOEC - other fish - 0.1 mg/l - 24.0 h
Toxicity to daphr and other aquati invertebrates	
Toxicity to algae	EC50 - No information available 0.36 mg/l - 10 d
	EC50 - Chlorella vulgaris (Fresh water algae) - 10.30 mg/l - 96 h
	Growth inhibition EC50 - Scenedesmus quadricauda (Green algae) - 0.08 mg/l - 96 h
245 Trichlerenhen	

2,4,5-Trichlorophenol

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.274 mg/l - 96.0 h
	NOEC - Cyprinodon variegatus (sheepshead minnow) - 1 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - 0.9 mg/l - 48 h

Phenol

Toxicity to fish	flow-through test LC50 - Onchorhynchus clarki - 8.9 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic	static test EC50 - Ceriodaphnia dubia (water flea) - 3.1 mg/l $$ - 48 h $$

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invertebrates	(US-EPA)
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata (algae) - 61.1 mg/l - 96 h (US-EPA)
Toxicity to bacteria	static test IC50 - microorganisms - 21 mg/l - 24 h Remarks: (ECHA)

2,4-xylenol; 2,4-dimethylphenol

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 9.2 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia magna (Water flea) - 2.1 mg/l - 48 h

2,4-dichlorophenol

Toxicity to fish	LC50 - Carassius auratus (goldfish) - 1.24 mg/l - 96 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - 2.8 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata - 1.13 mg/l - 72 h (OECD Test Guideline 201)

2,4-Dinitrophenol

Toxicity to fish	LC50 - Cyprinodon variegatus (sheepshead minnow) - 13.0 - 36.3 mg/l - 96.0 h
	LC50 - Lepomis macrochirus (Bluegill) - 1.76 - 5.9 mg/l - 96.0 h
	NOEC - Cyprinodon variegatus (sheepshead minnow) - 10.0 mg/l - 96.0 h
	static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0.39 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 6.10 - 7.00 mg/l - 24 h
	LC50 - Daphnia magna (Water flea) - 4.1 mg/l - 48 h
Toxicity to algae	EC50 - Desmodesmus subspicatus (green algae) - 40.00 mg/l - 48 h
	EC50 - SELENASTRUM - 5.55 - 17.40 mg/l - 72 h

2,4,6,-Trichlorophenol

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Toxicity to fish	LC50 - Lepomis macrochirus (Bluegill sunfish) - 0.32 mg/l - 96 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 2.2 mg/l - 48 h Remarks: (ECOTOX Database)

3,5-Dinitro-2-hydroxytoluene

Toxicity to fish	LC50 - Lepomis macrochirus (Bluegill) - 0.23 mg/l - 96 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia pulex (Water flea) - 0.14 mg/l - 48 h Remarks: (ECOTOX Database)

2,3,4,6-Tetrachlorophenol

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.29 - 0.38 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia magna (Water flea) - 0.09 mg/l - 48 h

4-Chloro-3-methylphenol-2,6-d2

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.92 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 4.4 - 5.3 mg/l - 24 h

p-cresol

Toxicity to fish	static test LC50 - Salmo trutta (brown trout) - 4.4 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 7.7 mg/l - 48 h (DIN 38412)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - 21 mg/l - 48 h (DIN 38412)
Toxicity to bacteria	static test EC50 - Tetrahymena pyriformis - 157 mg/l - 48 h Remarks: (ECHA)

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meta-Cresol

Toxicity to fish	static test LC50 - Salvelinus fontinalis - 7.6 mg/l - 96 h Remarks: (ECHA)
	static test LC50 - Oncorhynchus mykiss (rainbow trout) - 8.6 mg/l - 96 h Remarks: (ECHA)
	static test LC50 - Salmo trutta (brown trout) - 8.4 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	flow-through test EC50 - Daphnia pulicaria - > 99.5 mg/l - 48 h (US-EPA)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

DOT (US)

UN number: 1219 Class: 3 Packing group: II Proper shipping name: IsopropanolSOLUTION

Reportable Quantity (RQ): 5000 lbs Reportable Quantity (RQ): 100 lbs Reportable Quantity (RQ): 10 lbs Reportable Quantity (RQ): 100 lbs Reportable Quantity (RQ): 100 lbs Poison Inhalation Hazard: No

IMDG

UN number: 1219 Class: 3 Packing group: II EMS-No: F-E, S-D Proper shipping name: ISOPROPANOLSOLUTION

ΙΑΤΑ

UN number: 1219 Class: 3 Packing group: II Proper shipping name: IsopropanolSOLUTION Supelco - 861253

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SECTION 15: Regulatory information

SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

2-Propanol	CAS-No. 67-63-0	Revision Date 2007-03-01
2-chlorophenol	95-57-8	1993-02-16
2,3,4,6-Tetrachlorophenol	58-90-2	1993-04-24
2,6-Dichlorophenol	87-65-0	2007-03-01
Pentachlorophenol	87-86-5	2007-07-01
2,4,6,-Trichlorophenol	88-06-2	2007-07-01

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Reportable Quantity	D023 lbs	
	See F027 lbs	
	D037 lbs	
	D041 lbs	
	D042 lbs	
	D025 lbs	
	D024 lbs	

Massachusetts Right To Know Components

Massachusells Right to Rhow components		
2-Propanol	CAS-No. 67-63-0	Revision Date 2007-03-01
o-cresol	95-48-7	2007-03-01
	108-95-2	2007-07-01
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Phenol

2,4,6,-Trichlorophenol	88-06-2	2007-07-01
3,5-Dinitro-2-hydroxytoluene	534-52-1	2007-07-01

No components are subject to the Massachusetts Right to Know Act.

	-	
Pennsylvania Right To Know Components 2-Propanol	CAS-No. 67-63-0	Revision Date 2007-03-01
2-chlorophenol	95-57-8	1993-02-16
o-cresol	95-48-7	2007-03-01
Pentachlorophenol	87-86-5	2007-07-01
4-Nitrophenol	100-02-7	2007-07-01
2,4,5-Trichlorophenol	95-95-4	2011-07-01
Phenol	108-95-2	2007-07-01
2,4-xylenol; 2,4-dimethylphenol	105-67-9	2007-07-01
2,4-dichlorophenol	120-83-2	2011-07-01
2-nitrophenol	88-75-5	2007-07-01
2,4-Dinitrophenol	51-28-5	2007-07-01
2,4,6,-Trichlorophenol	88-06-2	2007-07-01
3,5-Dinitro-2-hydroxytoluene	534-52-1	2007-07-01
2,3,4,6-Tetrachlorophenol	58-90-2	1993-04-24
4-Chloro-3-methylphenol-2,6-d2	93951-72-5	1993-02-16
2,6-Dichlorophenol	87-65-0	2007-03-01
p-cresol	106-44-5	2007-07-01
meta-Cresol	108-39-4	2007-03-01
New Jersey Right To Know Components		
2-Propanol	CAS-No. 67-63-0	Revision Date 2007-03-01
o-cresol	95-48-7	2007-03-01
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Pentachlorophenol	87-86-5	2007-07-01
2,4,5-Trichlorophenol	95-95-4	2011-07-01
Phenol	108-95-2	2007-07-01
2,4-dichlorophenol	120-83-2	2011-07-01
2,4,6,-Trichlorophenol	88-06-2	2007-07-01
2,3,4,6-Tetrachlorophenol	58-90-2	1993-04-24
p-cresol	106-44-5	2007-07-01
meta-Cresol	108-39-4	2007-03-01

SECTION 16: Other information

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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