Safety Data Sheet

14 Mix phenols in isopropanol

Version：V2.0.0.1
Report No.：BWQ9812-2016-MSDS-EP
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*Prepared in accordance with EU REACH Regulation (REACH 1907/2006 with amendment 2020/878)

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

1.1 Product identifier

Product Name	14 Mix phenols in isopropanol
Cat No.	BWQ9812-2016
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable
REACH Registration Number	-
UFI	No information available

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

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

1.3 Details of the supplier of the Safety Data Sheet

Name of the company	Weiyel Inc
Address of the company	Hedian Light Industrial Park, Chengguan Town, Shangcheng County, Xinyang City, Henan Province, China
Post code	465350
Telephone number	010-58103678
Fax number	010-84840368
E-mail address	info@weiyel.com

1.4 Emergency telephone number

Emergency telephone number	010-58103678
Opening hours	24h

2 Hazards identification

2.1 CLP classification according to Regulation (EC) No. 1272/2008 with amendment 2023/707

Flammable liquids	Category 2
Serious eye damage/irritation	Category 2
Specific target organ toxicity - single exposure; narcotic effects	Category 3

2.2 Label elements

Hazard pictograms	
Signal word	Danger

Hazard statements

H225	Highly flammable liquid and vapour
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

Precautionary statements

- Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing gas/mist/vapour/spray.
P264	Wash hands and other parts of the body (if related) thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

- Response

P312	Call a POISON CENTRE/ doctor/… if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	Small fire: dry chemical, CO_2 or alcohol-resistant foam; Large fire: alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.

- Disposal

P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

2.3 Other hazards

- Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Phenol	Not PBT/vPvB
2-chlorophenol	Not PBT/vPvB
o-cresol	Insufficient information, temporarily unable to evaluate
m-cresol	Not PBT/vPvB
p-cresol	Not PBT/vPvB
2,4-xylenol	Insufficient information, temporarily unable to evaluate
2,4-dichlorophenol	Insufficient information, temporarily unable to evaluate
4-chlorophenol	Insufficient information, temporarily unable to evaluate
2,6-dichlorophenol	Insufficient information, temporarily unable to evaluate
2,4,6-trichlorophenol	Insufficient information, temporarily unable to evaluate
2,4,5-trichlorophenol	Insufficient information, temporarily unable to evaluate
4-nitrophenol	Insufficient information, temporarily unable to evaluate
2,3,4,6-tetrachlorophenol	Insufficient information, temporarily unable to evaluate
Pentachlorophenol	Insufficient information, temporarily unable to evaluate
Propan-2-ol	Not PBT/vPvB

◆ Results of endocrine disrupting properties assessment

Component	Results of endocrine disrupting properties assessment [according to (EU) No 2017/2100 or (EU) No 2018/605]
Phenol	Insufficient information, temporarily unable to evaluate
2-chlorophenol	Insufficient information, temporarily unable to evaluate
o-cresol	Insufficient information, temporarily unable to evaluate
m-cresol	Insufficient information, temporarily unable to evaluate
p-cresol	not ED
2,4-xylenol	Insufficient information, temporarily unable to evaluate
2,4-dichlorophenol	Insufficient information, temporarily unable to evaluate
4-chlorophenol	Insufficient information, temporarily unable to evaluate
2,6-dichlorophenol	Insufficient information, temporarily unable to evaluate
2,4,6-trichlorophenol	Insufficient information, temporarily unable to evaluate
2,4,5-trichlorophenol	Insufficient information, temporarily unable to evaluate
4-nitrophenol	Insufficient information, temporarily unable to evaluate
2,3,4,6-tetrachlorophenol	Insufficient information, temporarily unable to evaluate
Pentachlorophenol	Insufficient information, temporarily unable to evaluate
Propan-2-ol	Insufficient information, temporarily unable to evaluate

◆ Other

	Not applicable.

3 Composition/information on ingredients

3.1 Substance

	Not applicable

3.2 Mixture

Component	Weight % content(or range)	Classification according to Regulation (EC) No. 1272/2008 with amendment 2023/707 [CLP]	Specific Conc. Limits, M-factors
Phenol CAS : 108-95-2 EC : 203-632-7 Index No. : 604-001-00-2	0.00000507	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 3, H311; Skin corrosion/irritation, Category 1B, H314; Acute Toxicity - Inhalation, Category 3, H331; Germ cell mutagenicity, Category 2, H341; Specific target organ toxicity - repeated exposure, Category 2, H373	H314B:C ≥ 3%|H315:1% ≤ C < 3%|H319:1% ≤ C < 3%
2-chlorophenol CAS : 95-57-8 EC : 202-433-2 Index No. : 604-008-00-0	0.00000506	Acute Toxicity - Oral, Category 4, H302; Acute Toxicity - Dermal, Category 4, H312; Acute Toxicity - Inhalation, Category 4, H332; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
o-cresol CAS : 95-48-7 EC : 202-423-8 Index No. : 604-004-00-9	0.00000508	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 3, H311; Skin corrosion/irritation, Category 1B, H314	-
m-cresol CAS : 108-39-4 EC : 203-577-9 Index No. : 604-004-00-9	0.00000507	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 3, H311; Skin corrosion/irritation, Category 1B, H314	-
p-cresol CAS : 106-44-5 EC : 203-398-6 Index No. : 604-004-00-9	0.00000507	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 3, H311; Skin corrosion/irritation, Category 1B, H314	-
2,4-xylenol CAS : 105-67-9 EC : 203-321-6 Index No. : 604-006-00-X	0.00000508	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 3, H311; Skin corrosion/irritation, Category 1B, H314; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
2,4-dichlorophenol CAS : 120-83-2 EC : 204-429-6 Index No. : 604-011-00-7	0.00000504	Acute Toxicity - Oral, Category 4, H302; Acute Toxicity - Dermal, Category 3, H311; Skin corrosion/irritation, Category 1B, H314; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
4-chlorophenol CAS : 106-48-9 EC : 203-402-6 Index No. : 604-008-00-0	0.00000493	Acute Toxicity - Oral, Category 4, H302; Acute Toxicity - Dermal, Category 4, H312; Acute Toxicity - Inhalation, Category 4, H332; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
2,6-dichlorophenol CAS : 87-65-0 EC : 201-761-3 Index No. : -	0.00000503	Skin corrosion/irritation, Category 1B, H314	-
2,4,6-trichlorophenol CAS : 88-06-2 EC : 201-795-9 Index No. : 604-018-00-5	0.00000499	Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - short-term (acute)	-

		hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	
2,4,5-trichlorophenol CAS : 95-95-4 EC : 202-467-8 Index No. : 604-017-00-X	0.00000497	Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	H319:C ≥ 5%|H315:C ≥ 5%
4-nitrophenol CAS : 100-02-7 EC : 202-811-7 Index No. : 609-015-00-2	0.00000496	Acute Toxicity - Oral, Category 4, H302; Acute Toxicity - Dermal, Category 4, H312; Acute Toxicity - Inhalation, Category 4, H332; Specific target organ toxicity - repeated exposure, Category 2, H373	-
2,3,4,6-tetrachlorophenol CAS : 58-90-2 EC : 200-402-8 Index No. : 604-013-00-8	0.00000499	Acute Toxicity - Oral, Category 3, H301; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	H319:C ≥ 5%|H315:C ≥ 5%
Pentachlorophenol CAS : 87-86-5 EC : 201-778-6 Index No. : 604-002-00-8	0.00000484	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 3, H311; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Acute Toxicity - Inhalation, Category 2, H330; Specific target organ toxicity - single exposure; respiratory tract irritation, Category 3, H335; Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Propan-2-ol CAS : 67-63-0 EC : 200-661-7 Index No. : 603-117-00-0	99.99992982	Flammable liquids, Category 2, H225; Serious eye damage/irritation, Category 2, H319; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336	-

4 First-aid measures

4.1 Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Ingestion	Rinse mouth. Do NOT induce vomiting. Rest. Refer for medical attention.
Inhalation	Fresh air, rest. Refer for medical attention.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

4.2 Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

4.3 Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Small fire: dry chemical, CO_2 or alcohol-resistant foam; Large fire: alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out.
Unsuitable extinguishing media	Use of water spray when fighting fire may be inefficient.

5.2 Specific hazards arising from the substance or mixture

1	Will form explosive mixtures with air.
2	Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/ or vapour concentration.
3	Vapours may travel to source of ignition and flash back.
4	Liquid and vapour are flammable.
5	Development of hazardous combustion gases or vapor possible in the event of fire.
6	May expansion or decompose explosively when heated or involved in fire.

5.3 Advice for firefighters

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

1	Avoid breathing vapours and contacting with skin and eye.
2	Beware of vapours accumulating to form explosive concentrations.
3	Vapours can accumulate in low areas.
4	Emergency personnel wear positive pressure self-contained breathing apparatus. Wear protective and anti-static clothing. Wear chemical impermeable gloves.
5	Use personal protective equipment,do not breathe gas/mist/vapour/spray.
6	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
7	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

1	It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and

	wear anti-static clothing.
2	In case of small amount of spillage, use clean non sparking tools to collect absorption materials.
3	In case of large amount of spillage, construct cofferdam or dig a hole to collect the spillage. Use foam cover to reduce evaporation. Water spray mist can reduce evaporation, but can not reduce the flammability of the leakage in the restricted space.
4	Collect absorbent material using a clean, non-sparking tool.
5	Cover with anti-solvent foam to reduce evaporation.
6	Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
7	Water spray reduces evaporation but does not reduce the flammability of spills in confined spaces.
8	Cut off the source of the leak as much as possible.
9	Keep leaks in a ventilated place.
10	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
11	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
12	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.
13	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

6.4 Reference to other sections

1	Personal Protective Equipment advice is contained in Section 8 of the SDS.
2	Disposal considerations advice is contained in Section 13 of the SDS.

7 Handling and storage

7.1 Precautions for safe handling

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.

◆ Measures to prevent fire

1	Use only non-sparking tools.
2	To prevent fire caused by electrostatic discharge steam, equipment on all metal parts should be grounded.
3	Use explosion proof equipment.
4	Keep away from heat/sparks/open flames/ hot surfaces.

◆ Measures to prevent aerosol and dust generation

1	Not applicable.

◆ Advice on general occupational hygiene

1	Wash hands and face after using the substances.
2	Replace the contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

7.3 Specific end use(s)

1	In addition to use mentioned in the Section 1.2, unforeseen other specific end uses.

8 Exposure controls/personal protection

8.1 Control parameters

◆Occupational exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m³	ppm	mg/m³
Phenol	Japan - JSOH(2024–2025)	5	19	-	-
	Permissible exposure standards for workers in the workplace	5	19	10	28.5
	European Union	2	8	4	16
	France	2	7.8	4	15.6
	Germany (AGS)	2	8	4	16
	Italy	2	8	4	16
2-chlorophenol	Denmark	-	0.5	-	1
	Romania	-	-	-	10
o-cresol	Permissible exposure standards for workers in the workplace	5	22	10	33
	France	5	22	-	-
	Germany (AGS)	1	4.5	1	4.5
	Germany (DFG)	1	4.5	1	4.5
	United Kingdom	5	22	-	-
	Austria	5	22	10	44
m-cresol	Permissible exposure standards for workers in the workplace	5	22	10	33
	France	5	22	-	-
	Germany (AGS)	1	4.5	1	4.5
	Germany (DFG)	1	4.5	1	4.5
	United Kingdom	5	22	-	-
	Austria	5	22	10	44

p-cresol	Permissible exposure standards for workers in the workplace	5	22	10	33
	Germany (AGS)	1	4.5	1	4.5
	Germany (DFG)	1	4.5	1	4.5
	United Kingdom	5	22	-	-
	Austria	5	22	10	44
	Belgium	2.3	10	-	-
2,4-xylenol	USA - ACGIH	1(inhalable fraction and vapor)	-	-	-
4-chlorophenol	Denmark	-	0.5	-	1
	Latvia	-	1	-	-
	Poland	-	0.5	-	1.5
2,4,6-trichlorophenol	Denmark	-	0.5	-	1
	Sweden	-	0.5	-	1.5
2,4,5-trichlorophenol	Austria	0.012	0.1	0.048	0.4
	Denmark	-	0.5	-	1
	Sweden	-	0.5	-	1.5
2,3,4,6-tetrachlorophenol	Finland	-	0.5	-	1.5
Pentachlorophenol	Japan - JSOH(2024–2025)	-	0.5	-	-
	Permissible exposure standards for workers in the workplace	-	0.5	-	1.5
	France	-	0.5	-	-
	United Kingdom	-	-	-	1.5
	Belgium	-	0.05	-	-
	Denmark	0.005	0.05	0.01	0.1
Propan-2-ol	Japan - JSOH(2024–2025)	-	-	-	-
	Permissible exposure standards for workers in the workplace	400	983	500	1228.75
	France	-	-	400	980
	Germany (AGS)	200	500	400	1000
	Germany (DFG)	200	500	400	1000
	United Kingdom	400	999	500	1250

◆ Biological limit values

Component	Standard	Biological monitoring index	Biological limits value	Sampling time	Remark
Phenol	SCOEL(EU)	phenol/urine	120mg/g creatinine	Not strictly regulated	
		Phenol with hydrolysis(Creatinine in urine)	250mg/g	End of shift	
Pentachlorophenol	USA -ACGIH	Pentachlorophenol with hydrolysis(Urine)	Nonquantitative	Prior to last shift of work week	
Propan-2-ol	USA -ACGIH	Acetone(Urine)	40mg/L	End of shift at end of work week	

◆ Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 300 and GBZ/T 160 series standard Determination of toxic substances in workplace air.

◆ Derived No effect level (DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Phenol	Inhalation	No data available	No data available	No data available	8 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
2-chlorophenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
o-cresol	Inhalation	No data available	No data available	No data available	2.47 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
m-cresol	Inhalation	No data available	No data available	No data available	2.47 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
p-cresol	Inhalation	No data available	No data available	No data available	2.47 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
2,4-xylenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
2,4-dichlorophenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

4-chlorophenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
2,6-dichlorophenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
2,4,6-trichlorophenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
2,4,5-trichlorophenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
4-nitrophenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
2,3,4,6-tetrachlorophenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Pentachlorophenol	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Propan-2-ol	Inhalation	No data available	No data available	No data available	500 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

◆ Predicted No Effect Concentration (PNEC)

Component	A	B	C	D	E	F	G	H
Phenol	7.7 µg/L	770 ng/L	2.1 mg/L	91.5 µg/kg sediment dw	9.15 µg/kg sediment dw	No hazard identified	136 µg/kg soil dw	No potential for bioaccumulation
o-cresol	100 µg/L	10 µg/L	1.28 mg/L	580 µg/kg sediment dw	58 µg/kg sediment dw	No hazard identified	57.2 µg/kg soil dw	No potential for bioaccumulation
m-cresol	100 µg/L	10 µg/L	1.14 mg/L	710 µg/kg sediment dw	71 µg/kg sediment dw	No hazard identified	83.1 µg/kg soil dw	No potential for bioaccumulation
p-cresol	100 µg/L	10 µg/L	1.65 mg/L	850 µg/kg sediment dw	85 µg/kg sediment dw	No hazard identified	111 µg/kg soil dw	No potential for bioaccum

								ulation
Propan-2-ol	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No potential for bioaccumulation

Note 1:

A: Freshwater; B: Seawater; C: Sewage treatment plant; D: Sediment (freshwater); E: Sediment (seawater); F: Air; G: Soil; H: Secondary poisoning(Hazard for Predators).

Note 2:

The PNEC values of the remaining components not shown in the product are not available yet.

8.2 Exposure controls

8.2.1 Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

8.2.2 Personal protection equipment

General requirement	
Eye protection	Must wear appropriate safety goggles.
Hand protection	Must wear anti static chemical protective gloves.
Respiratory protection	Must wear appropriate personal respiratory protective equipment.
Skin and body protection	Must wear anti static chemical protective clothing and anti static shoes.

8.2.3 Environmental exposure controls

Environmental exposure controls	No information available

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	bright yellow to pale yellow transparent liquid
Colour	bright yellow to pale yellow transparent liquid
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	-90 (Propan-2-ol)
Initial boiling point and boiling range(°C)	83 (Propan-2-ol)
Flash point(Closed cup,°C)	11.7 (Propan-2-ol)
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit : 12 (Propan-2-ol) ; Lower limit : 2 (Propan-2-ol)

Vapor pressure	4.4kPa (20°C ,Propan-2-ol)
Vapor density(Air = 1)	2.1 (Propan-2-ol)
Relative density(Water=1)	0.79 (20°C,Propan-2-ol)
Solubility	Miscible with water (Propan-2-ol)
n-octanol/water partition coefficient	0.05 (Propan-2-ol)
Auto-ignition temperature(°C)	456 (Propan-2-ol)
Decomposition temperature(°C)	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Particle characteristics	Not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Information with regard to physical hazard classes	No information available

9.2.2 Other safety characteristics

Other safety characteristics	No information available

10 Stability and reactivity

Stability and reactivity

10.1 Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
10.2 Chemical stability	Stable under proper operation and storage conditions.
10.3 Possibility of hazardous reactions	In contact with mixtures of aluminium trichloride and nitro-compounds causes a severe explosion. In contact with ammonia, strong inorganic alkalis, active metals, alkali carbonates, metal oxides or metal alkaoxides may result in an explosion. In contact with oxidants causes severe reactions, and may cause a fire or explosion.
10.4 Conditions to avoid	Incompatible materials, heat, flame and spark.
10.5 Incompatible materials	Aluminium trichloride, strong oxidants, nitrate, nitrite and oxygen-halogen salts. Ammonia, strong inorganic alkalis, active metal, alkali metal carbonates, metal oxides, metal alkaoxides, and nitric acid. Oxidants, alkali metals, alkaline earth metals and aluminum.
10.6 Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 with amendment 2023/707

14 Mix phenols in isopropanol	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Causes serious eye irritation(Category 2)
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met

STOT-single exposure	May cause drowsiness or dizziness(Category 3)
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

Acute toxicity

Component	LD_{50}(oral)	LD_{50}(dermal)	LC_{50}(inhalation,4h)
o-cresol	121mg/kg(Rat)	890mg/kg(Rabbit)	No information available
m-cresol	242mg/kg(Rat)	2050mg/kg(Rabbit)	No information available
2-chlorophenol	40mg/kg(Rat)	No information available	No information available
Propan-2-ol	5045mg/kg(Rat)	12800mg/kg(Rabbit)	No information available
2,4-xylenol	3200mg/kg(Rat)	1040mg/kg(Rat)	No information available
2,4,5-trichlorophenol	820mg/kg(Rat)	No information available	No information available
Pentachlorophenol	80mg/kg(Rat)	80mg/kg(Rat)	No information available
Phenol	317mg/kg(Rat)	630mg/kg(Rabbit)	No information available
p-cresol	207mg/kg(Rat)	301mg/kg(Rabbit)	No information available
4-nitrophenol	202mg/kg(Rat)	1024mg/kg(Rat)	No information available
4-chlorophenol	670mg/kg(Rat)	1500mg/kg(Rat)	No information available
2,4,6-trichlorophenol	820mg/kg(Rat)	No information available	No information available
2,4-dichlorophenol	47mg/kg(Rat)	No information available	No information available
2,3,4,6-tetrachlorophenol	140mg/kg(Rat)	250mg/kg(Rabbit)	No information available
2,6-dichlorophenol	2120mg/kg(Mouse)	No information available	No information available

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Phenol	Category 3	Not Listed
2-chlorophenol	Not Listed	Not Listed
o-cresol	Not Listed	Not Listed
m-cresol	Not Listed	Not Listed
p-cresol	Not Listed	Not Listed
2,4-xylenol	Not Listed	Not Listed
2,4-dichlorophenol	Not Listed	Not Listed
4-chlorophenol	Not Listed	Not Listed
2,6-dichlorophenol	Not Listed	Not Listed
2,4,6-trichlorophenol	Category 2B	Category R
2,4,5-trichlorophenol	Not Listed	Not Listed
4-nitrophenol	Not Listed	Not Listed
2,3,4,6-tetrachlorophenol	Not Listed	Not Listed

Pentachlorophenol	Category 1	Category R
Propan-2-ol	Category 3	Not Listed

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Component	Endocrine disrupting properties
Phenol	No information available
2-chlorophenol	No information available
o-cresol	No information available
m-cresol	No information available
p-cresol	Existing research data indicates that this substance is not a reproductive or developmental toxicant, nor does it possess potential endocrine-disrupting properties; therefore, it is not considered a human endocrine disruptor.
2,4-xylenol	No information available
2,4-dichlorophenol	No information available
4-chlorophenol	No information available
2,6-dichlorophenol	No information available
2,4,6-trichlorophenol	No information available
2,4,5-trichlorophenol	No information available
4-nitrophenol	No information available
2,3,4,6-tetrachlorophenol	No information available
Pentachlorophenol	No information available
Propan-2-ol	No information available

11.2.2 Other Information

Other Information	See Section 11.1

12 Ecological information

12.1 Toxicity

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
o-cresol	LC_{50} : 6.2mg/L (96h)(Fish)	EC_{50} : 15.8mg/L (48h)(Crustaceans)	ErC_{50} : 100mg/L (96h)(Algae)
m-cresol	LC_{50} : 7.6mg/L (96h)(Fish)	No information available	No information available
2-chlorophenol	LC_{50} : 10.7mg/L (96h)(Fish)	EC_{50} : 2.6mg/L (48h)(Crustaceans)	ErC_{50} : 120mg/L (96h)(Algae)
Propan-2-ol	LC_{50} : 9640mg/L (96h)(Fish)	EC_{50} : >1000mg/L (48h)(Crustaceans)	ErC_{50} : >1000mg/L (72h)(Algae)
2,4-xylenol	LC_{50} : 16mg/L (96h)(Fish)	EC_{50} : 4.2mg/L (48h)(Crustaceans)	ErC_{50} : 9.7mg/L (72h)(Algae)
2,4,5-trichlorophenol	LC_{50} : 1.5mg/L (96h)(Fish)	EC_{50} : 0.98mg/L	ErC_{50} : 1.26mg/L

		(48h)(Crustaceans)	(96h)(Algae)
Pentachlorophenol	LC_{50}：0.19mg/L (96h)(Fish)	EC_{50}：0.11mg/L (48h)(Crustaceans)	ErC_{50}：0.4mg/L (96h)(Algae)
Phenol	LC_{50}：20.5mg/L (96h)(Fish)	EC_{50}：15mg/L (48h)(Crustaceans)	ErC_{50}：84.5mg/L (96h)(Algae)
p-cresol	LC_{50}：14mg/L (96h)(Fish)	EC_{50}：7.0mg/L (48h)(Crustaceans)	ErC_{50}：52mg/L (72h)(Algae)
4-nitrophenol	LC_{50}：28mg/L (96h)(Fish)	EC_{50}：8.04mg/L (48h)(Crustaceans)	ErC_{50}：4.89mg/L (96h)(Algae)
4-chlorophenol	LC_{50}：8.9mg/L (96h)(Fish)	EC_{50}：2.5mg/L (48h)(Crustaceans)	ErC_{50}：10mg/L (72h)(Algae)
2,4,6-trichlorophenol	LC_{50}：2.26mg/L (96h)(Fish)	EC_{50}：3.67mg/L (48h)(Crustaceans)	ErC_{50}：7.8mg/L (96h)(Algae)
2,4-dichlorophenol	LC_{50}：3.4mg/L (96h)(Fish)	EC_{50}：2.2mg/L (48h)(Crustaceans)	ErC_{50}：4.8mg/L (72h)(Algae)
2,3,4,6-tetrachlorophenol	LC_{50}：0.56mg/L (96h)(Fish)	EC_{50}：1.4mg/L (48h)(Crustaceans)	ErC_{50}：2.1mg/L (72h)(Algae)
2,6-dichlorophenol	LC_{50}：6.4mg/L (96h)(Fish)	EC_{50}：3.4mg/L (48h)(Crustaceans)	ErC_{50}：19.4mg/L (96h)(Algae)

Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
2,4,5-trichlorophenol	No information available	NOEC：0.11mg/L(Crustaceans)	NOEC：0.53mg/L(Algae)
Pentachlorophenol	NOEC：0.039mg/L(Fish)	NOEC：0.046mg/L(Crustaceans)	NOEC：0.10mg/L(Algae)
Phenol	No information available	NOEC：1.2mg/L(Crustaceans)	NOEC：25mg/L(Algae)
p-cresol	No information available	NOEC：0.52mg/L(Crustaceans)	NOEC：9.5mg/L(Algae)
Propan-2-ol	NOEC：＞100mg/L(Fish)	NOEC：>100mg/L(Crustaceans)	NOEC：1000mg/L(Algae)
4-chlorophenol	No information available	NOEC：0.19mg/L(Crustaceans)	NOEC：1.7mg/L(Algae)
2,4-dichlorophenol	No information available	NOEC：0.052mg/L(Crustaceans)	NOEC：0.67mg/L(Algae)
2,4-xylenol	No information available	NOEC：0.27mg/L(Crustaceans)	NOEC：1.8mg/L(Algae)
2,3,4,6-tetrachlorophenol	No information available	NOEC：0.18mg/L(Crustaceans)	NOEC：0.63mg/L(Algae)

12.2 Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
2-chlorophenol	High	High
o-cresol	Low(Half-life = 14 days)	Low(Half-life = 0.67 days)
m-cresol	Low(Half-life = 49 days)	Low(Half-life = 0.47 days)
p-cresol	Low(Half-life = 28 days)	Low(Half-life = 0.63 days)
2,4-xylenol	Low(Half-life = 14 days)	Low(Half-life = 0.5 days)

2,4-dichlorophenol	Media(Half-life = 70 days)	Low(Half-life = 8.83 days)
4-chlorophenol	High	High
2,6-dichlorophenol	High	High
2,4,6-trichlorophenol	High(Half-life = 1820.42 days)	Low(Half-life = 51.42 days)
2,4,5-trichlorophenol	High(Half-life = 1820.42 days)	Low(Half-life = 12.54 days)
4-nitrophenol	Low(Half-life = 9.79 days)	Low(Half-life = 6.04 days)
2,3,4,6-tetrachlorophenol	High(Half-life = 360 days)	Medium(Half-life = 151.83 days)
Pentachlorophenol	High(Half-life = 1535 days)	Low(Half-life = 58 days)

12.3 Bioaccumulative potential

Component	Bioaccumulative potential	Comments
2-chlorophenol	Low	BCF=214
o-cresol	Low	Log Kow=1.95
m-cresol	Low	Log Kow=1.96
p-cresol	Low	Log Kow=1.94
2,4-xylenol	Low	Log Kow=2.3
2,4-dichlorophenol	Low	BCF=69
4-chlorophenol	Low	BCF=52
2,6-dichlorophenol	Low	BCF=20
2,4,6-trichlorophenol	High	BCF=12130
2,4,5-trichlorophenol	Medium	BCF=825
4-nitrophenol	Low	BCF=280
2,3,4,6-tetrachlorophenol	Low	BCF=95
Pentachlorophenol	Low	BCF=198

12.4 Mobility in soil

Component	log Koc	Remark
Phenol	1.92	20 ℃
2-chlorophenol	2.647	
o-cresol	1.342	20 ℃
m-cresol	1.544	
p-cresol	1.69	20 ℃
2,4-xylenol	2.856	
2,4-dichlorophenol	2.856	
4-chlorophenol	2.637	
2,6-dichlorophenol	2.865	
2,4,6-trichlorophenol	3.074	
2,4,5-trichlorophenol	3.074	

4-nitrophenol	2.490	
2,3,4,6-tetrachlorophenol	3.301	
Pentachlorophenol	3.529	
Propan-2-ol	0.54	20 ℃

12.5 Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Phenol	Not PBT/vPvB
2-chlorophenol	Not PBT/vPvB
o-cresol	Insufficient information, temporarily unable to evaluate
m-cresol	Not PBT/vPvB
p-cresol	Not PBT/vPvB
2,4-xylenol	Insufficient information, temporarily unable to evaluate
2,4-dichlorophenol	Insufficient information, temporarily unable to evaluate
4-chlorophenol	Insufficient information, temporarily unable to evaluate
2,6-dichlorophenol	Insufficient information, temporarily unable to evaluate
2,4,6-trichlorophenol	Insufficient information, temporarily unable to evaluate
2,4,5-trichlorophenol	Insufficient information, temporarily unable to evaluate
4-nitrophenol	Insufficient information, temporarily unable to evaluate
2,3,4,6-tetrachlorophenol	Insufficient information, temporarily unable to evaluate
Pentachlorophenol	Insufficient information, temporarily unable to evaluate
Propan-2-ol	Not PBT/vPvB

12.6 Endocrine disrupting properties

Component	Endocrine disrupting properties
Phenol	No information available
2-chlorophenol	No information available
o-cresol	No information available
m-cresol	No information available
p-cresol	Existing research data indicates that this substance is not a reproductive or developmental toxicant, nor does it possess potential endocrine-disrupting properties; therefore, it is not considered an environmental endocrine disruptor.
2,4-xylenol	No information available
2,4-dichlorophenol	No information available
4-chlorophenol	No information available
2,6-dichlorophenol	No information available
2,4,6-trichlorophenol	No information available
2,4,5-trichlorophenol	No information available
4-nitrophenol	No information available

2,3,4,6-tetrachlorophenol	No information available
Pentachlorophenol	No information available
Propan-2-ol	No information available

12.7 Other adverse effects

	No information available

13 Disposal considerations

13.1 Waste treatment methods

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label	

IMDG-CODE

14.1 UN number	1219
14.2 UN proper shipping name	ISOPROPANOL(ISOPROPYL ALCOHOL)
14.3 Transport hazard class	3
14.4 Packing group	Ⅱ
14.5 Environmental hazards (Yes or no)	No

IATA-DGR

14.1 UN number	1219
14.2 UN proper shipping name	ISOPROPANOL (ISOPROPYL ALCOHOL)
14.3 Transport hazard class	3
14.4 Packing group	Ⅱ
14.5 Environmental hazards (Yes or no)	No

UN-ADR

14.1 UN number	1219
14.2 UN proper shipping name	ISOPROPANOL(ISOPROPYL ALCOHOL)
14.3 Transport hazard class	3
14.4 Packing group	Ⅱ
14.5 Environmental hazards (Yes or no)	No

Special precautions for user

	Shipment of the goods vehicle exhaust pipe must be equipped with fire retardant devices, prohibit using mechanical equipment and tools of which easy to produce sparks. Transit should be anti-exposure, anti-rain, anti-high temperature. Transportation used tank (tank) cars should be grounded chain, tank can be installed to reduce the partition hole static electricity shocks. Strictly prohibited shipping or transportation with oxidants, acids, food and food additives etc. When bulk transport, Prohibit the use of cement or wooden boats. Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

Maritime transport in bulk according to IMO instruments

◆Transport in bulk according to Annex II of MARPOL and the IBC code

	Not Available

◆Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

	Not Available

◆Transport in bulk in accordance with the IGC Code

	Not Available

15 Regulatory information

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

International chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M
Phenol	√	√	√	√	√	√	√	√	√	√	√	√	√
2-chlorophenol	√	√	√	√	√	√	√	√	√	√	√	√	√
o-cresol	√	√	√	√	√	√	√	√	√	√	√	√	√
m-cresol	√	√	√	√	√	√	√	√	√	√	√	√	√
p-cresol	√	√	√	√	√	√	√	√	√	√	√	√	√
2,4-xylenol	√	√	√	×	√	√	√	√	√	√	√	√	√
2,4-dichlorophenol	√	√	√	√	√	√	√	√	√	×	√	√	√
4-chlorophenol	√	√	√	√	√	√	√	√	√	×	√	√	√
2,6-dichlorophenol	√	√	√	×	√	√	√	√	√	×	√	√	√
2,4,6-trichlorophenol	√	√	√	×	√	√	√	√	√	×	√	√	√
2,4,5-trichlorophenol	√	√	√	×	√	×	×	√	√	×	√	√	√
4-nitrophenol	√	√	√	√	√	√	√	√	√	√	√	√	√
2,3,4,6-tetrachlorophenol	√	√	√	√	×	×	√	×	√	×	√	√	√
Pentachlorophenol	√	√	√	√	×	√	√	×	√	×	√	√	√
Propan-2-ol	√	√	√	√	√	√	√	√	√	√	√	√	√

【A】 China Inventory of Existing Chemical Substances(IECSC)
【B】 European Inventory of Existing Commercial Chemical Substances(EC inventory)
【C】 United States Toxic Substances Control Act Inventory(TSCA)

【D】 Canadian Domestic Substances List(DSL)
【E】 New Zealand Inventory of Chemicals(NZIoC)
【F】 Philippines Inventory of Chemicals and Chemical Substances(PICCS)
【G】 Korea Existing Chemicals Inventory(KECL)
【H】 Australian. Inventory of Industrial Chemical (AIICS)
【I】 Japan Inventory of Existing & New Chemical Substances(ENCS)
【J】 Thailand Existing Chemicals Inventory(TECI)
【K】 Mexico National Inventory of Chemical Substances (INSQ)
【L】 Russia Inventory of Existing Substances (DRAFT)
【M】 Inventory of Existing Chemical Substances in Taiwan, China (TCSI)

List of Chemical Substances under International Conventions

Component	A	B	C
Phenol	×	×	×
2-chlorophenol	×	×	×
o-cresol	×	×	×
m-cresol	×	×	×
p-cresol	×	×	×
2,4-xylenol	×	×	×
2,4-dichlorophenol	×	×	×
4-chlorophenol	×	×	×
2,6-dichlorophenol	×	×	×
2,4,6-trichlorophenol	×	×	×
2,4,5-trichlorophenol	×	×	×
4-nitrophenol	×	×	×
2,3,4,6-tetrachlorophenol	×	×	×
Pentachlorophenol	×	√	√
Propan-2-ol	×	×	×

【A】 The Montreal Protocol on Substances that Deplete the Ozone Layer
【B】 Stockholm Convention on Persistent Organic Pollutants (POPs)
【C】 Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

European chemical inventory

Component	A	B	C	D	E	F	G	H	I
Phenol	×	×	×	√	√	√	×	×	×
2-chlorophenol	×	×	×	√	√	×	×	×	×
o-cresol	×	×	×	√	√	×	×	×	×
m-cresol	×	×	×	√	√	×	×	×	×
p-cresol	×	×	×	√	√	√	×	×	×
2,4-xylenol	×	×	×	√	√	×	×	×	×
2,4-dichlorophenol	×	×	×	√	√	×	×	×	×
4-chlorophenol	×	×	×	√	√	×	×	×	×

2,6-dichlorophenol	×	×	×	√	×	×	×	×	×
2,4,6-trichlorophenol	×	×	×	√	×	×	×	×	×
2,4,5-trichlorophenol	×	×	×	√	×	×	×	×	×
4-nitrophenol	×	×	×	√	√	×	×	×	×
2,3,4,6-tetrachlorophenol	×	×	×	√	×	×	×	×	×
Pentachlorophenol	×	×	×	√	×	×	√	×	√
Propan-2-ol	×	×	×	√	√	×	×	×	×

[A] Candidate list of Substances of Very High Concern for authorization under EU REACH regulation
[B] Substances requiring authorisation under EU REACH regulation
[C] Substances restricted under EU REACH
[D] Pre-registered substances under EU REACH
[E] Registered substances under EU REACH
[F] Substance Evaluation – CoRAP under EU REACH
[G] List of priority substances under EU water policy （Directive 2455/2001/EC）
[H] Substances subject to POPs Regulation
[I] Substances proposed as POPs

Note:

"√" Indicates that the substance included in the regulations.
"×" No data or not included in the regulations.

German water hazard class(WGK)

Component	WGK	Remark
Phenol	WGK 2	
2-chlorophenol	WGK 2	
o-cresol	WGK 2	
m-cresol	WGK 2	
p-cresol	WGK 2	
2,4-xylenol	WGK 3	
2,4-dichlorophenol	WGK 3	
4-chlorophenol	WGK 2	
2,4,5-trichlorophenol	WGK 3	
4-nitrophenol	WGK 2	
2,3,4,6-tetrachlorophenol	WGK 3	
Pentachlorophenol	WGK 3	
Propan-2-ol	WGK 1	

【WGK 1】 slightly hazardous to water
【WGK 2】 obviously hazardous to water
【WGK 3】 highly hazardous to water
【nwg】 non-hazardous to water
【awg】 hazardous to water in general

German technical instructions on air quality control(TA LUFT)

Component	TA LUFT	Remark

Phenol	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
2-chlorophenol	Chapter 5.2.5 Organic Substances.The following values, specified as overall carbon, are in all not allowed to be exceeded in exhaust gas:Mass flow:0,50 kg/hr or Mass conc.:50 mg/m³ At old units with an annual mass flow till 1,5 Mg/a, specified as total carbon, the emissions in exhaust gas are not allowed to exceed 1,5 kg/h.	
o-cresol	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
m-cresol	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
p-cresol	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
2,4-xylenol	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
2,4-dichlorophenol	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
4-chlorophenol	Chapter 5.2.5 Organic Substances, dust,including fine dust.To be treated as overall dust. The emissions of dust in the exhaust gas are not allowed to exceed the following values:Mass flow:0,20 kg/hr or Mass conc.:20 mg/m³ The mass per unit volume of 0,15 g/m³ in exhaust gas is not allowed to be exceeded also on observance or lower deviation of a mass flow of 0,20 kg/h.For emission sources that exceed the mass flow rate of 0.40 kg/h, the mass concentration in waste gas the mass concentration must not exceed 10 mg/m³.	
2,6-dichlorophenol	Chapter 5.2.5 Organic Substances, dust,including fine dust.To be treated as overall dust. The emissions of dust in the exhaust gas are not allowed to exceed the following values:Mass flow:0,20 kg/hr or	

	Mass conc.:20 mg/m³ The mass per unit volume of 0,15 g/m³ in exhaust gas is not allowed to be exceeded also on observance or lower deviation of a mass flow of 0,20 kg/h.For emission sources that exceed the mass flow rate of 0.40 kg/h, the mass concentration in waste gas the mass concentration must not exceed 10 mg/m³.	
2,4,6-trichlorophenol	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
2,4,5-trichlorophenol	Chapter 5.2.5 Organic Substances, dust,including fine dust.To be treated as overall dust. The emissions of dust in the exhaust gas are not allowed to exceed the following values:Mass flow:0,20 kg/hr or Mass conc.:20 mg/m³ The mass per unit volume of 0,15 g/m³ in exhaust gas is not allowed to be exceeded also on observance or lower deviation of a mass flow of 0,20 kg/h.For emission sources that exceed the mass flow rate of 0.40 kg/h, the mass concentration in waste gas the mass concentration must not exceed 10 mg/m³.	
4-nitrophenol	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
2,3,4,6-tetrachlorophenol	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Pentachlorophenol	Chapter 5.2.7.1.1 Carcinogenic SubstancesThe substance must be assigned to the class (I, II or III) whose substances have the nearest potency. We can not accomplish this evaluation due to insufficiency of data.Carcinogenic substances not mentioned by name and for which no information on potency is available should be assigned to Class I as a precautionary measure.	
Propan-2-ol	Chapter 5.2.5 Organic Substances.The following values, specified as overall carbon, are in all not allowed to be exceeded in exhaust gas:Mass flow:0,50 kg/hr or Mass conc.:50 mg/m³ At old units with an annual mass flow till 1,5 Mg/a, specified as total carbon, the emissions in exhaust gas are not allowed to exceed 1,5 kg/h.	

German technical rules for hazardous substances(TRGS)

Component	TRGS	Remark
Phenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
2-chlorophenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
o-cresol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
m-cresol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
p-cresol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
2,4-xylenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
2,4-dichlorophenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
4-chlorophenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
2,6-dichlorophenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
2,4,6-trichlorophenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
2,4,5-trichlorophenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
4-nitrophenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
2,3,4,6-tetrachlorophenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Pentachlorophenol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 410|TRGS 500|TRGS 509|TRGS 510|TRGS 560	

Propan-2-ol	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724|TRGS 906	

15.2 Chemical safety assessment

	No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16 Other information

Information on revision

Creation Date	2026/01/16
Revision Date	-
Reason for revision	-

Reference

[1] IPCS: The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home.
[2] IARC, website: http://www.iarc.fr/.
[3] OECD: The Global Portal to Information on Chemical Substances, website: https://www.echemportal.org/echemportal/.
[4] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple.
[5] NLM: ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp.
[6] EPA: Integrated Risk Information System, website: http://cfpub.epa.gov/iris/.
[7] U.S. Department of Transportation: ERG, website: http://www.phmsa.dot.gov/hazmat/library/erg.
[8] Germany GESTIS-database on hazard substance, website: http://gestis-en.itrust.de/.

Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC_{50}	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD_{50}	Lethal Dose 50%	NTP	National Toxicology Program
EC_{50}	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC_X	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P_{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor		

Disclaimer

This Safety Data Sheet (SDS) was prepared according to REACH Regulation The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.