

1 Identification

- **Product identifier**
- **Product Name: Phenols Mix**
- **Part Number:** ECS-N-006
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SPEX CertiPrep, LLC.
203 Norcross Ave, Metuchen,
NJ 08840 USA
- **Information department:** product safety department
- **Emergency telephone number:**
Emergency Phone Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

dichloromethane
DNOC
2,4-dinitrophenol
pentachlorophenol
chlorocresol

- **Hazard statements**

H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Store locked up.

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

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

75-09-2	dichloromethane	97.8%
120-83-2	2,4-dichlorophenol	0.2%
95-57-8	2-chlorophenol	0.2%
534-52-1	DNOC	0.2%
59-50-7	chlorocresol	0.2%
87-86-5	pentachlorophenol	0.2%
88-06-2	2,4,6-trichlorophenol	0.2%

- **Chemical identification of the substance/preparation**

105-67-9	2,4-xylenol	0.2%
51-28-5	2,4-dinitrophenol	0.2%
88-75-5	2-nitrophenol	0.2%
100-02-7	4-nitrophenol	0.2%
108-95-2	phenol	0.2%

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water.

- **After swallowing:**

Immediately call a doctor.

Do not give anything to eat or drink - Do not induce vomiting

- **Information for Doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**

· **Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture** No further relevant information available.

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- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

75-09-2	dichloromethane	200 ppm
120-83-2	2,4-dichlorophenol	0.2 ppm
105-67-9	2,4-xylenol	6.9 mg/m ³
51-28-5	2,4-dinitrophenol	0.61 mg/m ³
95-57-8	2-chlorophenol	2.3 mg/m ³
88-75-5	2-nitrophenol	2.1 mg/m ³
534-52-1	DNOC	0.6 mg/m ³
59-50-7	chlorocresol	5.5 mg/m ³
100-02-7	4-nitrophenol	0.69 mg/m ³
87-86-5	pentachlorophenol	1 mg/m ³
108-95-2	phenol	15 ppm
88-06-2	2,4,6-trichlorophenol	2.5 mg/m ³

· **PAC-2:**

75-09-2	dichloromethane	560 ppm
120-83-2	2,4-dichlorophenol	2 ppm
105-67-9	2,4-xylenol	76 mg/m ³
51-28-5	2,4-dinitrophenol	6.8 mg/m ³
95-57-8	2-chlorophenol	25 mg/m ³
88-75-5	2-nitrophenol	23 mg/m ³
534-52-1	DNOC	0.83 mg/m ³
59-50-7	chlorocresol	60 mg/m ³
100-02-7	4-nitrophenol	7.6 mg/m ³
87-86-5	pentachlorophenol	15 mg/m ³
108-95-2	phenol	23 ppm
88-06-2	2,4,6-trichlorophenol	27 mg/m ³

· **PAC-3:**

75-09-2	dichloromethane	6,900 ppm
120-83-2	2,4-dichlorophenol	20 ppm
105-67-9	2,4-xylenol	460 mg/m ³
51-28-5	2,4-dinitrophenol	16 mg/m ³
95-57-8	2-chlorophenol	150 mg/m ³
88-75-5	2-nitrophenol	140 mg/m ³
534-52-1	DNOC	5 mg/m ³
59-50-7	chlorocresol	360 mg/m ³
100-02-7	4-nitrophenol	46 mg/m ³
87-86-5	pentachlorophenol	150 mg/m ³
108-95-2	phenol	200 ppm
88-06-2	2,4,6-trichlorophenol	160 mg/m ³

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7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

75-09-2 dichloromethane

PEL	Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910.1052
REL	See Pocket Guide App. A
TLV	Long-term value: 174 mg/m ³ , 50 ppm BEI

120-83-2 2,4-dichlorophenol

WEEL	Long-term value: 1 ppm Skin; Q
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534-52-1 DNOC

PEL	Long-term value: 0.2 mg/m ³ Skin
REL	Long-term value: 0.2 mg/m ³ Skin
TLV	Long-term value: (0.2) NIC-0.2* mg/m ³ *inhalable fraction + vapor; Skin

87-86-5 pentachlorophenol

PEL	Long-term value: 0.5 mg/m ³ Skin
REL	Long-term value: 0.5 mg/m ³ Skin
TLV	Short-term value: 1* mg/m ³ Long-term value: 0.5* mg/m ³ Skin; BEI; *inhalable fraction+vapor

- **Ingredients with biological limit values:**

75-09-2 dichloromethane

BEI	0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)
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87-86-5 pentachlorophenol

BEI 2 mg/g creatinine
 Medium: urine
 Time: prior to last shift of workweek
 Parameter: Total pentachlorophenol (background)

5 mg/L
 Medium: plasma
 Time: end of shift
 Parameter: Free pentachlorophenol (background)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form: Liquid
Color: According to product specification

· **Odor:** Characteristic

· **Odour Threshold:** Not applicable.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 40 °C (104 °F)

· **Flash point:** < 0 °C (<32 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 605 °C (1,121 °F)

· **Decomposition temperature:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

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· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	13 Vol %
Upper:	22 Vol %
· Vapor pressure at 20 °C (68 °F):	453 hPa (339.8 mm Hg)
· Density	Not applicable.
· Relative density	Not applicable.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not applicable.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
Organic solvents:	98.0 %
VOC content:	0.20 %
Solids content:	2.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
75-09-2 dichloromethane		
Oral	LD50	1,600 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/l (rat)
534-52-1 DNOC		
Oral	LD50	10 mg/kg (rat)
Dermal	LD50	1,000 mg/kg (rabbit)
87-86-5 pentachlorophenol		
Oral	LD50	27 mg/kg (rat)
Dermal	LD50	105 mg/kg (rat)
88-06-2 2,4,6-trichlorophenol		
Oral	LD50	820 mg/kg (rat)

- **Primary irritant effect:**
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
75-09-2	dichloromethane	2A

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120-83-2	2,4-dichlorophenol	2B
95-57-8	2-chlorophenol	2B
87-86-5	pentachlorophenol	2B
108-95-2	phenol	3
88-06-2	2,4,6-trichlorophenol	2B
· NTP (National Toxicology Program)		
75-09-2	dichloromethane	R
87-86-5	pentachlorophenol	R
88-06-2	2,4,6-trichlorophenol	R
· OSHA-Ca (Occupational Safety & Health Administration)		
75-09-2	dichloromethane	


12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN1593
· UN proper shipping name	
· DOT	Dichloromethane
· ADR	1593 Dichloromethane
· IMDG, IATA	DICHLOROMETHANE
· Transport hazard class(es)	
· DOT	
	
· Class	6.1 Toxic substances
· Label	6.1

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· ADR, IMDG, IATA	
	
· Class	6.1 Toxic substances
· Label	6.1
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Toxic substances
· Danger code (Kemler):	60
· EMS Number:	F-A,S-A
· Segregation groups	Liquid halogenated hydrocarbons
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1593 DICHLOROMETHANE, 6.1, III

15 Regulatory information

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

· Section 313 (Specific toxic chemical listings):	
75-09-2	dichloromethane
120-83-2	2,4-dichlorophenol
105-67-9	2,4-xylenol
51-28-5	2,4-dinitrophenol
95-57-8	2-chlorophenol
88-75-5	2-nitrophenol
534-52-1	DNOC
100-02-7	4-nitrophenol
87-86-5	pentachlorophenol
108-95-2	phenol
88-06-2	2,4,6-trichlorophenol
· TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
· TSCA new (21st Century Act) (Substances not listed)	
95-57-8	2-chlorophenol
534-52-1	DNOC
59-50-7	chlorocresol
88-06-2	2,4,6-trichlorophenol
· Proposition 65	
· Chemicals known to cause cancer:	
75-09-2	dichloromethane
87-86-5	pentachlorophenol
88-06-2	2,4,6-trichlorophenol

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· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

75-09-2	dichloromethane	L
87-86-5	pentachlorophenol	L
108-95-2	phenol	D, I
88-06-2	2,4,6-trichlorophenol	B2

· **TLV (Threshold Limit Value established by ACGIH)**

75-09-2	dichloromethane	A3
87-86-5	pentachlorophenol	A3
108-95-2	phenol	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

75-09-2	dichloromethane	
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· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02

GHS07

GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

dichloromethane

DNOC

2,4-dinitrophenol

pentachlorophenol

chlorocresol

· **Hazard statements**

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store locked up.

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

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** product safety department

· **Contact:**

SPEX CertiPrep, LLC.

1-732-549-7144

· **Date of preparation / last revision** 11/30/2018 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

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IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEL: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2

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