

1 Identification

- **Product identifier**
- **Product Name:** TCLP Calibration/Spiking Mix
- **Part Number:** ECS-B-018
- **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**



GHS08 Health hazard

Carc. 1B H350 May cause cancer.

Repr. 1B H360 May damage fertility or the unborn child.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
dichloromethane
bis(2-chloroethyl) ether
nitrobenzene
phenol
- **Hazard statements**
Harmful if swallowed.
May cause cancer.
May damage fertility or the unborn child.
- **Precautionary statements**
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 0
Reactivity = 0

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	1
FIRE	0
REACTIVITY	0

Health = *1

Fire = 0

Reactivity = 0

· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:**

87-68-3 hexachlorobuta-1,3-diene

· **vPvB:**

87-68-3 hexachlorobuta-1,3-diene

3 Composition/information on ingredients· **Chemical characterization: Mixtures**· **Description:** Mixture of the substances listed below with nonhazardous additions.· **Dangerous components:**

75-09-2	dichloromethane	97.0%
106-46-7	1,4-dichlorobenzene	0.2%
95-95-4	2,4,5-trichlorophenol	0.2%
88-06-2	2,4,6-trichlorophenol	0.2%
121-14-2	2,4-dinitrotoluene	0.2%
95-48-7	o-cresol	0.2%
108-39-4	3-Methylphenol	0.2%
106-44-5	p-cresol	0.2%
111-44-4	bis(2-chloroethyl) ether	0.2%
118-74-1	hexachlorobenzene	0.2%
87-68-3	hexachlorobuta-1,3-diene	0.2%
67-72-1	hexachloroethane	0.2%
98-95-3	nitrobenzene	0.2%
87-86-5	pentachlorophenol	0.2%
108-95-2	phenol	0.2%

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

110-86-1 Nitrogen (from Pyridine) 0.2%

4 First-aid measures· **Description of first aid measures**· **General information:** 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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

· **After skin contact:** Immediately rinse with water.· **After eye contact:** Rinse opened eye for several minutes under running water.· **After swallowing:** Immediately call a doctor.· **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.· **Special hazards arising from the substance or mixture** No further relevant information available.· **Advice for firefighters**· **Protective equipment:** Mouth respiratory protective device.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
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.

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 respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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:**

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

95-48-7 o-cresol

PEL	Long-term value: 22 mg/m ³ , 5 ppm Skin
REL	Long-term value: 10 mg/m ³ , 2.3 ppm
TLV	Long-term value: 20* mg/m ³ Skin;*as inhalable fraction and vapor

108-39-4 3-Methylphenol

PEL	Long-term value: 22 mg/m ³ , 5 ppm Skin
REL	Long-term value: 10 mg/m ³ , 2.3 ppm
TLV	Long-term value: 20* mg/m ³ Skin;*as inhalable fraction and vapor

106-44-5 p-cresol

PEL	Long-term value: 22 mg/m ³ , 5 ppm Skin
REL	Long-term value: 10 mg/m ³ , 2.3 ppm
TLV	Long-term value: 20* mg/m ³ Skin;*as inhalable fraction and vapor

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111-44-4 bis(2-chloroethyl) ether	
PEL	Ceiling limit value: 90 mg/m ³ , 15 ppm Skin
REL	Short-term value: 60 mg/m ³ , 10 ppm Long-term value: 30 mg/m ³ , 5 ppm Skin; See Pocket Guide App. A
TLV	Short-term value: 58 mg/m ³ , 10 ppm Long-term value: 29 mg/m ³ , 5 ppm Skin
118-74-1 hexachlorobenzene	
TLV	Long-term value: 0.002 mg/m ³ Skin
87-68-3 hexachlorobuta-1,3-diene	
REL	Long-term value: 0.24 mg/m ³ , 0.02 ppm Skin; See Pocket Guide App. A
TLV	Long-term value: 0.21 mg/m ³ , 0.02 ppm Skin
98-95-3 nitrobenzene	
PEL	Long-term value: 5 mg/m ³ , 1 ppm Skin
REL	Long-term value: 5 mg/m ³ , 1 ppm Skin
TLV	Long-term value: 5 mg/m ³ , 1 ppm Skin; BEI
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
108-95-2 phenol	
PEL	Long-term value: 19 mg/m ³ , 5 ppm Skin
REL	Long-term value: 19 mg/m ³ , 5 ppm Ceiling limit value: 60* mg/m ³ , 15.6* ppm *15-min; Skin
TLV	Long-term value: 19 mg/m ³ , 5 ppm Skin; BEI
· Ingredients with biological limit values:	
75-09-2 dichloromethane	
BEI	0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)
98-95-3 nitrobenzene	
BEI	5 mg/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Total p-nitrophenol (nonspecific)
	1.5 % of hemoglobin Medium: blood Time: end of shift Parameter: Methemoglobin (background, nonspecific, 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)

108-95-2 phenol

BEI 250 mg/g creatinine
 Medium: urine
 Time: end of shift
 Parameter: Phenol with hydrolysis (background, nonspecific)

· **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.
 Avoid contact with the eyes and skin.

· **Breathing equipment:**

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:**

Safety glasses



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)

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· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	605 °C (1121 °F)
· Decomposition temperature:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	13.0 Vol %
Upper:	22.0 Vol %
· Vapor pressure at 20 °C (68 °F):	453 hPa (340 mm Hg)
· Density	Not applicable.
· Relative density	Not applicable.
· Vapour 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:	97.8 %
VOC content:	0.8 %
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	1600 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/l (rat)
106-46-7 1,4-dichlorobenzene		
Oral	LD50	500 mg/kg (rat)
88-06-2 2,4,6-trichlorophenol		
Oral	LD50	820 mg/kg (rat)
121-14-2 2,4-dinitrotoluene		
Oral	LD50	268 mg/kg (rat)
111-44-4 bis(2-chloroethyl) ether		
Oral	LD50	75 mg/kg (rat)
Dermal	LD50	90 mg/kg (rabbit)
Inhalative	LC50/4 h	0.33 mg/l (rat)

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87-86-5 pentachlorophenol

Oral	LD50	27 mg/kg (rat)
Dermal	LD50	105 mg/kg (rat)

· **Primary irritant effect:**· **on the skin:** No irritant effect.· **on the eye:** No irritating effect.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Carcinogenic.

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

75-09-2	dichloromethane	2B
106-46-7	1,4-dichlorobenzene	2B
121-14-2	2,4-dinitrotoluene	2B
111-44-4	bis(2-chloroethyl) ether	3
118-74-1	hexachlorobenzene	2B
87-68-3	hexachlorobuta-1,3-diene	3
67-72-1	hexachloroethane	2B
98-95-3	nitrobenzene	2B
87-86-5	pentachlorophenol	2B
108-95-2	phenol	3
110-86-1	Nitrogen (from Pyridine)	3

· **NTP (National Toxicology Program)**

75-09-2	dichloromethane	R
106-46-7	1,4-dichlorobenzene	R
88-06-2	2,4,6-trichlorophenol	R
118-74-1	hexachlorobenzene	R
67-72-1	hexachloroethane	R
98-95-3	nitrobenzene	R
87-86-5	pentachlorophenol	R

· **OSHA-Ca (Occupational Safety & Health Administration)**

75-09-2	dichloromethane
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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.· **Ecotoxicological effects:**· **Remark:** Harmful to fish· **Additional ecological information:**· **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**· **PBT:**

87-68-3	hexachlorobuta-1,3-diene
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· **vPvB:**

87-68-3	hexachlorobuta-1,3-diene
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· **Other adverse effects** No further relevant information available.

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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 · ADR · IMDG, IATA	Dichloromethane 1593 Dichloromethane DICHLOROMETHANE
· Transport hazard class(es) · DOT	
	
· Class · Label	6.1 Toxic substances 6.1
· ADR, IMDG, IATA	
	
· Class · Label	6.1 Toxic substances 6.1
· Packing group · DOT, ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups	Warning: Toxic substances 60 F-A,S-A 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) · Excepted quantities (EQ)	5L 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, (E)

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15 Regulatory information

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

· Section 355 (extremely hazardous substances):

95-48-7	<i>o</i> -cresol
111-44-4	bis(2-chloroethyl) ether
98-95-3	nitrobenzene
108-95-2	phenol

· Section 313 (Specific toxic chemical listings):

All ingredients are listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

75-09-2	dichloromethane
106-46-7	1,4-dichlorobenzene
88-06-2	2,4,6-trichlorophenol
121-14-2	2,4-dinitrotoluene
111-44-4	bis(2-chloroethyl) ether
118-74-1	hexachlorobenzene
87-68-3	hexachlorobuta-1,3-diene
67-72-1	hexachloroethane
98-95-3	nitrobenzene
87-86-5	pentachlorophenol
110-86-1	Nitrogen (from Pyridine)

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

121-14-2	2,4-dinitrotoluene
98-95-3	nitrobenzene

· Chemicals known to cause developmental toxicity:

118-74-1	hexachlorobenzene
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· Carcinogenic categories

· EPA (Environmental Protection Agency)

75-09-2	dichloromethane	L
88-06-2	2,4,6-trichlorophenol	B2
95-48-7	<i>o</i> -cresol	C
108-39-4	3-Methylphenol	C
106-44-5	<i>p</i> -cresol	C
111-44-4	bis(2-chloroethyl) ether	B2
118-74-1	hexachlorobenzene	B2
87-68-3	hexachlorobuta-1,3-diene	C
67-72-1	hexachloroethane	L
98-95-3	nitrobenzene	L
87-86-5	pentachlorophenol	L
108-95-2	phenol	D, I

· TLV (Threshold Limit Value established by ACGIH)

75-09-2	dichloromethane	A3
106-46-7	1,4-dichlorobenzene	A3
111-44-4	bis(2-chloroethyl) ether	A4
118-74-1	hexachlorobenzene	A3
87-68-3	hexachlorobuta-1,3-diene	A3
67-72-1	hexachloroethane	A3
98-95-3	nitrobenzene	A3
87-86-5	pentachlorophenol	A3

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108-95-2	phenol	A4
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
75-09-2	dichloromethane	
106-46-7	1,4-dichlorobenzene	
121-14-2	2,4-dinitrotoluene	
111-44-4	bis(2-chloroethyl) ether	
87-68-3	hexachlorobuta-1,3-diene	
67-72-1	hexachloroethane	

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

· **Hazard pictograms**



GHS07

GHS08

· **Signal word** Danger

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

dichloromethane
bis(2-chloroethyl) ether
nitrobenzene
phenol

· **Hazard statements**

Harmful if swallowed.
May cause cancer.
May damage fertility or the unborn child.

· **Precautionary statements**

Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **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** 11/11/2015 / -

· **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
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
Acute Tox. 4: Acute toxicity, Hazard Category 4
Carc. 1B: Carcinogenicity, Hazard Category 1B
Repr. 1B: Reproductive toxicity, Hazard Category 1B