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SECTION 1: Identification of the substance/mixture and of the company/undertaking
· English additional compounds · 1.1 Product identifier
• Trade name: <u>TCLP Calibration/Spiking Mix</u>
• Article number: ECS-N-018 • 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. • Application of the substance / the mixture matériau de référence certifié
• 1.3 Details of the supplier of the safety data sheet • Manufacturer/Supplier: SPEX CertiPrep 203 Norcross Avenue Metuchen, NJ 08840 USA
• Further information obtainable from: product safety department • 1.4 Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887
SECTION 2: Hazards identification
• 2.1 Classification of the substance or mixture • Classification according to Regulation (EC) No 1272/2008
GHS08 health hazard
Carc. 1B H350 May cause cancer.
GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects. • Classification according to Directive 67/548/EEC or Directive 1999/45/EC
T; Toxic
R45: May cause cancer.
Xn; Harmful
R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Information concerning particular hazards for human and environment: The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
• Classification system: The classification is according to the latest editions of the EU-lists, and extended by company and literature data. • 2.2 Label elements
• 2.2 Label elements • Labelling according to EU guidelines: The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
• Code letter and hazard designation of product:
T Toxic
• Hazard-determining components of labelling: dichloromethane
hexachlorobenzene 2,4-dinitrotoluene bis(2-chloroethyl) ether
• <i>Risk phrases:</i> 45 May cause cancer. (Contd. on page 2)

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20/21/22 Also harmful by inhalation, in contact with skin and if swallowed.	(Contd. of page 1)
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	
· Safety phrases:	
53 Avoid exposure - obtain special instructions before use.	
1/2 Keep locked up and out of the reach of children.	
29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.	
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.	
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).	
· 2.3 Other hazards	
· Results of PBT and vPvB assessment	
· PBT:	
87-68-3 hexachlorobuta-1,3-diene	
· vPvB:	
87-68-3 hexachlorobuta-1,3-diene	

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

 \cdot **Description:** Mixture of substances listed below with nonhazardous additions.

CAS: 75-09-2	dichloromethane	97,09
EINECS: 200-838-9	🗙 Xn R40	, í
Index number: 602-004-00-3	Carc. Cat. 3	
	🗞 Carc. 2, H351	
CAS: 106-46-7	1,4-dichlorobenzene	0,2%
EINECS: 203-400-5	Xn R40; 💥 Xi R36; 🥁 N R50/53	
Index number: 602-035-00-2	Carc. Cat. 3	
	🚸 Carc. 2, H351; 🚸 Aquatic Acute 1, H400; Aquatic Chronic 1, H410; 🚸 Eye Irrit. 2, H319	1
CAS: 95-95-4	2,4,5-trichlorophenol	0,2%
EINECS: 202-467-8	🗙 Xn R22; 🗙 Xi R36/38; 🧏 N R50/53	
Index number: 604-017-00-X	♦ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; (↑) Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319]
CAS: 88-06-2	2,4,6-trichlorophenol	0,29
EINECS: 201-795-9	🗙 Xn R22-40; 🗙 Xi R36/38; 🌄 N R50/53	
Index number: 604-018-00-5	Carc. Cat. 3	
	Carc. 2, H351; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 121-14-2	2,4-dinitrotoluene	0,29
EINECS: 204-450-0	😡 T Carc. Cat. 2 R45-23/24/25; 🔀 Xn R48/22-62-68; 🍢 N R51/53	
Index number: 609-007-00-9	Muta. Cat. 3, Repr. Cat. 3	
	♦ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ♦ Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361f; STOT RE 2, H373; ♦ Aquatic Chronic 2, H411	
CAS: 95-48-7	o-cresol	0,29
EINECS: 202-423-8	😡 T R24/25; 🛃 C R34	
Index number: 604-004-00-9	🛞 Acute Tox. 3, H301; Acute Tox. 3, H311; 🕎 Skin Corr. 1B, H314	
CAS: 108-39-4	3-Methylphenol	0,29
EINECS: 203-577-9	😡 T R24/25; 🛃 C R34	
Index number: 604-004-00-9	🛞 Acute Tox. 3, H301; Acute Tox. 3, H311; 🕎 Skin Corr. 1B, H314	
CAS: 106-44-5	p-cresol	0,29
EINECS: 203-398-6	🙀 T R24/25; 🗾 C R34	_
Index number: 604-004-00-9	🛞 Acute Tox. 3, H301; Acute Tox. 3, H311; 🛞 Skin Corr. 1B, H314	
CAS: 111-44-4	bis(2-chloroethyl) ether	0,29
EINECS: 203-870-1	$\mathbb{R}^{T+R26/27/28}; \mathbb{R}^{Xn R40}$	
Index number: 603-029-00-2		
	Carc. Cat. 3	-
CI C 110 C 1	🚸 Flam. Liq. 3, H226; 🛞 Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; 🚸 Carc. 2, H351	0.00
CAS: 118-74-1 EINECS: 204-273-9	hexachlorobenzene	0,29
EINECS: 204-273-9 Index number: 602-065-00-6	👿 T Carc. Cat. 2 R45-48/25; 🌄 N R50/53	4
inaex number: 002-003-00-6	Carc. 1B, H350; STOT RE 1, H372; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 (Contd. c	

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CAS: 87-68-3	hexachlorobuta-1,3-diene	(Contd. o	0,2%
EINECS: 201-765-5	PBT; vPvB		0,2 /
2017035	\mathbb{R} T R25; Xn R21		
	Acute Tox. 3, H301; () Acute Tox. 4, H312		
CAS: 98-95-3	nitrobenzene		0,2%
EINECS: 202-716-0	😡 T R23/24/25-48/23/24; 🗙 Xn R40-62; 🌄 N R51/53		
Index number: 609-003-00-7			
	♦ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ♦ Cat H372; ♦ Aquatic Chronic 2, H411	rc. 2, H351; Repr. 2, H361f; STOT RE 1,	
CAS: 87-86-5	pentachlorophenol		0,2%
EINECS: 201-778-6	😡 T+ R26; 😡 T R24/25; 🗙 Xn R40; 🗙 Xi R36/37/38; 🌄 N R50/53		
Index number: 604-002-00-8			
	♦ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 2, H330; ♦ Can Aquatic Chronic 1, H410; ♦ Skin Irrit. 2, H315; Eye Irrit. 2, H319; ST	rc. 2, H351; 🚯 Aquatic Acute 1, H400; DT SE 3, H335	
CAS: 108-95-2	phenol		0,29
EINECS: 203-632-7	😡 T R23/24/25; 🛃 C R34; 🗙 Xn R48/20/21/22-68		
Index number: 604-001-00-2			
	♦ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ♦ Mu Corr. 1B, H314	ta. 2, H341; STOT RE 2, H373; 🔶 Skin	
CHEMICAL IDENTIFICAT	ION OF THE SUBSTANCE/PREPARATION		
CAS: 67-72-1 hexachl EINECS: 200-666-4	oroethane	Xn R48/22 STOT RE 2, H373	- 0,2
CAS: 110-86-1 Nitroger	n (from Pyridine)		0,2
SVHC			
121-14-2 2,4-dinitrotoluene			
Additional information: For	the wording of the listed risk phrases refer to section 16.		

SECTION 4: First aid measures

· 4.1 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: Call for a doctor immediately.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

- Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.

· 5.3 Advice for firefighters

· Protective equipment: Mouth respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures Not required.

· 6.2 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.
- 6.3 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.

• 6.4 Reference to other sections

See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

- Ensure good ventilation/exhaustion at the workplace.
- Open and handle receptacle with care.
- Prevent formation of aerosols.
- · Information about fire and explosion protection: Keep respiratory protective device available.
- · 7.2 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 container tightly sealed.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

• Additional information about design of technical facilities: No further data; see item 7.

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

98-95-3 nitrobenzene

IOELV Long-term value: 1 mg/m³, 0,2 ppm Skin

108-95-2 phenol

IOELV Short-term value: 16 mg/m³, 4 ppm Long-term value: 8 mg/m³, 2 ppm Skin

• Additional information: The lists valid during the making were used as basis.

- · 8.2 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.

· Respiratory protection:

- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- · 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. **Eve protection:**

Safety glasses

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Tightly sealed goggles

· 9.1 Information on basic physical a	und chemical properties
· General Information	na chemica properties
· Appearance:	
Form:	Fluid
Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	40 °C
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	605 °C
Decomposition temperature:	Not determined.
Self-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 %
· Vapour pressure at 20 °C:	453 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
• Evaporation rate	Not determined.
· Solubility in / Miscibility with	
water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/wat	ter): Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	97,8 %
VOC (EC)	97,80 %
Solids content:	2,0 %
• 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity

· 10.2 Chemical stability

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known. 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

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SECTIO	N 11: Tox	icological information
• 11.1 Infor	mation on	toxicological effects
· Acute toxi		6 · · · · ·
· LD/LC50	values rele	vant for classification:
75-09-2 di	chlorometl	hane
Oral	LD50	1600 mg/kg (rat)
		88 mg/l (rat)
106-46-71	4-dichlor	obenzene
Oral	LD50	500 mg/kg (rat)
88-06-2 2,	4,6-trichlo	rophenol
Oral	LD50	820 mg/kg (rat)
121-14-2 2	2,4-dinitrot	oluene
Oral		268 mg/kg (rat)
111 - 44-4 l	ois(2-chlore	pethyl) ether
Oral	LD50	75 mg/kg (rat)
Dermal	LD50	90 mg/kg (rabbit)
Inhalative	LC50/4 h	0,33 mg/l (rat)
87-86-5 pe	entachlorop	phenol
Oral	LD50	27 mg/kg (rat)
Dermal	LD50	105 mg/kg (rat)
· Primary in		
• on the skii • on the eye		
		sitising effects known.
		ical information:
		e following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in
the latest v	version:	

Harmful

Carcinogenic.

SECTION 12: Ecological information

· 12.1 Toxicity

- Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability No further relevant information available.
- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- · Remark: Harmful to fish
- · Additional ecological information:
- · General notes:

Water hazard class 3 (German Regulation) (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 · 12.5 Results of PBT and vPvB assessment

· PBT:

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

· vPvB:

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

· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

• Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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· Uncleaned packaging:

• Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information	
· 14.1 UN-Number · ADR, IMDG, IATA	UN1593
 14.2 UN proper shipping name ADR IMDG, IATA 	1593 DICHLOROMETHANE DICHLOROMETHANE
· 14.3 Transport hazard class(es)	
· ADR, IMDG, IATA	
5 K K K K K K K K K K K K K K K K K K K	
· Class	6.1 Toxic substances.
· Label	6.1
· 14.4 Packing group · ADR, IMDG, IATA	111
 14.5 Environmental hazards: Marine pollutant: 	No
 14.6 Special precautions for user Danger code (Kemler): EMS Number: Segregation groups 	Warning: Toxic substances. 60 F-A,S-A Liquid halogenated hydrocarbons
· 14.7 Transport in bulk according to Annex II of MARPO IBC Code	DL73/78 and the Not applicable.
· Transport/Additional information:	
· ADR · 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
Transport category	2
• Tunnel restriction code	E
· 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":	UN1593, DICHLOROMETHANE, 6.1, III

SECTION 15: Regulatory information

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

· 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.

· Other regulations, limitations and prohibitive regulations

· Substances of very high concern (SVHC) according to REACH, Article 57

121-14-2 2,4-dinitrotoluene

• 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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SECTION	6: Other information
	tion is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall gally valid contractual relationship.
Relevant phr	1565
H226	Flammable liquid and vapour.
H300	Fatal if swallowed.
H300 H301	Toxic if swallowed.
H302	Harmful if swallowed.
	Fatal in contact with skin.
H310	
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
4373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
4411	Toxic to aquatic life with long lasting effects.
R10	Flammable.
R21	Harmful in contact with skin.
R22	Harmful if swallowed.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R24/25	Toxic in contact with skin and if swallowed.
R25	Toxic if swallowed.
R26	Very toxic by inhalation.
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
R <i>34</i>	Causes burns.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R36/38	Irritating to eyes and skin.
R40	Limited evidence of a carcinogenic effect.
R45	
	May cause cancer.
	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R48/23/24	Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin.
R48/25	<i>Toxic: danger of serious damage to health by prolonged exposure if swallowed.</i>
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.
R68	Possible risk of irreversible effects.
	ssuing MSDS: product safety department
Contact:	
SPEX CertiP	rep Inc.
732-549-7144	4
Abbreviation	s and acronyms:
ADR: Accord euro	ppéen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
	nal Maritime Code for Dangerous Goods
	al Air Transport Association urmonised System of Classification and Labelling of Chemicals
	International system of Classification and Laboration for Chemical Substances
	n List of Notified Chemical Substances
	histracts Service (division of the American Chemical Society)
	amic Compounds (USA, EU)
LC50: Lethal con LD50: Lethal dose	zentration, 50 percent 2. 50 percent
	, oppren munable liquids, Hazard Category 3
Acute Tox. 2: Acu	te toxicity, Hazard Category 2
	te toxicity, Hazard Category 3
	te toxicity, Hazard Category 4 te toxicity, Hazard Category 1
	te toxicity, Hazard Category I n corrosion/irritation, Hazard Category IB
Skin Irrit. 2: Skin	corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serio	us eye damage/eye irritation, Hazard Category 2
	1 mutagenicity, Hazard Category 2 vominity Hazard Category 2
Jure. 1D: Carcine	ogenicity, Hazard Category 1B (Contd. on page
	(Contd. on pag

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Carc. 2: Carcinogenicity, Hazard Category 2 Repr. 2: Reproductive toxicity, Hazard Category 2 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3 STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 1 Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 2 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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