



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 11-Jun-2021 Previous revision date 18-Sep-2020 Revision Number 1

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

### 1.1. Product identifier

**Product Name** Lyphochek Urine Metals Control, Level 1  
**Catalogue Number(s)** 400

**Pure substance/mixture** Mixture

Contains Trichloroacetic acid

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

**Recommended use** In vitro diagnostic

### 1.3. Details of the supplier of the safety data sheet

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories Inc.  
9500 Jeronimo Road  
Irvine, California 92618  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd  
The Junction  
Station Road  
Watford, WD17 1ET  
UK

For further information, please contact

**Technical Service** 00800 00246 723  
Techsupport.UK@bio-rad.com

### 1.4. Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC UK: 44-870-8200418

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

<b>Skin corrosion/irritation</b>	Category 2 - (H315)
<b>Serious eye damage/eye irritation</b>	Category 2 - (H319)
<b>Specific target organ toxicity — single exposure</b>	Category 3 - (H335)
<b>Chronic aquatic toxicity</b>	Category 3 - (H412)

### 2.2. Label elements

Contains Trichloroacetic acid

**Signal word**

Warning

**Hazard statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements - EU (§28, 1272/2008)**

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P312 - Call a POISON CENTER or doctor if you feel unwell

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

**2.3. Other hazards**

Harmful to aquatic life. Contains components derived from human urine.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Trichloroacetic acid	200-927-2	76-03-9	1 - 2.5	Skin Corr. 1A (H314) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Phenol	203-632-7	108-95-2	0.3 - 0.999	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Muta. 2 (H341) STOT RE 2 (H373) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	No data available
Sodium fluoride	231-667-8	7681-49-4	0.1 - 0.299	Acute Tox. 3 (H301) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) (EUH032)	No data available
Zinc sulfate, monohydrate	-	7446-19-7	0.01 - 0.099	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), disodium	-	10048-95-0	0.01 - 0.099	Acute Tox. 3 (H301)	No data available

salt, heptahydrate				Acute Tox. 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Carc. 1A (H350)	
Selenium dioxide	231-194-7	7446-08-4	0.001 - 0.01	Acute Tox. 3 (H301) Acute Tox. 3 (H331) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Mercury chloride (HgCl <sub>2</sub> )	231-299-8	7487-94-7	0.001 - 0.01	Acute Tox. 2 (H300) Skin Corr. 1B (H314) Muta. 2 (H341) Repr. 2 (H361f) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Aluminum nitrate nonahydrate	-	7784-27-2	0.001 - 0.01	No data available	No data available
Thallium(I) acetate	209-257-5	563-68-8	< 0.001	Acute Tox. 2 (H300) Acute Tox. 2 (H330) STOT RE 2 (H373) Aquatic Chronic 2 (H411)	No data available
Pentachlorophenol	201-778-6	87-86-5	< 0.001	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 2 (H330) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Carc. 2 (H351) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Lead chloride (PbCl <sub>2</sub> )	231-845-5	7758-95-4	< 0.001	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Repr. 1A (H360Df) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Cobalt(II) sulfate (1:1), heptahydrate	-	10026-24-1	< 0.001	No data available	No data available
Cadmium chloride	233-296-7	10108-64-2	< 0.001	Acute Tox. 3 (H301) Acute Tox. 2 (H330) Muta. 1B (H340) Carc. 1B (H350) Repr. 1B (H360FD) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer	-	28300-74-5	< 0.001	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Aquatic Chronic 2 (H411)	No data available

Full text of H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General advice

Show this safety data sheet to the doctor in attendance. Contains components derived from human urine.

<b>Inhalation</b>	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a doctor.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

#### **4.2. Most important symptoms and effects, both acute and delayed**

**Symptoms** May cause redness and tearing of the eyes. Burning sensation.

#### **4.3. Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Contains human source material and / or potentially infectious components.

### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

#### **5.2. Special hazards arising from the substance or mixture**

**Specific hazards arising from the chemical** None known.

#### **5.3. Advice for firefighters**

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

#### **6.2. Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

#### **6.3. Methods and material for containment and cleaning up**

**Methods for containment** Do not allow into any sewer, on the ground or into any body of water.

<b>Methods for cleaning up</b>	Clean contaminated surface thoroughly. Use: Disinfectant.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

<b>Reference to other sections</b>	See section 8 for more information. See section 13 for more information.
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**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Ensure adequate ventilation. Avoid breathing vapours or mists. In case of insufficient ventilation, wear suitable respiratory equipment.
<b>General hygiene considerations</b>	Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Follow universal and standard precautions for handling potentially infectious materials.

**7.2. Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Store according to product and label instructions.
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**7.3. Specific end use(s)****Identified uses**

<b>Risk Management Methods (RMM)</b>	The information required is contained in this Safety Data Sheet.
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**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure Limits**

Chemical name	European Union	United Kingdom	France	Spain	Germany
Trichloroacetic acid 76-03-9	-	-	TWA: 1 ppm TWA: 5 mg/m <sup>3</sup>	TWA: 1 ppm TWA: 6.8 mg/m <sup>3</sup>	TWA: 0.2 ppm TWA: 1.4 mg/m <sup>3</sup>
Phenol 108-95-2	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> *	TWA: 2 ppm TWA: 7.8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> Sk*	TWA: 2 ppm TWA: 7.8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 15.6 mg/m <sup>3</sup> *	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> via dérmica*	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> H*
Sodium fluoride 7681-49-4	TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), disodium salt, heptahydrate 10048-95-0	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>	-	TWA: 0.01 mg/m <sup>3</sup>	-
Selenium dioxide 7446-08-4	-	TWA: 0.1 mg/m <sup>3</sup>	-	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>
Mercury chloride (HgCl <sub>2</sub> ) 7487-94-7	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>
Aluminum nitrate nonahydrate	-	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	-

7784-27-2					
Thallium(I) acetate 563-68-8	-	TWA: 0.1 mg/m <sup>3</sup> Sk*	-	TWA: 0.1 mg/m <sup>3</sup> via dérmica*	-
Pentachlorophenol 87-86-5	-	-	TWA: 0.5 mg/m <sup>3</sup> *	TWA: 0.5 mg/m <sup>3</sup> via dérmica*	H*
Lead chloride (PbCl <sub>2</sub> ) 7758-95-4	-	TWA: 0.15 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.15 mg/m <sup>3</sup>	-
Cobalt(II) sulfate (1:1), heptahydrate 10026-24-1	-	TWA: 0.1 mg/m <sup>3</sup>	-	TWA: 0.02 mg/m <sup>3</sup>	-
Cadmium chloride 10108-64-2	TWA: 0.001 mg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> TWA: 0.002 mg/m <sup>3</sup>	-
Antimonate(2-), bis[.mu.-(2,3-dihydroxybu tanedioato(4-)-O1,O2:O3, O4)]di-, dipotassium, trihydrate, stereoisomer 28300-74-5	-	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	-
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Trichloroacetic acid 76-03-9	-	TWA: 1 ppm	-	-	TWA: 1 mg/m <sup>3</sup>
Phenol 108-95-2	TWA: 2 ppm TWA: 8.0 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> pelle*	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> P*	TWA: 8 mg/m <sup>3</sup> H*	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> iho*	TWA: 1 ppm TWA: 4 mg/m <sup>3</sup> H*
Sodium fluoride 7681-49-4	TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup>	-	TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup>
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), disodium salt, heptahydrate 10048-95-0	-	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.0028 mg/m <sup>3</sup>	TWA: 0.01 ppm	TWA: 0.01 mg/m <sup>3</sup>
Selenium dioxide 7446-08-4	-	TWA: 0.2 mg/m <sup>3</sup>	-	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>
Mercury chloride (HgCl <sub>2</sub> ) 7487-94-7	TWA: 0.02 mg/m <sup>3</sup> pelle*	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> iho*	TWA: 0.02 mg/m <sup>3</sup> H*
Aluminum nitrate nonahydrate 7784-27-2	-	TWA: 2 mg/m <sup>3</sup>	-	TWA: 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>
Thallium(I) acetate 563-68-8	-	TWA: 0.1 mg/m <sup>3</sup>	-	TWA: 0.1 mg/m <sup>3</sup> iho*	TWA: 0.1 mg/m <sup>3</sup> H*
Pentachlorophenol 87-86-5	-	TWA: 0.5 mg/m <sup>3</sup> P*	-	TWA: 0.5 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup> iho*	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> H*
Lead chloride (PbCl <sub>2</sub> ) 7758-95-4	TWA: 0.15 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.15 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>
Cobalt(II) sulfate (1:1), heptahydrate 10026-24-1	-	TWA: 0.02 mg/m <sup>3</sup>	-	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>
Cadmium chloride 10108-64-2	-	TWA: 0.002 mg/m <sup>3</sup>	TWA: 0.004 mg/m <sup>3</sup>	TWA: 0.004 mg/m <sup>3</sup>	TWA: 0.005 mg/m <sup>3</sup>
Antimonate(2-), bis[.mu.-(2,3-dihydroxybu tanedioato(4-)-O1,O2:O3, O4)]di-, dipotassium, trihydrate, stereoisomer 28300-74-5	-	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Trichloroacetic acid 76-03-9	TWA: 1 ppm TWA: 5 mg/m <sup>3</sup>	TWA: 1 ppm TWA: 7 mg/m <sup>3</sup>	STEL: 4 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	TWA: 0.75 ppm TWA: 5 mg/m <sup>3</sup>	TWA: 0.5 ppm STEL: 1.5 ppm

				STEL: 2.25 ppm STEL: 10 mg/m <sup>3</sup>	
Phenol 108-95-2	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL 4 ppm STEL 16 mg/m <sup>3</sup> H*	TWA: 5 ppm TWA: 19 mg/m <sup>3</sup> STEL: 5 ppm STEL: 19 mg/m <sup>3</sup> H*	STEL: 16 mg/m <sup>3</sup> TWA: 7.8 mg/m <sup>3</sup>	TWA: 1 ppm TWA: 4 mg/m <sup>3</sup> STEL: 3 ppm STEL: 12 mg/m <sup>3</sup> H*	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> Sk*
Sodium fluoride 7681-49-4	-	-	TWA: 2 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> STEL: 7.5 mg/m <sup>3</sup>
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), disodium salt, heptahydrate 10048-95-0	-	TWA: 0.1 mg/m <sup>3</sup> H*	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> STEL: 0.03 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> STEL: 0.03 mg/m <sup>3</sup>
Selenium dioxide 7446-08-4	TWA: 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.16 mg/m <sup>3</sup> H*	STEL: 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> STEL: 0.15 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>
Mercury chloride (HgCl <sub>2</sub> ) 7487-94-7	TWA: 0.02 mg/m <sup>3</sup> STEL 0.08 mg/m <sup>3</sup> H*	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.16 mg/m <sup>3</sup> H*	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.06 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.06 mg/m <sup>3</sup>
Aluminum nitrate nonahydrate 7784-27-2	-	TWA: 2 mg/m <sup>3</sup>	-	TWA: 2 mg/m <sup>3</sup> STEL: 4 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>
Thallium(I) acetate 563-68-8	TWA: 0.1 mg/m <sup>3</sup> STEL 1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> H*	STEL: 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup> H*	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.06 mg/m <sup>3</sup> Sk*
Pentachlorophenol 87-86-5	H*	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> H*	STEL: 1.5 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.05 ppm TWA: 0.5 mg/m <sup>3</sup> STEL: 0.15 ppm STEL: 1.5 mg/m <sup>3</sup> H*	TWA: 0.5 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup> Sk*
Lead chloride (PbCl <sub>2</sub> ) 7758-95-4	TWA: 0.1 mg/m <sup>3</sup> STEL 0.4 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.8 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> STEL: 0.15 mg/m <sup>3</sup>	TWA: 0.15 mg/m <sup>3</sup> STEL: 0.45 mg/m <sup>3</sup>
Cobalt(II) sulfate (1:1), heptahydrate 10026-24-1	H*	TWA: 0.05 mg/m <sup>3</sup> H*	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.06 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>
Cadmium chloride 10108-64-2	-	TWA: 0.015 mg/m <sup>3</sup> TWA: 0.004 mg/m <sup>3</sup> H*	TWA: 0.01 mg/m <sup>3</sup> TWA: 0.002 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> STEL: 0.15 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> TWA: 0.002 mg/m <sup>3</sup> STEL: 0.03 mg/m <sup>3</sup> STEL: 0.006 mg/m <sup>3</sup>
Antimonate(2-), bis[.mu.-(2,3-dihydroxybu tanedioato(4-)-O1,O2:O3, O4)]di-, dipotassium, trihydrate, stereoisomer 28300-74-5	TWA: 0.5 mg/m <sup>3</sup> STEL 1.5 mg/m <sup>3</sup>	-	-	TWA: 0.5 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup>

## Biological occupational exposure limits

Chemical name	European Union	United Kingdom	France	Spain	Germany
Phenol 108-95-2	-	-	250 mg/g creatinine - urine (Total Phenol) - end of shift	120 mg/g Creatinine - urine ( ) - end of shift	120 mg/g Creatinine - urine (Phenol (after hydrolysis)) - end of shift
Sodium fluoride 7681-49-4	-	-	3 mg/g creatinine - urine (Fluorides) - beginning of shift 10 mg/g creatinine - urine (Fluorides) - end of shift		7.0 mg/g Creatinine - urine (Fluoride) - end of shift 4.0 mg/g Creatinine - urine (Fluoride) - before beginning of next shift

Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), disodium salt, heptahydrate 10048-95-0	-	-	0.05 mg/g creatinine - urine (Metabolites of inorganic Arsenic) - end of workweek		
Mercury chloride (HgCl <sub>2</sub> ) 7487-94-7	-	-	0.015 mg/L - blood (Total inorganic Mercury) - end of shift at end of workweek 0.050 mg/g creatinine - urine (Total inorganic Mercury) - prior to shift		25 µg/g Creatinine - urine (Mercury) - no restriction
Pentachlorophenol 87-86-5	-	-	5 mg/L - plasma (Free Pentachlorophenol) - end of shift 2 mg/g creatinine - urine (Total Pentachlorophenol) - prior to last shift of workweek	2 mg/g Creatinine - urine (total pentachlorophenol) - start of last shift of workweek 5 mg/L - plasma (Free pentachlorophenol) - end of shift	
Lead chloride (PbCl <sub>2</sub> ) 7758-95-4	-	-	400 µg/L - blood (Lead) - 300 µg/L - blood (Lead) - 200 µg/L - blood (Lead) - 100 µg/L - blood (Lead) -		
Cobalt(II) sulfate (1:1), heptahydrate 10026-24-1	-	-	0.015 mg/L - urine (Cobalt) - end of shift at end of workweek 0.001 mg/L - blood (Cobalt) - end of shift at end of workweek		
Cadmium chloride 10108-64-2	-	-	0.005 mg/g creatinine - urine (Cadmium) - not critical 0.005 mg/L - blood (Cadmium) - not critical		
<b>Chemical name</b>	<b>Italy</b>	<b>Portugal</b>	<b>Netherlands</b>	<b>Finland</b>	<b>Denmark</b>
Phenol 108-95-2	-	-	-	1.3 mmol/L - urine (Total phenol) - after the shift	
<b>Chemical name</b>	<b>Austria</b>	<b>Switzerland</b>	<b>Poland</b>	<b>Norway</b>	<b>Ireland</b>
Phenol 108-95-2	-	250 mg/g creatinine - urine (Phenol) - end of shift	-	-	120 mg/g Creatinine - urine (Phenol) - end of shift
Sodium fluoride 7681-49-4	4 mg/g Creatinine - urine ( ) - before following shift 7 mg/g Creatinine - urine ( ) - immediately after exposure or end of		-	-	2 mg/L - urine (Fluoride) - prior to shift 3 mg/L - urine (Fluoride) - end of shift



	the shift				
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), disodium salt, heptahydrate 10048-95-0	3.2 million/ $\mu$ L Erythrocytes - red and white blood count () - not provided 3.8 million/ $\mu$ L Erythrocytes - red and white blood count () - not provided 4000 Leukocytes/ $\mu$ L - red and white blood count () - not provided 13000 Leukocytes/ $\mu$ L - red and white blood count () - not provided 10 g/dL Hemoglobin - red and white blood count () - not provided 12 g/dL Hemoglobin - red and white blood count () - not provided 30 % Hematocrit - red and white blood count () - not provided 35 % Hematocrit - red and white blood count () - not provided 50 $\mu$ g/L - urine () - after end of work day, at the end of a work week/end of the shift		-	-	-
Mercury chloride (HgCl <sub>2</sub> ) 7487-94-7	25 $\mu$ g/g Creatinine - urine () - after end of work day, at the end of a work week/end of the shift		-	-	-
Pentachlorophenol 87-86-5	-		-	-	2 mg/g Creatinine - urine (total Pentachlorophenol) - prior to last shift of workweek 5 mg/L - plasma (free Pentachlorophenol) - prior to last shift of workweek
Lead chloride (PbCl <sub>2</sub> ) 7758-95-4	120 $\mu$ g/100 mL RBC Erythropoietic protoporphyria - blood (Ethylenediaminetetraacetic acid) - not		-	-	-

	provided 30 µg/100 mL blood Lead - blood (Ethylenediaminetetraacetic acid) - not provided 3.8 million/µL Erythrocytes - blood (Ethylenediaminetetraacetic acid) - not provided 12 g/dL Hemoglobin - blood (Ethylenediaminetetraacetic acid) - not provided 35 % Hematocrit - blood (Ethylenediaminetetraacetic acid) - not provided 10 mg/L - urine (.delta.-Aminolevulinic acid) - not provided 3.2 million/µL Erythrocytes - blood (Ethylenediaminetetraacetic acid) - not provided 10 g/dL Hemoglobin - blood (Ethylenediaminetetraacetic acid) - not provided 30 % Hematocrit - blood (Ethylenediaminetetraacetic acid) - not provided 6 mg/L - urine (.delta.-Aminolevulinic acid) - not provided				
Cobalt(II) sulfate (1:1), heptahydrate 10026-24-1	10 µg/L - urine (spontaneous urine) - after end of work day, at the end of a work week/end of the shift - () -		-	-	-
Cadmium chloride 10108-64-2	2.5 µg/g Creatinine - urine (N-Acetylglucosaminidase) - not provided - () -		-	-	2 µg/g Creatinine - urine (Cadmium) - not critical

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls****Personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Hand protection</b>	Wear suitable gloves. Impervious gloves.
<b>Skin and body protection</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>General hygiene considerations</b>	Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Follow universal and standard precautions for handling potentially infectious materials.
<b>Environmental exposure controls</b>	No information available.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

<b>Physical state</b>	Solid
<b>Appearance</b>	powder or cake, lyophilised
<b>Colour</b>	yellow
<b>Odour</b>	Slight.
<b>Odour threshold</b>	No information available

<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>
<b>pH</b>	4.9-5.1	
<b>pH (as aqueous solution)</b>		
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Soluble in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	

**9.2. Other information**

<b>Softening point</b>	Not applicable
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Molecular weight	Not applicable
VOC Content (%)	Not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity	No information available.
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### 10.2. Chemical stability

Stability	Stable under normal conditions.
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#### Explosion data

Sensitivity to mechanical impact	None.
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Sensitivity to static discharge	None.
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### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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### 10.4. Conditions to avoid

Conditions to avoid	None known based on information supplied.
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### 10.5. Incompatible materials

Incompatible materials	Strong acids. Strong bases. Strong oxidising agents.
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### 10.6. Hazardous decomposition products

Hazardous decomposition products	None known based on information supplied.
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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Information on likely routes of exposure

##### Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Irritating to eyes. (based on components). Causes serious eye irritation.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

#### Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. May cause redness and tearing of the eyes.
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#### Numerical measures of toxicity

**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	5,194.10 mg/kg
<b>ATEmix (dermal)</b>	31,690.50 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	37.60 mg/l

**Product Information****Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Trichloroacetic acid	= 3320 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	
Phenol	= 340 mg/kg ( Rat ) = 317 mg/kg ( Rat )	= 630 mg/kg ( Rabbit )	= 316 mg/m <sup>3</sup> ( Rat ) 4 h
Sodium fluoride	= 52 mg/kg ( Rat )	= 175 mg/kg ( Rat )	
Selenium dioxide	= 48 mg/kg ( Rat ) = 68.1 mg/kg ( Rat )	= 4 mg/kg ( Rabbit )	
Mercury chloride (HgCl <sub>2</sub> )	= 1 mg/kg ( Rat )	= 41 mg/kg ( Rabbit ) = 41 mg/kg ( Rat )	
Thallium(I) acetate	= 41.3 mg/kg ( Rat )		
Pentachlorophenol	= 27 mg/kg ( Rat )	= 40 mg/kg ( Rabbit ) = 26 mg/kg ( Rat )	
Lead chloride (PbCl <sub>2</sub> )	> 1947 mg/kg ( Rat )		
Cobalt(II) sulfate (1:1), heptahydrate	= 582 mg/kg ( Rat )		
Cadmium chloride	= 88 mg/kg ( Rat )		
Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedi oato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer	= 115 mg/kg ( Rat )		

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation**

Classification based on data available for ingredients. Irritating to skin.

**Product Information****Serious eye damage/eye irritation**

Classification based on data available for ingredients. Causes serious eye irritation.

**Product Information****Respiratory or skin sensitisation**

Based on available data, the classification criteria are not met.

**Product Information****Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

**Product Information**

Chemical name	European Union
Phenol	Muta. 2
Mercury chloride (HgCl <sub>2</sub> )	Muta. 2
Cadmium chloride	Muta. 1B

**Carcinogenicity**

Based on available data, the classification criteria are not met.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Product Information	
Chemical name	European Union
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), disodium salt, heptahydrate	Carc. 1A
Pentachlorophenol	Carc. 2
Cadmium chloride	Carc. 1B

**Reproductive toxicity** Based on available data, the classification criteria are not met.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	European Union
Mercury chloride (HgCl <sub>2</sub> )	Repr. 2
Lead chloride (PbCl <sub>2</sub> )	Repr. 1A
Cadmium chloride	Repr. 1B

Product Information	
<b>STOT - single exposure</b>	May cause respiratory irritation.
Product Information	

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

Product Information	
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**Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

Product Information				
Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Phenol	EC50: 0.0188 - 0.1044mg/L (96h, Pseudokirchneriella subcapitata) EC50: 187 - 279mg/L (72h, Desmodesmus subspicatus) EC50: =46.42mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 11.9 - 25.3mg/L (96h, Lepomis macrochirus) LC50: 11.9 - 50.5mg/L (96h, Pimephales promelas) LC50: 20.5 - 25.6mg/L (96h, Pimephales promelas) LC50: 23.4 - 36.6mg/L (96h, Oryzias latipes) LC50: 33.9 - 43.3mg/L (96h, Oryzias latipes) LC50: 34.09 - 47.64mg/L (96h, Poecilia reticulata) LC50: 4.23 - 7.49mg/L (96h, Oncorhynchus mykiss) LC50: 5.0 - 12.0mg/L (96h, Oncorhynchus mykiss) LC50: 5.449 - 6.789mg/L (96h, Oncorhynchus mykiss) LC50: 7.5 - 14mg/L (96h, Oncorhynchus mykiss)	-	EC50: 10.2 - 15.5mg/L (48h, Daphnia magna) EC50: 4.24 - 10.7mg/L (48h, Daphnia magna)

		LC50: =0.00175mg/L (96h, <i>Cyprinus carpio</i> ) LC50: =11.5mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =13.5mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =27.8mg/L (96h, <i>Brachydanio rerio</i> ) LC50: =31mg/L (96h, <i>Poecilia reticulata</i> ) LC50: =32mg/L (96h, <i>Pimephales promelas</i> )		
Sodium fluoride	EC50: =272mg/L (96h, <i>Pseudokirchneriella subcapitata</i> ) EC50: =850mg/L (72h, <i>Desmodesmus subspicatus</i> )	LC50: 38 - 68mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =180mg/L (96h, <i>Pimephales promelas</i> ) LC50: =830mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: >530mg/L (96h, <i>Lepomis macrochirus</i> )	-	EC50: =338mg/L (48h, <i>Daphnia magna</i> ) EC50: =98mg/L (48h, <i>Daphnia magna</i> )
Mercury chloride (HgCl <sub>2</sub> )	-	LC50: 0.014 - 0.019mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: 0.02 - 0.26mg/L (96h, <i>Cyprinus carpio</i> ) LC50: 0.096 - 0.133mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: 0.1 - 0.182mg/L (96h, <i>Pimephales promelas</i> ) LC50: 0.13 - 0.19mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: 5.933 - 10.34mg/L (96h, <i>Poecilia reticulata</i> ) LC50: =0.041mg/L (96h, <i>Poecilia reticulata</i> ) LC50: =0.155mg/L (96h, <i>Pimephales promelas</i> ) LC50: =0.4mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =4.425mg/L (96h, <i>Cyprinus carpio</i> )	-	EC50: =0.0015mg/L (48h, <i>Daphnia magna</i> ) EC50: >0.012mg/L (48h, <i>Daphnia magna</i> )
Pentachlorophenol	EC50: 0.005 - 0.3mg/L (96h, <i>Pseudokirchneriella subcapitata</i> ) EC50: =0.1mg/L (72h, <i>Pseudokirchneriella subcapitata</i> ) EC50: =0.183mg/L (72h, <i>Desmodesmus subspicatus</i> )	LC50: 0.031 - 0.038mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: 0.079 - 0.187mg/L (96h, <i>Pimephales promelas</i> ) LC50: 0.102 - 0.128mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: 0.103 - 0.129mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: 0.11 - 0.49mg/L (96h, <i>Pimephales promelas</i> ) LC50: 0.170 - 0.3mg/L (96h, <i>Oryzias latipes</i> ) LC50: =0.36mg/L (96h,	-	EC50: 0.138 - 0.307mg/L (48h, <i>Daphnia magna</i> )

		Poecilia reticulata)		
Cadmium chloride	EC50: =3.7mg/L (96h, Chlorella vulgaris)	LC50: =0.0409mg/L (96h, Pimephales promelas)	-	EC50: 0.012 - 0.054mg/L (48h, Daphnia magna)

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**Component Information**

Chemical name	Partition coefficient
Phenol	1.5
Pentachlorophenol	5.01

**12.4. Mobility in soil**

**Mobility in soil** No information available.

**12.5. Results of PBT and vPvB assessment****PBT and vPvB assessment**

Chemical name	PBT and vPvB assessment
Trichloroacetic acid	The substance is not PBT / vPvB
Phenol	The substance is not PBT / vPvB
Sodium fluoride	The substance is not PBT / vPvB PBT assessment does not apply
Zinc sulfate, monohydrate	The substance is not PBT / vPvB
Selenium dioxide	PBT assessment does not apply
Aluminum nitrate nonahydrate	PBT assessment does not apply
Lead chloride (PbCl <sub>2</sub> )	PBT assessment does not apply
Cadmium chloride	PBT assessment does not apply

**12.6. Other adverse effects**

**Other adverse effects** No information available.

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances
Pentachlorophenol	Group III Chemical	-

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**SECTION 14: Transport information****IMDG**

**14.1 UN number or ID number** Not regulated



14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

**RID**

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None

**ADR**

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None

**IATA**

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****France****Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number	Title
Phenol 108-95-2	RG 14	-
Sodium fluoride 7681-49-4	RG 32	-
Selenium dioxide 7446-08-4	RG 75	-
Mercury chloride (HgCl <sub>2</sub> ) 7487-94-7	RG 2	-
Pentachlorophenol 87-86-5	RG 14	-
Lead chloride (PbCl <sub>2</sub> ) 7758-95-4	RG 1	-
Cadmium chloride 10108-64-2	RG 61	-

**Germany**

**Water hazard class (WGK)** slightly hazardous to water (WGK 1)

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Authorisations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Pentachlorophenol - 87-86-5	22.	
Cadmium chloride - 10108-64-2	72. 28. 29. 30.	

**Persistent Organic Pollutants**

Not applicable

**Export Notification requirements**

This product contains substances which are regulated pursuant to Regulation (EC) No. 649/2012 of the European parliament and of the council concerning the export and import of dangerous chemicals

Chemical name	European Export/Import Restrictions per (EC) 689/2008 - Annex Number
Pentachlorophenol - 87-86-5	I.1 I.3

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009** Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**15.2. Chemical safety assessment****Chemical Safety Report**

No information available

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

EUH032 - Contact with acids liberates very toxic gas

H300 - Fatal if swallowed

H301 - Toxic if swallowed

H302 - Harmful if swallowed

H311 - Toxic in contact with skin

H314 - Causes severe skin burns and eye damage

H315 - Causes skin irritation

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H330 - Fatal if inhaled

H331 - Toxic if inhaled

H332 - Harmful if inhaled

H335 - May cause respiratory irritation

H340 - May cause genetic defects

H341 - Suspected of causing genetic defects  
 H350 - May cause cancer  
 H351 - Suspected of causing cancer  
 H360Df - May damage the unborn child. Suspected of damaging fertility  
 H360FD - May damage fertility. May damage the unborn child  
 H361f - Suspected of damaging fertility  
 H372 - Causes damage to organs through prolonged or repeated exposure  
 H373 - May cause damage to organs through prolonged or repeated exposure  
 H400 - Very toxic to aquatic life  
 H401 - Toxic to aquatic life  
 H410 - Very toxic to aquatic life with long lasting effects  
 H411 - Toxic to aquatic life with long lasting effects

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA                      TWA (time-weighted average)                      STEL                      STEL (Short Term Exposure Limit)  
 Ceiling                      Maximum limit value                      \*                      Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AELG(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
 Organisation for Economic Co-operation and Development Screening Information Data Set

RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**Prepared By** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 11-Jun-2021

**Reason for revision** Significant changes throughout SDS. Review all sections

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**