

## 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

### COD/CSB HR

Revision date 07-12-2022

Revision Number 1

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

### 1.1. Product identifier

**Product Code(s)** COD-17-HR  
**Product Name** COD/CSB HR  
**Unique Formula Identifier (UFI)** JP9C-N2D9-J623-M5AQ  
**Pure substance/mixture** Mixture  
Contains Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1), Potassium dichromate

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

**Recommended use** Reagent for water analysis Restricted to professional users  
**Uses advised against** No information available

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

#### Manufacturer

Water-I.D. GmbH  
Daimlerstr. 20  
76344 Eggenstein, Germany  
Tel.: +49 (0) 721 78 20 29 0, Fax: +49 (0) 721 78 20 29 11  
Website: www.water-id.com  
EHS / Compliance: lab@water-id.com

### 1.4. Emergency telephone number

**Emergency Telephone** Poison Control Centre Munich  
Tel.: +49 (0) 89 19 24 0  
Germany  
24 hours service  
Languages: German, English

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

<b>Acute toxicity - Oral</b>	Category 4 - (H302)
<b>Acute toxicity - Dermal</b>	Category 1 - (H310)
<b>Acute toxicity - Inhalation (Dusts/Mists)</b>	Category 2 - (H330)
<b>Skin corrosion/irritation</b>	Category 1 Sub-category A - (H314)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)
<b>Germ cell mutagenicity</b>	Category 1B - (H340)
<b>Carcinogenicity</b>	Category 1B - (H350)
<b>Specific target organ toxicity — repeated exposure</b>	Category 2 - (H373)

Chronic aquatic toxicity Corrosive to metals	Category 1 - (H410)
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**2.2. Label elements**

Contains Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1), Potassium dichromate



**Signal word**  
Danger

**Hazard statements**

- H290 - May be corrosive to metals
- H302 - Harmful if swallowed
- H310 - Fatal in contact with skin
- H314 - Causes severe skin burns and eye damage
- H330 - Fatal if inhaled
- H340 - May cause genetic defects
- H350 - May cause cancer
- H373 - May cause damage to organs through prolonged or repeated exposure
- H410 - Very toxic to aquatic life with long lasting effects
- EUH208 - Contains Potassium dichromate May produce an allergic reaction.

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

- P201 - Obtain special instructions before use
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 - Immediately call a POISON CENTER or doctor
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

**2.3. Other hazards**

Very toxic to aquatic life.

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

**3.1 Substances**

Not applicable

**3.2 Mixtures**

Chemical name	Weight-%	REACH registration number	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Sulfuric acid 7664-93-9	80-90	No data available	231-639-5	Skin Corr. 1A (H314)	Eye Irrit. 2 :: 5%≤C<15% Skin Corr. 1A :: C≥15%		

					Skin Irrit. 2 :: 5%≤C<15%		
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	<2	No data available	231-992-5	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Acute Tox. 2 (H330) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	STOT RE 2 :: C>=0.1%		
Sulfuric acid, disilver(1+) salt 10294-26-5	<1	No data available	233-653-7	No data available			
Potassium dichromate 7778-50-9	<0.5	No data available	231-906-6	Acute Tox. 3 (H301) Acute Tox. 4 (H312) Acute Tox. 2 (H330) Skin Corr. 1B (H314) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Muta. 1B (H340) Carc. 1B (H350) Repr. 1B (H360FD) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Ox. Sol. 2 (H272)	STOT SE 3 :: C>=5%		

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

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Sulfuric acid 7664-93-9	2140		0.375		
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	57	625			
Potassium dichromate 7778-50-9	48	1150			

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No	SVHC candidates
Potassium dichromate	7778-50-9	X

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention.

**Inhalation**

If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the

substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.

<b>Eye contact</b>	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Skin contact</b>	Get immediate medical advice/attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<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. Get immediate medical advice/attention.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe vapour or mist. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

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

**Symptoms** Coughing and/ or wheezing. Difficulty in breathing. Burning sensation.

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

**Note to doctors** Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

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

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

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

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

**5.3. Advice for firefighters**

**Special protective equipment and precautions 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** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Do not breathe vapour or mist. Keep people away from and upwind of spill/leak. Attention! Corrosive material.

**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. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

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

**Methods for containment** Prevent further leakage or spillage if safe to do so.  
**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.  
**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash it before reuse. Do not breathe vapour or mist. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.  
**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not breathe vapour or mist. Contaminated work clothing should not be allowed out of the workplace.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Protect from moisture. Store away from other materials.

**7.3. Specific end use(s)**

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure Limits**

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Sulfuric acid 7664-93-9	-	TWA: 0.1 mg/m <sup>3</sup> STEL 0.2 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	-	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> *	TWA: 0.1 mg/m <sup>3</sup> TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>

Sulfuric acid, disilver(1+) salt 10294-26-5	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>
Potassium dichromate 7778-50-9	TWA: 0.005 mg/m <sup>3</sup> TWA: 0.010 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup>	-	TWA: 0.05 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.010 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup>	TWA: 0.010 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>Cyprus</b>	<b>Czech Republic</b>	<b>Denmark</b>	<b>Estonia</b>	<b>Finland</b>
Sulfuric acid 7664-93-9	TWA: 0.05 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> TWA: 0.05 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> STEL: 0.1 mg/m <sup>3</sup>
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> Ceiling: 0.15 mg/m <sup>3</sup> *	TWA: 0.02 mg/m <sup>3</sup> H*	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> iho*
Sulfuric acid, disilver(1+) salt 10294-26-5	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> Ceiling: 0.03 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> STEL: 0.03 mg/m <sup>3</sup>
Potassium dichromate 7778-50-9	-	TWA: 0.01 mg/m <sup>3</sup> Ceiling: 0.1 mg/m <sup>3</sup>	TWA: 0.001 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	TWA: 0.005 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>France</b>	<b>Germany</b>	<b>Germany MAK</b>	<b>Greece</b>	<b>Hungary</b>
Sulfuric acid 7664-93-9	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> Peak: 0.1 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> Peak: 0.16 mg/m <sup>3</sup> *	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> *
Sulfuric acid, disilver(1+) salt 10294-26-5	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> Peak: 0.02 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>
Potassium dichromate 7778-50-9	TWA: 0.001 mg/m <sup>3</sup> STEL: 0.005 mg/m <sup>3</sup>	-	*	TWA: 0.5 mg/m <sup>3</sup> TWA: 0.005 mg/m <sup>3</sup> TWA: 0.010 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup> TWA: 0.01 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>Ireland</b>	<b>Italy</b>	<b>Italy REL</b>	<b>Latvia</b>	<b>Lithuania</b>
Sulfuric acid 7664-93-9	TWA: 0.05 ppm STEL: 0.15 ppm	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.06 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> pelle*	TWA: 0.025 mg/m <sup>3</sup> *	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> *
Sulfuric acid, disilver(1+) salt 10294-26-5	TWA: 0.01 mg/m <sup>3</sup> STEL: 0.03 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> TWA: 0.01 mg/m <sup>3</sup>
Potassium dichromate 7778-50-9	TWA: 0.005 mg/m <sup>3</sup> TWA: 0.01 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup> STEL: 0.15 mg/m <sup>3</sup> STEL: 0.03 mg/m <sup>3</sup> STEL: 0.075 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> TWA: 0.010 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup>	TWA: 0.0002 mg/m <sup>3</sup> STEL: 0.0005 mg/m <sup>3</sup> *	TWA: 0.005 mg/m <sup>3</sup> TWA: 0.010 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup> TWA: 0.01 mg/m <sup>3</sup>	Sensitizer TWA: 0.005 mg/m <sup>3</sup> STEL: 0.015 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>Luxembourg</b>	<b>Malta</b>	<b>Netherlands</b>	<b>Norway</b>	<b>Poland</b>
Sulfuric acid 7664-93-9	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	STEL: 0.3 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	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>
Sulfuric acid, disilver(1+) salt 10294-26-5	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>
Potassium dichromate 7778-50-9	-	-	TWA: 0.001 mg/m <sup>3</sup>	STEL: 0.003 mg/m <sup>3</sup>	TWA: 0.010 mg/m <sup>3</sup> TWA: 0.01 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>Portugal</b>	<b>Romania</b>	<b>Slovakia</b>	<b>Slovenia</b>	<b>Spain</b>
Sulfuric acid 7664-93-9	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> STEL: STEL mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>
Sulfuric acid, mercury(2+)	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>	-	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>

salt (1:1) 7783-35-9				STEL: STEL mg/m <sup>3</sup> *	
Sulfuric acid, disilver(1+) salt 10294-26-5	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> STEL: STEL mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>
Potassium dichromate 7778-50-9	TWA: 0.5 mg/m <sup>3</sup> TWA: 0.05 mg/m <sup>3</sup>	-	-	TWA: 0.010 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>Sweden</b>		<b>Switzerland</b>	<b>United Kingdom</b>	
Sulfuric acid 7664-93-9	NGV: 0.1 mg/m <sup>3</sup> Vägledande KGV: 0.2 mg/m <sup>3</sup>		TWA: 0.1 mg/m <sup>3</sup> STEL: 0.2 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> STEL: 0.15 mg/m <sup>3</sup>	
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	NGV: 0.02 mg/m <sup>3</sup>		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>	
Sulfuric acid, disilver(1+) salt 10294-26-5	NGV: 0.01 mg/m <sup>3</sup> NGV: 0.1 mg/m <sup>3</sup>		TWA: 0.01 mg/m <sup>3</sup> STEL: 0.02 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	
Potassium dichromate 7778-50-9	NGV: 0.005 mg/m <sup>3</sup> Bindande KGV: 0.015 mg/m <sup>3</sup> Sensitizer		TWA: 0.005 mg/m <sup>3</sup> H*	TWA: 0.01 mg/m <sup>3</sup> TWA: 0.025 mg/m <sup>3</sup>	

**Biological occupational exposure limits**

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	-	25 µg/g Creatinine (urine - after end of work day, at the end of a work week/end of the shift)	-	10 µg/L - blood (Mercury) - not critical 30 µg/g Creatinine - urine (Mercury) - single sample or urine collected over 24 hours	-
Potassium dichromate 7778-50-9	-	9 µg/L (blood - Ethylenediaminetetr aacetic acid not provided) 12 µg/L (urine - spontaneous urine after end of work day, at the end of a work week/end of the shift) ( - )	-	5 µg/g Creatinine - urine (Chromium) - single sample at the end of the work shift	-
Chemical name	Denmark	Finland	France	Germany	Germany
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	-	-	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) 25 µg/g Creatinine - BAT (not fixed) urine	25 µg/g Creatinine (urine - Mercury no restriction)
Potassium dichromate 7778-50-9	-	-	0.01 mg/g creatinine - urine (Total Chromium) - augmented during shift 0.03 mg/g creatinine - urine (Total Chromium) - end of shift at end of	0.6 µg/L - BAR (end of exposure or end of shift) urine	-

			workweek	
Chemical name	Hungary	Ireland	Italy	Italy REL
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	0.030 mg/g Creatinine (urine - Mercury not critical) 0.017 µmol/mmol Creatinine (urine - Mercury not critical)	-	-	-
Potassium dichromate 7778-50-9	-	25 µg/L (urine - total Chromium end of shift at end of workweek) 10 µg/L (urine - total Chromium increase during shift)	-	25 µg/L - urine (Total chromium) - end of shift at end of workweek 10 µg/L - urine (Total chromium) - increase during shift
Chemical name	Latvia	Luxembourg	Romania	Slovakia
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	-	-	10 µg/L - blood (Mercury) - end of shift 30 µg/g Creatinine - urine (Mercury) - beginning of next shift	-
Chemical name	Slovenia	Spain	Switzerland	United Kingdom
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	0.25 µg/g Creatinine - urine (Mercury) - not relevant 30 µg/L urine - urine (Mercury) - not relevant	-	-	-

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

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

## 8.2. Exposure controls

### Personal protective equipment

**Eye/face protection** Tight sealing safety goggles. Face protection shield.

**Hand protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Impervious clothing. Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

**Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not breathe vapour or mist. Contaminated work clothing should not be allowed out of the workplace.

**Environmental exposure controls** No information available.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Physical state** Liquid

**Appearance** Liquid



**Colour** dark orange  
**Odour** Odourless.  
**Odour threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</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>Flash point</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>pH</b>	< 1	None known
<b>pH (as aqueous solution)</b>	No data available	No information available
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Vapour pressure</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Bulk density</b>	No data available	
<b>Liquid Density</b>	No data available	
<b>Relative vapour density</b>	No data available	None known
<b>Particle characteristics</b>		
<b>Particle Size</b>	No information available	
<b>Particle Size Distribution</b>	No information available	

**9.2. Other information**

9.2.1. Information with regards to physical hazard classes  
 Not applicable

9.2.2. Other safety characteristics  
 No information available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

**Reactivity** No information available.

**10.2. Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None.  
**Sensitivity to static discharge** None.

**10.3. Possibility of hazardous reactions**

**Possibility of hazardous reactions** None under normal processing.

**10.4. Conditions to avoid**

**Conditions to avoid** Excessive heat. Exposure to air or moisture over prolonged periods.

**10.5. Incompatible materials**

**Incompatible materials** Acids. Bases. Oxidising agent.

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** None known based on information supplied.

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on components). Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

**Eye contact** Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.

**Skin contact** Specific test data for the substance or mixture is not available. Fatal in contact with skin. (based on components). Corrosive. Causes burns.

**Ingestion** Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

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

**Symptoms** Coughing and/ or wheezing. Difficulty in breathing. Redness. Burning. May cause blindness.

**Numerical measures of toxicity**

**Acute toxicity**

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

**ATEmix (oral)** 300.60 mg/kg  
**ATEmix (dermal)** 45.40 mg/kg  
**ATEmix (inhalation-dust/mist)** 0.376 mg/l

**Unknown acute toxicity**

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.  
 86.84 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.  
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid	= 2140 mg/kg ( Rat )		= 0.375 mg/L ( Rat ) 4 h
Sulfuric acid, mercury(2+) salt (1:1)	= 57 mg/kg ( Rat )	= 625 mg/kg ( Rat )	

Potassium dichromate	= 48 mg/kg ( Rat )	= 1150 mg/kg ( Rabbit )	= 99 mg/m <sup>3</sup> ( Rat ) 4 h
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**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. Causes burns.
- Serious eye damage/eye irritation** Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.
- Respiratory or skin sensitisation** No information available.
- Germ cell mutagenicity** Contains a known or suspected mutagen. Classification based on data available for ingredients. May cause genetic defects.

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

Chemical name	European Union
Potassium dichromate	Muta. 1B

- Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

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

Chemical name	European Union
Potassium dichromate	Carc. 1B

- Reproductive toxicity** No information available.

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

Chemical name	European Union
Potassium dichromate	Repr. 1B

- STOT - single exposure** No information available.
- STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.
- Aspiration hazard** No information available.

**11.2. Information on other hazards**

**11.2.1. Endocrine disrupting properties**

- Endocrine disrupting properties** No information available.

**11.2.2. Other information**

- Other adverse effects** No information available.

**SECTION 12: Ecological information**

**12.1. Toxicity**

- Ecotoxicity** Harmful to aquatic life with long lasting effects.
- Unknown aquatic toxicity** Contains 12.89 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sulfuric acid	-	LC50: >500mg/L (96h, Brachydanio rerio)	-	-
Potassium dichromate	-	LC50: 113.6 - 155.7mg/L (96h, Lepomis macrochirus) LC50: 14 - 20.9mg/L (96h, Pimephales promelas) LC50: 15.41 - 30.36mg/L (96h, Pimephales promelas) LC50: 21.209 - 30.046mg/L (96h, Oryzias latipes) LC50: 23 - 41.2mg/L (96h, Poecilia reticulata) LC50: 24.81 - 34.55mg/L (96h, Poecilia reticulata) LC50: 65.6 - 137.6mg/L (96h, Lepomis macrochirus) LC50: =12.3mg/L (96h, Oncorhynchus mykiss) LC50: =320mg/L (96h, Lepomis macrochirus) LC50: >139mg/L (96h, Cyprinus carpio)	-	-

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** No information available.

**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
Sulfuric acid	The substance is not PBT / vPvB PBT assessment does not apply
Sulfuric acid, disilver(1+) salt	PBT assessment does not apply
Potassium dichromate	PBT assessment does not apply

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.

**SECTION 14: Transport information**

**IATA**

<b>14.1 UN number or ID number</b>	UN2922
<b>14.2 UN proper shipping name</b>	Corrosive liquid, toxic, n.o.s. (Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1))
<b>14.3 Transport hazard class(es)</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>14.4 Packing group</b>	II
<b>Description</b>	UN2922, Corrosive liquid, toxic, n.o.s. (Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1)), 8 (6.1), II
<b>14.5 Environmental hazards</b>	Yes
<b>14.6 Special precautions for user</b>	
<b>Special Provisions</b>	A3, A803
<b>ERG Code</b>	8P

**IMDG**

<b>14.1 UN number or ID number</b>	UN2922
<b>14.2 UN proper shipping name</b>	Corrosive liquid, toxic, n.o.s. (Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1))
<b>14.3 Transport hazard class(es)</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>14.4 Packing group</b>	II
<b>Description</b>	UN2922, Corrosive liquid, toxic, n.o.s. (Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1)), 8 (6.1), II
<b>14.5 Marine pollutant</b>	NP
<b>Environmental hazards</b>	Yes
<b>14.6 Special precautions for user</b>	
<b>Special Provisions</b>	274
<b>EmS-No</b>	F-A, S-B No information available
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	No information available

**RID**

<b>14.1 UN number or ID number</b>	UN2922
<b>14.2 UN proper shipping name</b>	Corrosive liquid, toxic, n.o.s. (Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1))
<b>14.3 Transport hazard class(es)</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>14.4 Packing group</b>	II
<b>Description</b>	UN2922, Corrosive liquid, toxic, n.o.s. (Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1)), 8 (6.1), II
<b>14.5 Environmental hazards</b>	Yes
<b>14.6 Special precautions for user</b>	
<b>Special Provisions</b>	274
<b>Classification code</b>	CT1

**ADR**

<b>14.1 UN number or ID number</b>	UN2922
<b>14.2 UN proper shipping name</b>	Corrosive liquid, toxic, n.o.s. (Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1))
<b>14.3 Transport hazard class(es)</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>14.4 Packing group</b>	II
<b>Description</b>	UN2922, Corrosive liquid, toxic, n.o.s. (Sulfuric acid, Sulfuric acid, mercury(2+) salt (1:1)), 8 (6.1), II, (E)
<b>14.5 Environmental hazards</b>	Yes

**14.6 Special precautions for user**

Special Provisions 274  
 Classification code CT1  
 Tunnel restriction code (E)

**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
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	RG 2	-
Potassium dichromate 7778-50-9	RG 10, RG 10bis, RG 10ter	-

**Germany**

**Water hazard class (WGK)** strongly hazardous to water (WGK 3)

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Carcinogens	Netherlands - List of Reproductive Toxins
Sulfuric acid	Present	-	-
Potassium dichromate	Present	Present	Fertility Category 1B Can be harmful via breastfeeding Development Category 1B

**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 authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

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
Potassium dichromate - 7778-50-9	72. 28. 29. 30.	X

**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
Sulfuric acid, mercury(2+) salt (1:1) - 7783-35-9	V

**Dangerous substance category per Seveso Directive (2012/18/EU)**

H1 - ACUTE TOXIC

H2 - ACUTE TOXIC

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

Chemical name	EU - Water Framework Directive (2000/60/EC)
Sulfuric acid, mercury(2+) salt (1:1) - 7783-35-9	Priority hazardous substance

Chemical name	EU - Environmental Quality Standards (2008/105/EC)
Sulfuric acid, mercury(2+) salt (1:1) - 7783-35-9	Priority hazardous substance

**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

**Legend:**

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

**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**

- H272 - May intensify fire; oxidiser
- H300 - Fatal if swallowed
- H301 - Toxic if swallowed
- H310 - Fatal in contact with skin
- H312 - Harmful in contact with skin
- H314 - Causes severe skin burns and eye damage
- H317 - May cause an allergic skin reaction
- H330 - Fatal if inhaled
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H340 - May cause genetic defects
- H350 - May cause cancer
- H360FD - May damage fertility. May damage the unborn child
- 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
- H410 - Very 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 Ceiling	TWA (time-weighted average) Maximum limit value	STEL *	STEL (Short Term Exposure Limit) Skin designation
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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
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	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) (AEGl(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  
 World Health Organization

Revision date 07-12-2022

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

**Disclaimer**

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**End of Safety Data Sheet**