Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 17.04.2021 Version number 19 Revision: 10.03.2021

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

· **1.1 Product identifier**

· **Product name: COD2 TC (MR)**

· **Catalog number:** 251991

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Xylem Analytics Germany GmbH
WTW
Dr.-Karl-Slevogt-Straße 1
D 82362 Weilheim
Germany
Tel. +49 881 183-0

· **Informing department:** E-Mail: Info.WTW@Xyleminc.com

· **1.4 Emergency telephone number:** Chemtrec (USA & Canada) 800-424-9300 (INTERNATIONAL) 001 703-527-3887

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

GHS06 skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

GHS08 health hazard

Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.
STOT RE 2 H373 May cause damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.

GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

GHS07

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 17.04.2021 Version number 19 Revision: 10.03.2021

Product name: COD2 TC (MR)

(Contd. of page 1)

Acute Tox. 4 H302 Harmful if swallowed.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS05 GHS06 GHS08 GHS09

· **Signal word** Danger
· **Hazard-determining components of labelling:**
sulphuric acid 82 %
mercury sulphate
potassium dichromate
· **Hazard statements**
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H340 May cause genetic defects.
H350 May cause cancer.
H373 May cause damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.
H410 Very toxic to aquatic life with long lasting effects.
· **Precautionary statements**
P260 Do not breathe 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.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P310 IF exposed or concerned: Immediately call a POISON CENTER/doctor.
· **Additional information:**
EUH208 Contains potassium dichromate. May produce an allergic reaction.
Restricted to professional users.

· **2.3 Other hazards**
Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.
Acid burns have to treated immediately, as it may otherwise cause badly curing wounds.
CAS 7783-35-9: Danger by skin resorption.

· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **Determination of endocrine-disrupting properties**
The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** sulfuric acid solution
· **Dangerous components:**
The percent content of the chromium compound mentioned below refers to the amount of chromate ions dissolved in water.
The percent content of the mercury compound mentioned below refers to the amount of the pure mercury therein.

CAS: 7664-93-9 EINECS: 231-639-5 Index No: 016-020-00-8 Reg.nr.: 01-2119458838-20-XXXX	sulphuric acid Met. Corr.1, H290; Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 15 % Skin Irrit. 2; H315: 5 % ≤ C < 15 % Eye Dam. 1; H318: C ≥ 15 % Eye Irrit. 2; H319: 5 % ≤ C < 15 %	80–90%
CAS: 7783-35-9 EINECS: 231-992-5 Index No: 080-002-00-6	mercury sulphate Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Specific concentration limit: STOT RE 2; H373: C ≥ 0.1 %	0.25–1%

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 17.04.2021 Version number 19 Revision: 10.03.2021

Product name: COD2 TC (MR)

(Contd. of page 2)

CAS: 10294-26-5 EINECS: 233-653-7	disilver(1+) sulfate Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=100)	0.25–1%
CAS: 7778-50-9 EINECS: 231-906-6 Index No: 024-002-00-6 Reg.nr.: 01-2119454792-32-XXXX	potassium dichromate Ox. Sol. 2, H272; Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Muta. 1B, H340; Carc. 1B, H350; Repr. 1B, H360FD; STOT RE 1, H372; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H312; Skin Sens. 1, H317 Specific concentration limit: STOT SE 3; H335: C ≥ 5 %	0.25–1%

· **SVHC**

CAS: 7778-50-9	potassium dichromate

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information**
Personal protection for the First Aider!
Instantly remove any clothing soiled by the product.
· **After inhalation**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness bring patient into stable side position for transport.
· **After skin contact**
Wash with polyethylene glycol 400 and then rinse with copious amounts of water.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
· **After eye contact**
Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.
Call a doctor immediately.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Do not induce vomiting; instantly call for medical help.
· **4.2 Most important symptoms and effects, both acute and delayed:**
breathing difficulty
bloody diarrhoea
coughing
asthma attacks
metallic taste
after inhalation:
damage to the affected mucous membranes
after swallowing:
burns
absorption
pain
strong caustic effect.
unconsciousness
methaemoglobin formation
sickness
vomiting
cramps
· **Danger**
Danger of system failure.
Danger of gastric perforation.
Danger of pulmonary oedema.
· **4.3 Indication of any immediate medical attention and special treatment needed:**
If swallowed or in case of vomiting, danger of entering the lungs
Subsequent observation for pneumonia and pulmonary oedema

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** CO_2, sand, extinguishing powder.
· **For safety reasons unsuitable extinguishing agents** Water.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 3)

· **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
Sulphur oxides (SOx)
mercury vapours
chromium trioxide
Dipotassium oxide
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Ensure adequate ventilation
Use breathing protection against the effects of fumes/dust/aerosol.
· **Advice for emergency responders:** Protective equipment: see section 8

· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Inform respective authorities in case product reaches water or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Use neutralising agent.
Neutralize with diluted sodium hydroxide solution.
Absorb with liquid-binding material (sand, diatomite, universal binders).
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:**
Open and handle container with care.
Work only in fume cupboard.
Prevent formation of aerosols.
· **Hygiene measures:**
Do not inhale gases / fumes / aerosols.
Do not get in eyes, on skin, or on clothing.
Take off immediately all contaminated clothing.
Store protective clothing separately.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and containers:** Store in cool location.
· **Information about storage in one common storage facility:**
Store away from metals.
Do not store together with alkalis (caustic solutions).
Store away from flammable substances.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Store in a locked cabinet or with access restricted to technical experts or their assistants.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 4)

Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
This product is hygroscopic.
Store under dry conditions.

· **Recommended storage temperature:** 20°C +/- 5°C

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 7664-93-9 sulphuric acid	
WEL (Great Britain)	Long-term value: 0.05* mg/m³ *mist: defined as thoracic fraction
IOELV (European Union)	Long-term value: 0.05 mg/m³
OEL (Sweden)	Short-term value: 0.2 mg/m³ Long-term value: 0.1 mg/m³ C, V
CAS: 7783-35-9 mercury sulphate	
WEL (Great Britain)	Long-term value: 0.02 mg/m³ as Hg
IOELV (European Union)	Long-term value: 0.02 mg/m³ as Hg
OEL (Sweden)	Long-term value: 0.02 mg/m³ inhalerbart damm, som Hg; B
CAS: 10294-26-5 disilver(1+) sulfate	
WEL (Great Britain)	Long-term value: 0.01 mg/m³ as Ag
OEL (Sweden)	Long-term value: 0.1 mg/m³ som Ag, totaldamm
CAS: 7778-50-9 potassium dichromate	
WEL (Great Britain)	Long-term value: 0.05 mg/m³ as Cr; Carc, Sen, BMGV
OEL (Sweden)	Short-term value: 0.015 mg/m³ Long-term value: 0.005 mg/m³ totaldamm; C,S,V; som Cr;

· **Regulatory information**
WEL (Great Britain): EH40/2011
IOELV (European Union): (EU) 2017/164
OEL (Sweden): AFS2015:7

· **Additional information:** IOELV = Indicative Occupational Exposure Limit

· **DNELs**
Derived No Effect Level (DNEL)

CAS: 7664-93-9 sulphuric acid		
Inhalative	DNEL	0.1 mg/m³ (Worker / acute / local effects) 0.05 mg/m³ (Worker / acute / systemic effects)

· **Recommended monitoring procedures:**
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· **PNECs**
Predicted No Effect Concentration (PNEC)

CAS: 7664-93-9 sulphuric acid	
PNEC	8.8 mg/l (Sewage treatment plant)
	0.00025 mg/l (Marine water)
	0.0025 mg/l (Fresh water)
PNEC	0.002 mg/kg (Marine sediment)

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 5)

	0.002 mg/kg (Fresh water sediment)

· **Ingredients with biological limit values:**

CAS: 7783-35-9 mercury sulphate	
BMGV (Great Britain)	20 µmol/mol creatinine Medium: urine Sampling time: random Parameter: mercury
CAS: 7778-50-9 potassium dichromate	
BMGV (Great Britain)	10 µmol/mol creatinine Medium: urine Sampling time: post shift Parameter: chromium

· **Regulatory information** BMGV (Great Britain): EH40/2011

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

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Individual protection measures, such as personal protective equipment**
· **Eye/face protection**
Tightly sealed safety glasses.
Face protection
· **Hand protection**
Acid resistant gloves
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.3 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Other skin protection (body protection):** Acid resistant protective clothing
· **Breathing equipment:**
Use breathing protection against the effects of fumes/dust/aerosol.
In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
· **Recommended filter device for short term use:** Combination filter B-P2

· **Environmental exposure controls**
Avoid release to the environment.
Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Physical state**	Fluid
· **Form:**	Solution
· **Colour:**	Yellow-brown
· **Odour:**	Recognisable
· **Odour threshold:**	Not determined.
· **Melting point/Freezing point:**	Not determined.
· **Boiling point or initial boiling point and boiling range**	>100°C
· **Flammability**	Not applicable.
· **Explosive properties:**	Product is not explosive.
· **Lower and upper explosion limit**	
· **Lower:**	Not applicable.
· **Upper:**	Not applicable.
· **Flash point:**	Not applicable.
· **Ignition temperature:**	Not applicable.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 6)

· **Decomposition temperature:**	Not determined.
· **pH at 20°C**	1
· **Kinematic viscosity**	Not determined.
· **Solubility**	
· **Water:**	Fully miscible
· **Partition coefficient n-octanol/water (log value)**	Not applicable (mixture).
· **Vapour pressure:**	Not determined.
· **Density and/or relative density**	
· **Density at 20°C:**	1.76 g/cm³
· **Relative density:**	Not determined.
· **Relative gas density**	Not determined.
· **Particle characteristics**	Not applicable (liquid).

· **9.2 Other information**

· **Information with regard to physical hazard classes**
· **Corrosive to metals**
May be corrosive to metals.
· **Metals that are corroded by the substance or mixture** Information on incompatible materials can be found in Sections 7 and 10.
· **Other safety characteristics**
· **Oxidising properties:** CAS 7664-93-9 :
Oxidising potential
· **Additional information**
· **Solids content:** < 5 %
· **Solvent content:**
· **Organic solvents:** 0 %
· **Water:** < 20 %

SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability** Stable at ambient temperature (room temperature).
· **10.3 Possibility of hazardous reactions**
Reacts with metals forming hydrogen (--> Explosive!)
Corrosive action on metals
When diluting, always add acid to water, never vice versa
Diluting or dissolving in water always causes rapid heating
Reacts with acids, alkalis and oxidizing agents
Reacts with reducing agents
Reacts with peroxides
Reacts with halogenated compounds
Reacts with ammonia (NH_3).
· **10.4 Conditions to avoid** strong heating
· **10.5 Incompatible materials:**
metals
organic substances
combustible substances
organic solvents
· **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

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

· **Acute toxicity**
Classification according to calculation procedure:
Harmful if swallowed.
Toxic in contact with skin.

· **Acute toxicity estimate ($ATE_{(MIX)}$) - Calculation method:**

Oral	CLP $ATE_{(MIX)}$	681 mg/kg (.)
Dermal	CLP $ATE_{(MIX)}$	694 mg/kg (.)

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 7)

Inhalative	CLP $ATE_{(MIX)}$	5.9 mg/l/4h (aerosol (dust, mist))

· **LD/LC50 values that are relevant for classification:**

CAS: 7664-93-9 sulphuric acid		
Oral	LD50	2140 mg/kg (rat) (IUCLID)
	LC 50	510 mg/m³/2h (rat) IUCLID
CAS: 7783-35-9 mercury sulphate		
Oral	LD50	5 mg/kg (ATE)
	LD50.	57 mg/kg (rat) (RTECS)
Dermal	LD50	5 mg/kg (ATE)
	LD50.	625 mg/kg (rat)
Inhalative	LC50/4h	0.05 mg/l (ATE)
CAS: 10294-26-5 disilver(1+) sulfate		
Oral	LD50	>5000 mg/kg (rat) (OECD 401) (Registrant, ECHA)
CAS: 7778-50-9 potassium dichromate		
Oral	LD50	90.5 mg/kg (rat) (OECD 401) (ECHA, registrant: LD50 = 90.5 mg/kg female to 168.0 mg/kg male)
	LDLo	26 mg/kg (child)
		143 mg/kg (man)
Dermal	LD50	1170 mg/kg (rat) (IUCLID)
Inhalative	LC50/4h	0.094 mg/l/4h (rat) (OECD 403, Aerosol)
	LD50 IPR	28 mg/kg (rat)

· **Skin corrosion/irritation** Causes severe skin burns and eye damage.
· **Serious eye damage/irritation**
Causes serious eye damage.
Risk of blindness!

· **Information on components:**

CAS: 10294-26-5 disilver(1+) sulfate		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: burns)
CAS: 7778-50-9 potassium dichromate		
Irritation of skin	OECD 404	(rabbit: irritation)

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Information on components:**
CAS 7783-35-9: Sensitizing effect by skin contact is possible by prolonged/repeated exposure.
CAS 7778-50-9: Sensitizing effect by inhalation and skin contact is possible by prolonged exposure.

CAS: 7778-50-9 potassium dichromate		
Sensitisation	Patch test (human)	(positive) (IUCLID)

· **Germ cell mutagenicity** May cause genetic defects.
· **Carcinogenicity** May cause cancer.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure**
May cause damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.

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

· **Additional toxicological information:**
Mercury compounds have a cytotoxic and protoplasmatoxic effect.
The principal signs manifest themselves in the CNS.
Inhalable chromium (VI) compounds have claerly shown themselves to be carcinogenic in animal experiments.
Poor tendency for ulcers to heal following penetration of substance into the wound.
Lethal dose (man): 0.5 g
Antidotes: chelating agents such as EDTA, DMPS

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 8)

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
The aerosol is corrosive to the eyes, the skin and the respiratory tract. Inhalation of aerosols may cause lung oedema.
Sulfuric acid: erosion of the teeth, cancer

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 7664-93-9 sulphuric acid	
EC50	>100 mg/l/48h (Daphnia magna) (OECD 202) (ECHA)
LC50	16–29 mg/l/96h (bluegill) (Merck)
CAS: 7783-35-9 mercury sulphate	
LC50	0.5 mg/l/48h (gold orfe)
EC50	0.005–3.6 mg/l/48h (Daphnia magna)
LC50	0.19 mg/l/96h (fathhead minnow)
CAS: 10294-26-5 disilver(1+) sulfate	
EC50	0.0045 mg/l/48h (Daphnia magna) (GESTIS)
EC50	0.0049 mg/l/96h (fathhead minnow)
EC10	0.00214 mg/l (Daphnia magna) (ASTM) (21d, test substance: $AgNO_3$)
	0.00039 mg/l (fathhead minnow) (ASTM E1241-98) (28d, test substance: $AgNO_3$, result in mg/l Ag)
CAS: 7778-50-9 potassium dichromate	
EC50	0.62 mg/l/48h (Daphnia magna) (OECD 202) (Merck)
NOEC	0.016–0.064 mg/l (Daphnia magna) (7d)
	6 mg/l (fathhead minnow) (7d)
IC50	0.16–0.59 mg/l/96 h (Chlorella vulgaris) (IUCLID)
EC50	0.31 mg/l/72 h (Desmodesmus subspicatus)
LC50	58.5 mg/l/96h (byr)
	0.131 mg/l/96h (bluegill)
	160 mg/l/96h (guppy)
	26.13 mg/l/96h (fathhead minnow) (Merck/IUCLID)

· **Bacterial toxicity:**	
CAS: 7778-50-9 potassium dichromate	
EC50	58 mg/l (Photobacterium phosphoreum) (30 min; Microtox-Test)

· **Other information:**
Toxic for fish:
sulphates > 7 g/l

· **12.2 Persistence and degradability** .

· **Other information:**
Mixture of inorganic compounds.
Methods for the determination of biodegradability are not applicable to inorganic substances.

· **12.3 Bioaccumulative potential**
BCF = Bioconcentration factor

CAS: 10294-26-5 disilver(1+) sulfate	
BCF	2.5 (rainbow trout) (8d, 15°C, test substance: $AgNO_3$)

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 9)

CAS: 7778-50-9 potassium dichromate	
BCF	17.4 (rainbow trout)

· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
Harmful effect due to pH shift.
Forms corrosive mixtures with water even if diluted.
Avoid transfer into the environment.
· **Water hazard:**
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

· **European waste catalogue**	
16 05 07*	discarded inorganic chemicals consisting of or containing hazardous substances

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN2922

· **14.2 UN proper shipping name**
· **ADR** 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (SULPHURIC ACID, MERCURY SULPHATE), ENVIRONMENTALLY HAZARDOUS
· **IMDG** CORROSIVE LIQUID, TOXIC, N.O.S. (SULPHURIC ACID, MERCURY SULPHATE), MARINE POLLUTANT
· **IATA** CORROSIVE LIQUID, TOXIC, N.O.S. (SULPHURIC ACID, MERCURY SULPHATE)

· **14.3 Transport hazard class(es)**

· **ADR**

· **Class** 8 (CT1) Corrosive substances.
· **Label** 8+6.1

· **IMDG**

· **Class** 8 Corrosive substances.

(Contd. on page 11)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 10)

· **Label**	8/6.1
· **IATA**	

· **Class**	8 Corrosive substances.
· **Label**	8 (6.1)
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	II
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	Yes Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· **Kemler Number:**	86
· **EMS Number:**	F-A,S-B
· **Segregation groups**	Acids
· **Stowage Category**	B
· **Stowage Code**	SW2 Clear of living quarters.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Excepted quantities (EQ):**	E2
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

*
SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**

CAS: 7783-35-9	mercury sulphate	Annex I Part 1 Annex I Part 3 Annex V Part 2

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**

None of the ingredients is listed.

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** E1 Hazardous to the Aquatic Environment
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**

CAS: 7778-50-9	potassium dichromate

(Contd. on page 12)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 11)

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 18, 28, 29, 47, 72

· **Information about limitation of use:**
Employment restrictions concerning pregnant and lactating women must be observed (92/85/EEC).
Employment restrictions concerning young persons must be observed (94/33/EC).

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

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**
H272 May intensify fire; oxidiser.
H290 May be corrosive to metals.
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.
H318 Causes serious eye damage.
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.

· **Abbreviations and acronyms:**
EC50: effective concentration, 50 percent (in vivo)
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: hallf maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Ox. Sol. 2: Oxidizing solids – Category 2
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1B: Carcinogenicity – Category 1B
Repr. 1B: Reproductive toxicity – Category 1B
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

(Contd. on page 13)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 12)

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· **Sources**
Data arise from safety data sheets, reference works and literature.
ECHA: European CHemicals Agency http://echa.europa.eu
IUCLID (International Uniform Chemical Information Database)
GESTIS- Stoffdatenbank (Substance Database, Germany)
RTECS (Registry of Toxic Effects of Chemical Substances)

· *** Data compared to the previous version altered.**