

### Safety Data Sheet acc. to ISO/DIS 11014

Printing date 10/22/2015

Reviewed on 10/22/2015

## 1 Identification

- **Product identifier**
- **Trade name:** COD Reagent 0-15000 mg/l, Mercury Free
- **Catalogue number:** 420712, 2420712
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**  
Tintometer Inc.  
6456 Parkland Drive  
Sarasota, FL 34243  
USA  
phone: (941) 756-6410  
fax: (941) 727-9654  
www.lovibond.us  
Made in Germany
- **Emergency telephone number:** Chemtrec®: (US & Canada) 800-424-9300 (International) +1 (703) 527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**

US-GHS



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Muta. 1B H340 May cause genetic defects.  
Carc. 1B H350 May cause cancer.  
Repr. 1B H360 May damage fertility or the unborn child.



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

Skin Sens. 1 H317 May cause an allergic skin reaction.

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

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## Hazard pictograms



GHS05 GHS08 GHS09

## Signal word Danger

### Hazard-determining components of labeling:

sulphuric acid  
potassium dichromate

### Hazard statements

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H340 May cause genetic defects.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.  
H400 Very toxic to aquatic life.  
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/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.

### Canadian Hazard Symbols:



### WHMIS classification:

E  
Corrosive material  
D2A  
Very toxic material causing other toxic effects

### NFPA ratings (scale 0 - 4)



Health = 3  
Fire = 0  
Reactivity = 2

The substance demonstrates unusual reactivity with water.

### Other hazards

Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.  
Acid burns have to be treated immediately, as it may otherwise cause badly curing wounds.

## 3 Composition/information on ingredients

### Chemical characterization: Mixtures

**Description:** sulfuric acid solution

### Composition and Information on Ingredients:

Cancer Status IARC: Strong inorganic acid mists containing sulphuric acid can cause cancer.

The percent content of the chromium compound mentioned below refers to the amount of the pure chromium therein.

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CAS: 7664-93-9 EINECS: 231-639-5 Index number: 016-020-00-8 RTECS: WS5600000	sulphuric acid ⚠ Met. Corr.1, H290; Skin Corr. 1A, H314	60-70%
CAS: 10294-26-5 EINECS: 233-653-7	disilver(1+) sulphate ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=100)	0.1-<1%
CAS: 7778-50-9 EINECS: 231-906-6 Index number: 024-002-00-6 RTECS: HX 7680000	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, H360; STOT RE 1, H372; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H312; Skin Sens. 1, H317	0.1-<0.3%

• **Additional information:** For the wording of the listed risk phrases refer to section 16.

## \* 4 First-aid measures

• **Description of first aid measures**

• **General information:**

Personal protection for the First Aider.  
Immediately remove any clothing soiled by the product.

• **After inhalation:**

Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness remove to fresh air, apply artificial respiration, and consult a physician.

• **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.  
Call a doctor immediately.

• **After swallowing:**

Rinse out mouth and then drink 1-2 glasses of water.  
Do not induce vomiting; immediately call for medical help.

• **Most important symptoms and effects, both acute and delayed**

burns  
resorption  
after inhalation:  
coughing  
breathing difficulty  
asthma attacks  
damage to the affected mucous membranes  
after swallowing:  
sickness  
vomiting  
diarrhoea  
irritations  
pain  
strong caustic effect  
methaemoglobinaemia  
unconsciousness  
cramps

• **Danger:**

Danger of circulatory collapse.  
Danger of gastric perforation.  
Danger of pulmonary edema.

• **Indication of any immediate medical attention and special treatment needed:**

If swallowed or in case of vomiting, danger of entering the lungs.  
Later observation for pneumonia and pulmonary edema.

## 5 Fire-fighting measures

• **Extinguishing media**

• **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder.

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- **For safety reasons unsuitable extinguishing agents:** Water
  - **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.  
Sulfur oxides (SO<sub>x</sub>)  
chromium oxides  
Potassium oxide
  - **Advice for firefighters**
  - **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
  - **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Ambient fire may liberate hazardous vapours.
- 

## 6 Accidental release measures

- **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 respiratory protective device against the effects of fumes/dust/aerosol.
  - **Advice for emergency responders:** Protective equipment: see section 8
  - **Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Prevent seepage into sewage system, workpits and cellars.
  - **Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Use neutralizing agent.  
Neutralize with diluted sodium hydroxide solution.  
Absorb with liquid-binding material (sand, diatomite, universal binders).  
Dispose contaminated material as waste according to item 13.
  - **Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- 

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
- **Advice on safe handling:**  
Open and handle receptacle with care.  
Work only in fume cabinet.  
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 before breaks and at the end of work.  
Do not eat, drink or smoke when using this product.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**  
Do not store together with alkalis (caustic solutions).  
Store away from flammable substances.  
Store away from metals.
- **Further information about storage conditions:**  
Store under lock and key and with access restricted to technical experts or their assistants only.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

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- Protect from exposure to the light.  
 Protect from humidity and water.  
 This product is hygroscopic.  
 Store in dry conditions.
- **Recommended storage temperature:** 20 °C +/- 5 °C (approx. 68°F)
  - **Specific end use(s)** No further relevant information available.

### \* 8 Exposure controls/personal protection

#### · Control parameters

#### · Components with limit values that require monitoring at the workplace:

<b>CAS: 7664-93-9 sulphuric acid</b>	
PEL (USA)	Long-term value: 1 mg/m <sup>3</sup>
REL (USA)	Long-term value: 1 mg/m <sup>3</sup>
TLV (USA)	Long-term value: 0.2* mg/m <sup>3</sup> *as thoracic fraction
EL (Canada)	Long-term value: 0.2 mg/m <sup>3</sup> ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0.2 mg/m <sup>3</sup>
<b>CAS: 10294-26-5 disilver(1+) sulphate</b>	
EL (Canada)	Short-term value: 0.03 mg/m <sup>3</sup> Long-term value: 0.01 mg/m <sup>3</sup> as Ag
<b>CAS: 7778-50-9 potassium dichromate</b>	
PEL (USA)	Long-term value: 0.005* mg/m <sup>3</sup> Ceiling limit value: 0.1** mg/m <sup>3</sup> *as Cr(VI) **as CrO <sub>3</sub> ; see 29 CFR 1910.1026
REL (USA)	Long-term value: 0.0002 mg/m <sup>3</sup> as Cr; See Pocket Guide Apps. A and C
TLV (USA)	Long-term value: 0.05 mg/m <sup>3</sup> as Cr; BEI
EL (Canada)	Long-term value: 0.025 mg/m <sup>3</sup> Ceiling limit value: 0.1 mg/m <sup>3</sup> as Cr; ACGIH A1, IARC 1

#### · Additional information:

ACGIH® - American Conderence of Governmental Industrial Hygienists

- A1 - Confirmed human carcinogen
- A2 - Suspected human carcinogen
- A3 - Confirmed animal carcinogen with unknown relevance to humans
- A4 - Not classifiable as a human carcinogen
- A5 - Not suspected as a human carcinogen

#### · DNEL

Derived No Effect Level (DNEL)

<b>CAS: 7664-93-9 sulphuric acid</b>		
Inhalative	DNEL	0.1 mg/m <sup>3</sup> (Worker / acute / local effects)
		0.05 mg/m <sup>3</sup> (Worker / acute / systemic effects)

#### · PNEC

Predicted No Effect Concentration (PNEC)

<b>CAS: 7664-93-9 sulphuric acid</b>	
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)
	0.002 mg/kg (Fresh water sediment)

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<b>Ingredients with biological limit values:</b>	
<b>CAS: 7778-50-9 potassium dichromate</b>	
BEI (USA)	25 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Total chromium (fume)
	10 µg/L Medium: urine Time: increase during shift Parameter: Total chromium (fume)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Engineering measures:**  
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.  
See item 7.
- **Personal protective equipment:**
- **Breathing equipment:** Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Combination filter B-P2
- **Protection of hands:**  
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:  $\geq 0.3$  mm
- **Penetration time of glove material**  
Value for the permeation: Level  $\leq 1$  (10 min)  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**  
Tightly sealed goggles  
Face protection
- **Body protection:** Acid resistant protective clothing
- **Limitation and supervision of exposure into the environment:** Avoid release to the environment.

## 9 Physical and chemical properties

<b>Information on basic physical and chemical properties</b>	
<b>Appearance:</b>	
Form / Physical state:	Liquid
Color:	Yellow-brown
Odor:	Recognizable
Odor threshold:	Not determined.
pH-value at 20 °C (68 °F):	1
Melting point/freezing point:	Not determined.
Initial boiling point and boiling range:	> 100 °C (> 212 °F)
Flash point:	Not applicable.
Flammability (solid, gas):	Not applicable.
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not self-igniting.
Danger of explosion:	Product does not present an explosion hazard.
<b>Flammability or explosive limits:</b>	
Lower:	Not applicable.
Upper:	Not applicable.
Oxidizing properties:	Oxidizing potential
Vapor Pressure:	Not determined.

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· <b>Density at 20 °C (68 °F):</b>	1,53 g/cm <sup>3</sup> (12.768 lbs/gal)
· <b>Relative density:</b>	Not determined.
· <b>Vapor density:</b>	Not determined.
· <b>Evaporation rate:</b>	Not determined.
· <b>Solubility(ies)</b>	
<b>Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0,0 %
<b>Water:</b>	< 40 %
<b>Solids content:</b>	< 1 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** see section "Possibility of hazardous reactions"
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions**
  - Corrosive action on metals.
  - Reacts with metals forming hydrogen (Danger of explosion!)
  - When diluting, always add acid to water, never vice versa.
  - Diluting or dissolving in water always causes rapid heating.
- **Conditions to avoid** strong heating
- **Incompatible materials:**
  - organic substances
  - Ammonia (NH<sub>3</sub>)
  - alkali compounds
  - alkalis
  - acids
  - metals
  - halogen compounds
  - combustible materials
  - organic solvents
  - nitriles
  - peroxides
  - reducing agents
  - oxidizing agents
- **Hazardous decomposition products:**
  - Sulfur oxides (SO<sub>x</sub>)
  - see section 5

## \*11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

### · **Acute toxicity estimate (ATE<sub>(MIX)</sub>) - Calculation method:**

Oral	GHS ATE <sub>(MIX)</sub>	3365 mg/kg (.)
Inhalative	GHS ATE <sub>(MIX)</sub>	77 mg/l/4h (.) (Aerosol)

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

#### **CAS: 7664-93-9 sulphuric acid**

Oral	LD50	2140 mg/kg (rat) (IUCLID)
Inhalative	LC 50	510 (pure) mg/m <sup>3</sup> /2h (rat) IUCLID

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<b>CAS: 10294-26-5 disilver(1+) sulphate</b>		
Oral	LD50	> 5000 mg/kg (rat) (OECD 401) (Registrant, ECHA)
<b>CAS: 7778-50-9 potassium dichromate</b>		
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)
Inhalative	LC50	0.094 mg/l/4h (rat) (OECD 403, Aerosol)
	LD50 IPR	28 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Causes severe skin burns.
- **on the eye:**  
Causes serious eye damage.  
Risk of blindness!

- **Information on components:**

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

- **Sensitization:**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.

- **Information on components:**

CAS 7778-50-9: Sensitizing effect by inhalation and skin contact is possible by prolonged exposure.

<b>CAS: 7778-50-9 potassium dichromate</b>		
Sensitization	Patch test (human)	(positive) (IUCLID)

- **Carcinogenic categories**

<b>• IARC (International Agency for Research on Cancer)</b>		
CAS: 7664-93-9	sulphuric acid	1
CAS: 7778-50-9	potassium dichromate	1

<b>• NTP (National Toxicology Program)</b>		
CAS: 7664-93-9	sulphuric acid	K
CAS: 7778-50-9	potassium dichromate	K

<b>• OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
None of the ingredients is listed.		

- **Other information:**

see section 8 / 15

Cancer Status of Sulfuric acid: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric acid" as a known human carcinogen, (IARC category 1). This classification applies only to mists containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions.

A2 (Suspected for humans) by ACGIH

IARC - International Agency for Research on Cancer

- Group 1 - Carcinogenic to humans
- Group 2A - Probably carcinogenic to humans
- Group 2B - Possibly carcinogenic to humans
- Group 3 - Not classifiable as to carcinogenicity to humans
- Group 4 - Probably not carcinogenic to humans

NTP - National Toxicology Program, U.S. Department of Health and Human Services

- Group K - Known to be Human Carcinogens
- Group R - Reasonably Anticipated to be Human Carcinogens

- **Synergistic Products:** None

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- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**  
The following statements refer to the mixture:  
Muta. 1B, Carc. 1B, Repr. 1B
- **Germ cell mutagenicity** May cause genetic defects.
- **Carcinogenicity** May cause cancer.
- **Reproductive toxicity** May damage fertility.
- **Teratogenicity:** May damage the unborn child.
- **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**  
Inhalable chromium (VI) compounds have clearly 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  
Sulfuric acid: erosion of the teeth, cancer  
The aerosol is corrosive to the eyes, the skin and the respiratory tract. Inhalation of aerosols may cause lung oedema.
- **Experience with humans:**  
CAS 7778-50-9: Can cause liver damage.  
CAS 7778-50-9: Can cause kidney damages.  
CAS 7778-50-9: May cause lung damages.  
CAS 7778-50-9: Can cause cardiac damages.

## 12 Ecological information

### · Toxicity

#### · Aquatic toxicity:

##### **CAS: 7664-93-9 sulphuric acid**

EC50 &gt; 100 mg/l/48h (Daphnia magna) (OECD 202)

LC50 16-29 mg/l/96h (bluegill)  
(Merck)

##### **CAS: 10294-26-5 disilver(1+) sulphate**

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<sub>3</sub>)  
0.00039 mg/l (fathhead minnow) (ASTM E1241-98)  
(28d, test substance: AgNO<sub>3</sub>, 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:

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sulfates &gt; 7 g/l

- **Persistence and degradability .**

- **Other information:**

Mixture of inorganic compounds.

Methods for the determination of biodegradability are not applicable to inorganic substances.

- **Bioaccumulative potential**

BCF = Bioconcentration factor

<b>CAS: 10294-26-5 disilver(1+) sulphate</b>	
BCF	2.5 (rainbow trout) (8d, 15 °C, test substance: AgNO <sub>3</sub> )
<b>CAS: 7778-50-9 potassium dichromate</b>	
BCF	17.4 (rainbow trout)

- **Mobility in soil** No further relevant information available.

- **Other adverse effects**

Forms corrosive mixtures with water even if diluted.

Harmful effect due to pH shift.

Neutralization possible in waste water treatment plants.

Avoid transfer into the environment.

- **Water hazard:**

Mixture (German regulation, Self-assessment):

Water danger class 3: extremely hazardous for water

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

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

### 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

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

Hand over to hazardous waste disposers.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### \*14 Transport information

- **UN-Number**

• DOT, ADR, RID, IMDG, IATA

UN1830

- **UN proper shipping name**

• DOT, IATA

Sulfuric acid

• ADR/RID

1830 Sulfuric acid, ENVIRONMENTALLY HAZARDOUS

• IMDG

SULPHURIC ACID, MARINE POLLUTANT

- **Transport hazard class(es)**

• DOT / TDG

• **Class**

8 Corrosive substances

• **Label**

8

- **ADR/RID**

• **Class**

8 (C1) Corrosive substances

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· Label	8
· IMDG	
	
· Class	8 Corrosive substances
· Label	8
· IATA	
	
· Class	8 Corrosive substances
· Label	8
· Packing group	
· DOT, ADR, RID, IMDG, IATA	II
· Environmental hazards:	Product contains environmentally hazardous substances: disilver(1+) sulphate
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR/RID):	Symbol (fish and tree)
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	E
· Stowage Code	SW15 For metal drums, stowage category B.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· ADR/RID	
· Limited quantity (LQ):	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· 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
· Canadian TDG Class:	UN 1830, 8, II

## \*15 Regulatory information

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

### · Section 355 (Extremely hazardous substances):

CAS: 7664-93-9 sulphuric acid

### · Section 313 (Specific toxic chemical listings):

This mixture contains Chromic acid, dipotassium salt [listed as \*\*undefined\*\* - Cr(VI)] which is subject to the reporting requirements of Section 313 SARA Title III and 40 CFR Part 372.

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**Trade name: COD Reagent 0-15000 mg/l, Mercury Free**

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CAS: 7664-93-9	sulphuric acid	
CAS: 10294-26-5	disilver(1+) sulphate	
CAS: 7778-50-9	potassium dichromate	
<b>· TSCA (Toxic Substances Control Act):</b>		
All ingredients are listed.		
<b>· Proposition 65</b>		
<b>· Chemicals known to cause cancer:</b>		
Chromium (hexavalent) compounds are listed in California Proposition 65 as carcinogens.		
CAS: 7778-50-9	potassium dichromate	
<b>· Chemicals known to cause reproductive toxicity for females:</b>		
Chromium (hexavalent) compounds are listed in California Proposition 65 as toxic to reproduction for females.		
CAS: 7778-50-9	potassium dichromate	
<b>· Chemicals known to cause reproductive toxicity for males:</b>		
Chromium (hexavalent) compounds are listed in California Proposition 65 as toxic to reproduction for males.		
CAS: 7778-50-9	potassium dichromate	
<b>· Chemicals known to cause developmental toxicity:</b>		
Chromium (hexavalent) compounds are listed in California Proposition 65 as toxic to development.		
CAS: 7778-50-9	potassium dichromate	
<b>· Canadian Ingredient Disclosure List</b>		
<b>· Limit 0,1%</b>		
CAS: 7778-50-9	potassium dichromate	
<b>· Limit 1%</b>		
CAS: 7664-93-9	sulphuric acid	
<b>· Canadian Domestic Substances List (DSL)</b>		
All ingredients are listed.		
<b>· Canadian Non-domestic Substance List</b>		
None of the ingredients is listed.		
<b>· New Jersey Right-to-Know List:</b>		
CAS: 7664-93-9	sulphuric acid	
CAS: 7778-50-9	potassium dichromate	
<b>· New Jersey Special Hazardous Substance List:</b>		
CAS: 7664-93-9	sulphuric acid	CA, CO, R2
CAS: 7778-50-9	potassium dichromate	CA, MU
<b>· Pennsylvania Right-to-Know List:</b>		
CAS: 7664-93-9	sulphuric acid	
CAS: 7778-50-9	potassium dichromate	
<b>· Pennsylvania Special Hazardous Substance List:</b>		
CAS: 7664-93-9	sulphuric acid	E
CAS: 7778-50-9	potassium dichromate	E
<b>· EPA (Environmental Protection Agency)</b>		
CAS: 7778-50-9	potassium dichromate	A(inh), D(oral), K/L(inh), CBD(oral)
<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>		
Chromium, hexavalent [Cr(VI)]		
CAS: 7778-50-9	potassium dichromate	
<b>· Australian Inventory of Chemical Substances</b>		
All ingredients are listed.		
<b>· European EINECS</b>		
All ingredients are listed.		
<b>· Standard for the Uniform Scheduling of Drugs and Poisons</b>		
CAS: 7664-93-9	sulphuric acid	S6
<b>· Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals:</b>		
None of the ingredients is listed.		

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**Trade name: COD Reagent 0-15000 mg/l, Mercury Free**


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<b>Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:</b>
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None of the ingredients is listed.
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- **Information about limitation of use:**

Employment restrictions concerning pregnant and lactating women must be observed.  
Employment restrictions concerning young persons must be observed.

- **This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR**

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

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## \*16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H272 May intensify fire; oxidizer.  
H290 May be corrosive to metals.  
H301 Toxic if swallowed.  
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.  
H360 May damage fertility or the unborn child.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

- **Date of preparation / last revision 10/22/2015 / 16**

- **Abbreviations and acronyms:**

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: half maximal inhibitory concentration  
NOEL or NOEC: No Observed Effect Level or Concentration  
ADR: Accord européen sur le transport 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  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
Ox. Sol. 2: Oxidising Solids, Hazard Category 2  
Met. Corr. 1: Corrosive to metals, Hazard Category 1  
Acute Tox. 3: Acute toxicity, Hazard Category 3  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Acute Tox. 2: Acute toxicity, Hazard Category 2  
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
Muta. 1B: Germ cell mutagenicity, Hazard Category 1B  
Carc. 1B: Carcinogenicity, Hazard Category 1B  
Repr. 1B: Reproductive toxicity, Hazard Category 1B  
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1  
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

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**Trade name: COD Reagent 0-15000 mg/l, Mercury Free**

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Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

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**• Sources**

Data arise from safety data sheets, reference works and literature.  
GESTIS- Stoffdatenbank (Substance Database, Germany)  
IUCLID (International Uniform Chemical Information Database)

**• \* Data compared to the previous version altered.**

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US

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