SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Issue Date 21-01-2005 **Revision Date** 14-Feb-2023 **Version** 2.1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s) 2125951-EU

Product Name 2125951 COD/CSB/DCO

Unique Formula Identifier (UFI) CCT4-HF7V-480J-0J4F

Molecular weight Not applicable

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

Recommended Use Laboratory Use.

Uses advised against Consumer use

1.3. Details of the supplier of the safety data sheet

Supplier
HACH UK
Laser House
Ground Floor, Suite B
Waterfront Quay, Salford Quays
GB - Manchester, M50 3XW
Tel. +44 (0) 161 872 1487
info-uk@hach.com

HACH Ireland
Unit 34 GB Business Park
Little Island
IRL-Co. Cork
T45 H681
Tel. +353 (0)146 02 522
info-ie@hach.com

1.4. Emergency telephone number

UK: Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Corrosive to metals	Category 1 - (H290)
Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 3 - (H311)

Skin corrosion/irritation	Category 1 Sub-category A - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Germ cell mutagenicity	Category 1B - (H340)
Carcinogenicity	Category 1A - (H350)
Specific target organ toxicity — repeated exposure	Category 2 - (H373)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label elements

Contains Sulfuric acid 82%, Sulfuric acid, mercury(2+) salt (1:1), Sulfuric acid, disilver(1+) salt, Chromium trioxide



Signal word
Danger

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 organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects
EUH208 - Contains Chromium trioxide May produce an allergic reaction.

Precautionary Statements - EU (§28, 1272/2008)
P201 - Obtain special instructions before use
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
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 + P313 - IF exposed or concerned: Get medical advice/attention

Special labelling of certain mixtures
Restricted to professional users

2.3. Other hazards
No information available.

PBT & vPvB
This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT)
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	CAS No. EC No. Index No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Sulfuric acid	7664-93-9 (016-020-00-8) 231-639-5 016-020-00-8	80 - 90%	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 (080-002-00-6) 231-992-5 080-002-00-6	<1%	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	10294-26-5 233-653-7 -	<1%	Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	-	100	100
Chromium trioxide	1333-82-0 215-607-8 024-001-00-0 024-017-00-8	<1%	Ox. Sol. 1 - H271 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Skin Corr. 1A - H314 Skin Sens. 1 - H317 Eye Dam. 1 - H318 Acute Tox. 2 - H330 Resp. Sens. 1 - H334 Muta. 1B - H340 Carc. 1A - H350 Repr. 2 - H361f STOT RE 1 - H372 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	STOT SE 3 :: C>=1%	-	-

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

Acute Toxicity Estimate *No information available*

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Sulfuric acid, disilver(1+) salt 10294-26-5	> 5000 mg/kg	None reported	None reported	None reported	None reported
Chromium trioxide 1333-82-0	52 mg/kg	55 mg/kg	0.217 mg/L	None reported	None reported

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
Chromium trioxide	1333-82-0	X

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice Take off contaminated clothing and shoes immediately. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.

Skin contact Get immediate medical attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. For severe burns, immediate medical attention is required.

Ingestion Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing vapours or mists. Use personal protective equipment as required. See section 8 for more information.

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

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

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

Note to doctors Treat symptomatically.

Section 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Product itself does not burn.

Unsuitable extinguishing media No information available.

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. Do not flush into surface water or sanitary sewer system.

Hazardous combustion products	Sulphur oxides. chromium oxides. Mercury.

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.
Additional information	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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. Attention! Corrosive material. Keep people away from and upwind of spill/leak. Avoid breathing vapours or mists.
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	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Place in appropriate chemical waste container.
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. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Avoid breathing vapours or mists.
General hygiene considerations	Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. 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. Protect from

moisture. Keep out of the reach of children. Store away from other materials. Store locked up. Accessible only for authorized persons.

7.3. Specific end use(s)

Specific use(s) Analytical reagent.
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	United Kingdom	Ireland
Sulfuric acid 7664-93-9	TWA: 0.05 mg/m³	TWA: 0.05 mg/m³ STEL: 0.15 mg/m³	TWA: 0.05 ppm STEL: 0.15 ppm
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	TWA: 0.02 mg/m³	TWA: 0.02 mg/m³ STEL: 0.06 mg/m³	TWA: 0.02 mg/m³ STEL: 0.06 mg/m³
Sulfuric acid, disilver(1+) salt 10294-26-5	TWA: 0.01 mg/m³	TWA: 0.01 mg/m³ STEL: 0.03 mg/m³	TWA: 0.01 mg/m³ STEL: 0.03 mg/m³
Chromium trioxide 1333-82-0	TWA: 0.005 mg/m³ TWA: 0.010 mg/m³ TWA: 0.025 mg/m³	TWA: 0.01 mg/m³ TWA: 0.025 mg/m³ STEL: 0.03 mg/m³ STEL: 0.065 mg/m³ Sen+	TWA: 0.005 mg/m³ TWA: 0.01 mg/m³ TWA: 0.025 mg/m³ STEL: 0.15 mg/m³ STEL: 0.03 mg/m³ STEL: 0.075 mg/m³

Chemical name	European Union	United Kingdom	Ireland
Chromium trioxide 1333-82-0	-	-	25 µg/L (urine - total Chromium end of shift at end of workweek) 10 µg/L (urine - total Chromium increase during shift)

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

Additional information No information available.

8.2. Exposure controls

Engineering controls Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Personal protective equipment
Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Barrier creams may help to protect the exposed areas of skin. Wear suitable gloves. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374-1:2016 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III acco.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Short term	Wear protective nitrile rubber gloves	0,40 mm	>30 minutes
Long term (repeated)	Wear protective Viton™ gloves	0,70 mm	>480 minutes

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection Ensure adequate ventilation. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Recommended filter type: ABEK-P3.

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

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Liquid

Colour Light orange colour **Odour** Odourless

Odour threshold Not applicable

Property	Values	Remarks • Method
Molecular weight	Not applicable	
pH	< 0.5	@ 20 °C
Melting point / freezing point	4 °C / 39.2 °F	
Initial boiling point and boiling range	~ 300 °C / 572 °F	
Evaporation rate	0.16 (water = 1)	
Vapour pressure	1.725 mm Hg / 0.23 kPa at 25 °C / 77 °F	
Relative vapor density	0.03	
Specific Gravity	1.78	
Partition coefficient	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	

Decomposition temperature No data available

Dynamic viscosity ~ 2.499 cP (mPa s) at 20 °C / 68 °F

Kinematic viscosity ~ 1.404 cSt (mm^2/s) at 20 °C / 68 °F
Relative density 1.78 g/mL

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Completely soluble	> 10000 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	No information available	No data available	No information available

Metal Corrosivity
Classified as corrosive to metal according to CLP criteria
Steel Corrosion Rate 4.88 mm/yr / 0.19 in/yr
Aluminum Corrosion Rate 55.4 mm/yr / 2.18 in/yr

Explosive properties

Upper explosion limit No data available
Lower explosion limit No data available

Flammable properties

Flash point No data available

Flammability

Upper flammability limit: No data available
Lower flammability limit No data available

Oxidising properties No data available.

Bulk density No data available

9.2. Other information

No information available.

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity Reacts violently with water. Corrosive to metal.

10.2. Chemical stability

Stability Stable under normal conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Reacts with many compounds.

Hazardous polymerisation Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid Exposure to air or moisture over prolonged periods. Extremes of temperature and direct sunlight. Temperatures above 300 °C / 572 °F.

10.5. Incompatible materials

Incompatible materials Organic material. Bases. Metals. Ammonia. Reducing agent. Nitric acid. Alkaline earth metals.

10.6. Hazardous decomposition products

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating and toxic gases and vapours.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity
Harmful if swallowed
Toxic in contact with skin

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid, disilver(1+) salt	Rat LD_{50}	> 5000 mg/kg	None reported	None reported	Vendor SDS
Chromic acid ($H_2Cr_2O_7$)	Rat LD_{50}	80 mg/kg	None reported	None reported	RTECS

Dermal Exposure Route:

Inhalation (Dust/Mist) Exposure Route:

Inhalation (Vapor) Exposure Route:

Acute Toxicity Estimate (ATE)

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

ATEmix (oral)	614.30 mg/kg
ATEmix (dermal)	633.30 mg/kg
ATEmix (inhalation-dust/mist)	5.83 mg/l
ATEmix (inhalation-vapour)	63.90 mg/l

Unknown acute toxicity
0.001 % of the mixture consists of ingredient(s) of unknown toxicity.

0.001 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

0.001 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
0.001 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
0.001 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapour)
0.001 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Skin corrosion/irritation
Causes severe burns.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid	Existing human experience	Human	None reported	None reported	Corrosive to skin	HSDB
Sulfuric acid, mercury(2+) salt (1:1)	Existing human experience	Human	None reported	None reported	Skin irritant	GESTIS
Sulfuric acid, disilver(1+) salt	Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA

Serious eye damage/eye irritation
Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid	Existing human experience	Human	None reported	None reported	Corrosive to eyes	HSDB
Sulfuric acid, mercury(2+) salt (1:1)	Existing human experience	Human	None reported	None reported	Eye irritant	GESTIS
Sulfuric acid, disilver(1+) salt	Draize Test	Rabbit	180 mg	None reported	Corrosive to eyes	ECHA

Respiratory or skin sensitisation
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Skin Sensitization Exposure Route:

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sulfuric acid, disilver(1+) salt	*in vivo* Assay	Guinea pig	No sensitisation responses were observed.	ECHA

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

Mixture No data available.

Substance Test data reported below.

Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid	Human TD_{Lo}	0.144 mg/L	5 minutes	**Lungs, Thorax, or Respiration** Dyspnea	RTECS

STOT - repeated exposure
May cause damage to organs.

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid, disilver(1+) salt	Rat LD	> 2000 mg/kg	14 days	No toxicological effects observed	ECHA

Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid	Human TC_{Lo}	0.003 mg/L	168 days	**Musculoskeletal** Changes in teeth and supporting structures	RTECS

Germ cell mutagenicity
Classification based on data available for ingredients. Contains a known or suspected mutagen.

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

Chemical name	European Union
Chromium trioxide	Muta. 1B

Mixture invitro **Data** No data available.

Substance invitro **Data** Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid	Cytogenetic analysis	Hamster ovary	4 mmol/L	None reported	Positive test result for mutagenicity	No information available
Sulfuric acid, disilver(1+) salt	Mutation in mammalian somatic cells	Human lymphocyte	.08 mg/L	3 hours	Negative	ECHA

Mixture invivo **Data** No data available.

Substance invivo **Data** No data available.

Carcinogenicity
Classification based on data available for ingredients.

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

Chemical name	European Union
Chromium trioxide	Carc. 1A Carc. 1B

Mixture No data available.

Substance No data available.

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

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

Chemical name	European Union
Chromium trioxide	Repr. 2

Mixture No data available.

Substance Test data reported below.

Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid	Rabbit TC_{Lo}	0.02 mg/L	7 hours	**Specific Developmental Abnormalities** Musculoskeletal system	No information available

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

11.2 Information on other hazards
Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

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 Very toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 0.001 % of components with unknown hazards to the aquatic environment.

Mixture

Acute aquatic toxicity: No data available.

Aquatic Chronic Toxicity: No data available.

Substance

Acute aquatic toxicity: Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfuric acid,	96 hours	*Pimephales promelas*	LC_{50}	0.0012 mg/L	GESTIS

disilver(1+) salt					
Chromic acid (H2Cr2O7)	96 hours	None reported	LC_{50}	0.0031 mg/L	CEPA

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfuric acid, disilver(1+) salt	48 Hours	*Ceriodaphnia dubia*	LC_{50}	0.0045 mg/L	GESTIS

Aquatic Chronic Toxicity: No data available.

12.2. Persistence and degradability

Mixture No data available.

12.3. Bioaccumulative potential

Mixture: No data available.

Partition coefficient Not applicable

12.4. Mobility in soil

Soil Organic Carbon-Water Partition Coefficient Not applicable

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Sulfuric acid	The substance is not PBT / vPvB
Sulfuric acid, disilver(1+) salt	PBT assessment does not apply
Chromium trioxide	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

No information available.

Ozone: Not applicable

Ozone depletion potential (ODP): No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Advice on Disposal

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Our local agencies will accept used cuvettes to ensure their proper disposal.

Waste disposal number of waste from residues/unused products

160506	WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Waste disposal number of used product

160506	WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Contaminated packaging	Dispose of contents/containers in accordance with local regulations.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN number or ID number	UN3316
14.2 Proper shipping name	CHEMICAL KIT
14.3 Transport hazard class(es)	9
14.4 Packing Group	Not regulated
Description	UN3316, CHEMICAL KIT (Sulfuric acid, disilver(1+) salt), 9, Marine pollutant
14.5 Marine pollutant	This material meets the definition of a marine pollutant
Environmental hazards	Yes
14.6 Special precautions for user	251, 340
EmS-No	F-A, S-P
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable

ADR

14.1 UN number or ID number	3316
14.2 Proper shipping name	CHEMICAL KIT
14.3 Transport hazard class(es)	9
Labels	9
14.4 Packing Group	II
Description	3316, CHEMICAL KIT, 9, II, Environmentally Hazardous
14.5 Environmental hazards	Yes
14.6 Special precautions for user	251, 340
Classification code	M11
Tunnel restriction code	(E)

IATA

14.1 UN number or ID number	UN3316
14.2 Proper shipping name	CHEMICAL KIT
14.3 Transport hazard class(es)	9
14.4 Packing group	Not regulated
Description	UN3316, CHEMICAL KIT, 9
14.5 Environmental hazards	Yes
14.6 Special precautions for user	See section 6-8 for more information
ERG Code	9L

Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

Section 15: REGULATORY INFORMATION

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

National regulations

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

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women 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
Sulfuric acid - 7664-93-9	75.	
Sulfuric acid, mercury(2+) salt (1:1) - 7783-35-9	18. 75.	
Chromium trioxide - 1333-82-0	72. 28. 29. 75. 47.	16.

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	I.1 I.3 V

Dangerous substance category per Seveso Directive (2012/18/EU)
• E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

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

Germany

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

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Sulfuric acid 7664-93-9	RG 5,RG 14,RG 15,RG 15bis,RG 20bis RG 14,RG 20bis,RG 65	-
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	RG 2	-
Chromium trioxide 1333-82-0	RG 10,RG 10bis,RG 10ter RG 10	-

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
DSL/NDSL	Complies
ENCS	Complies
IECSC	Complies
KECL - Existing substances	Complies
PICCS	Complies
AICS	Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
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 Chemical safety assessments for substances in this mixture were not carried out.

Section 16: OTHER INFORMATION

Issue Date 21-01-2005

Revision Date 14-Feb-2023

Revision Note New SDS, SDS sections updated, 3, 9, 11, 12.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

**	Hazard Designation
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service Number
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008]

DNEL	Derived No Effect Level (DNEL)
EC	European Community
ECHA	ECHA (The European Chemicals Agency)
EC50	Effective Concentration to 50% of a test population
EEC	European Economic Community
EN	European Standard
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
IATA-DGR	International Air Transport Association - Dangerous Goods Regulations
ICAO	International Civil Aviation Organization
ICAO-TI	International Civil Aviation Organization - Technical Instructions
IUCLID	IUCLID (The International Uniform Chemical Information Database)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LOAEL	Lowest observed adverse effect level
LOAEC	Lowest observed adverse effect concentration
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
MAK	Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances
NOAEL	NOAEL (No observed adverse effect level)
NOAEC	No observed adverse effect concentration
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labour)
PEC	Predicted Effect Concentration
PNEC	Predicted No Effect Concentration (PNEC)
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006])
RID	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
TWA	TWA (time-weighted average)
SKN*	Skin designation
SKN+	Skin sensitisation
STEL	STEL (Short Term Exposure Limit)
STOT	Specific Target Organ Toxicity
STOT RE	Specific target organ toxicity — repeated exposure
STOT SE	Specific target organ toxicity — single exposure
SVHC	Substances of Very High Concern
TLV	Threshold Limit Value
TRGS	Technical rules for hazardous substances, Germany
TSCA	Toxic Substances Control Act
UN	United Nations
vPvB	very persistent and very bioaccumulative
VOC	Volatile organic compounds
AwSV	Administrative regulation of water polluting substances, Germany

Key literature references and sources for data
See Section 11: TOXICOLOGICAL INFORMATION
See Section 12: ECOLOGICAL INFORMATION

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

Carcinogenicity	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
Ozone	Calculation method
Corrosive to metals	Calculation method

Full text of H-Statements referred to under section 3
H300 - Fatal if swallowed
H301 - Toxic if swallowed
H310 - Fatal in contact with skin
H311 - Toxic 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
H372 - Causes damage to organs through prolonged or repeated exposure
H373 - May cause damage to organs through prolonged or repeated exposure
H361f - Suspected of damaging fertility
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H290 - May be corrosive to metals

Training Advice 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

Restrictions on use For Laboratory Use Only.

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

End of Safety Data Sheet