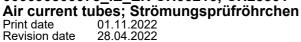
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name/designation Air current tubes; Strömungsprüfröhrchen

CH00216; CH25301 **Prod-Nr**

Hazard components

Sulphuric acid >95%

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

Sector of uses [SU]

SU2a Mining, (without offshore industries) SU2b Offshore industries

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

SU24 Scientific research and development

SU0 Other

Process categories [PROC]

Industrial: Professional:

PROC15 Use as laboratory reagent

PROC0 Other

Environmental release categories [ERC]

not determined

Product Categories [PC]

PC0 Other

Quality control reagent

Article categories [AC]

not applicable

Use of the substance/mixture

Draeger tubes for air current tests.

Uses advised against

Do not use for private purposes (household).

Remark

none

1.3 Details of the supplier of the safety data sheet

Supplier

Draeger Ireland Ltd. Unit 4075 Kinkswood Rd., Citywest, Business Campus IE-Dublin 24

Telephone 01850 372343

Department responsible for information: Dräger Environmental Management

Telephone +49 451 882 6979

E-mail (competent person): sds@draeger.com

1.4 Emergency telephone number

Poisons Information Centre of Ireland, Beaumont Hospital, PO Box +353 1 837 9964, +353 1 809 2166 1297, Beaumont Road

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 Classification procedure

[CLP]

Met. Corr. 1, H290 Skin Corr. 1A, H314

Hazard statements for physical hazards

H290 May be corrosive to metals.

Hazard statements for health hazards

H314 Causes severe skin burns and eye damage.

Remark

none

Additional information

This article contains hazardous substances or mixtures intended to be released under normal or reasonably foreseeable conditions of use.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



GHS05

Signal word

Danger

Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P234 Keep only in original packaging.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing and eye/face protection.

P310 Immediately call a POISON CENTER/doctor/....

P390 Absorb spillage to prevent material damage.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

P420 Store separately.

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

P403 + P235 Store in a well-ventilated place. Keep cool.

P402 Store in a dry place.

P501 Contents / container to properly dispose and recycle.

Supplemental hazard information

EUH071 Corrosive to the respiratory tract.

Special rules for supplemental label elements for certain mixtures

not applicable

special rules for labelling of plant protection products

not applicable

Special rules on packaging

not applicable

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Other labelling

not applicable

2.3 Other hazards

Adverse physicochemical effects

The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

Adverse human health effects and symptoms

Causes severe burns.

Due to its pH value (see section 9), irritation of the skin and eyes cannot be ruled out.

Adverse environmental effects

not determined

Other adverse effects

Processing vapours can irritate the respiratory tracts, skin and eyes.

Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

* SECTION 3: Composition / information on ingredients

3.1 Substances

not applicable

* 3.2 Mixtures

Description

none

Hazardous ingredients

CAS No.	EC No.	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
7664-93-9	231-639-5	Sulphuric acid >95%	≤ 10 %	Skin Corr. 1A; H314	Skin Corr. 1A;H314: C>=15% Skin Irrit. 2;H315: 5%<=C<15% Eye Irrit. 2;H319: 5%<=C<15%

Remark

none

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove contaminated, saturated clothing immediately.

Following inhalation

Provide fresh air.

If intensive inhalation of fumes seek medical treatment immediately.

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Following skin contact

Wash immediately with:

Water

Remove contaminated, saturated clothing immediately.

Call a physician immediately.

In case of skin irritation, consult a physician.

After eye contact

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Call a physician immediately.

Following ingestion

Do NOT induce vomiting. Call a physician immediately. Rinse mouth thoroughly with water.

Let water be drunken in little sips (dilution effect).

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

not determined

Effects

gastric perforation

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor

not determined

SECTION 5: Firefighting measures

5.1 Extinguishing media

Unsuitable extinguishing media

none

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In the event of fire the following can be released:

Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters In case of fire: Wear self-contained breathing apparatus.

Additional information

The product itself does not burn.

Co-ordinate fire-fighting measures to the fire surroundings.

Do not inhale explosion and combustion gases.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

For emergency responders

Personal protection equipment

Use breathing apparatus if exposed to vapours/dust/aerosol.

Wear acid-resistent boots.

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6.2 Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and cleaning up

For containment

Do not use organic absorbent material. Take up with absorbent material (e.g. acid binder). Flush away residues with water.

For cleaning up

Dilute with plenty of water.

6.4 Reference to other sections

Disposal: see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Treatment only in suitable rooms and systems.

No special measures are necessary.

Use only acid-proof equipment.

Use only in well-ventilated areas.

Take the usual precautions when handling with chemicals.

The product is not:

Combustible

Avoid:

Eye contact

Skin contact

Do not inhale aerosols

Advices on general occupational hygiene When using do not eat, drink, smoke, sniff.

Remove contaminated, saturated clothing immediately.

Work in rooms with good ventilation.

Wash hands and face before breaks and after work and take a shower if necessary.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container.

Keep container tightly closed.

Ensure adequate ventilation of the storage area.

Storage class

8B Non-combustible corrosive substances

Materials to avoid

Do not store together with:

Metal

Further information on storage conditions

Keep in a cool, well-ventilated place.

Keep away from:

alkali

Keep container tightly closed in a cool, well-ventilated place.

Do not store at temperature above 25°C (=77°F).

Limited stability, look up product instructions.



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7.3 Specific end use(s)

Recommendation

See section 1.2

Industrial sector specific solutions

not applicable

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

CAS No.	EC No.	Substance name	occupational exposure limit value
7664-93-9	231-639-5	Sulphuric acid (mist)	0,05 [mg/m³] 2009/161/EU
7664-93-9	231-639-5	Sulphuric acid	0,05 [mg/m³] (IE)
7664-93-9	231-639-5	sulphuric-acid	- [ml/m³(ppm)] 0,05 [mg/m³] Short-term(ml/m³) - Short-term(mg/m³) - EU, thoracic fraction

8.2 Exposure controls

Appropriate engineering controls

Technical measures to prevent exposure

not applicable

Personal protection equipment

Eye/face protection

safety goggles

Hand protection

Gloves (acid-resistant)

Body protection:

Light protective clothing. Required properties: acid-resistant

Respiratory protection Respiratory protection necessary at: aerosol or mist formation Suitable respiratory protection apparatus: Particle-filtering half mask, filter P2

Environmental exposure controls

Technical measures to prevent exposure

not applicable

Additional information

none

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state

Aerosol

Colour

whitish

Odour

stinging

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:	not determined		
Melting point/freezing point	Melting point approx20 °C		none
Boiling point or initial boiling point and boiling range	approx. 335 °C pressure 1 bar		none
flammability	solid	not applicable	none not applicable
flammability	gaseous	not applicable	none not applicable
Lower and upper explosion limit	Upper explosion limit	not applicable	none not applicable
Lower and upper explosion limit	Lower explosion limit	not applicable	none not applicable
Flash point		not applicable	none not applicable
Auto-ignition temperature		not determined	none not determined
Auto-ignition temperature		not applicable	none not determined
Decomposition temperature		not determined	none not determined
Decomposition temperature		not determined	No decomposition if used as directed.
рН	in delivery state < 1		suspension in water
	Concentration 80 % weight		
Viscosity	not determined	not applicable	none not determined
Viscosity	not determined	not applicable	none not determined
Solubility(ies)	Water solubility	not determined	not determined
Solubility(ies)	not determined	not determined	none not determined
Partition coefficient n-octanol/water (log value)		not determined	none not determined
Vapour pressure	approx. 0.0001 hPa (20°C)		none
Density and/or relative density	approx. 1.84 g/cm³ (20°C) pressure 1 bar		information concerns to liquid phase
Density and/or relative density	Bulk density	not applicable	not applicable
Relative vapour density	approx. 3.4 (20°C) pressure 1 bar		none
particle characteristics	not determined		

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9.2 Other information

Other safety characteristics

	Value	Method	Source, Remark
Evaporation rate		not determined	none not determined
Solvent content			none not applicable
Water content			none not determined
Solid content			none not applicable
acid number		not applicable	none not determined
Solvent separation test		not determined	none not determined
Explosive properties			not determined
Oxidising properties			not determined

Other information

Product effects hygroscopic.

In case of warming up in water hydrolyse.

Vapours are heavier than air.

SECTION 10: Stability and reactivity

10.1 Reactivity

Sulphuric acid, concentrated

Corrosive to metals.

Formation of:

Gases/vapours, corrosive

During dilution or dissolving in water, strong heating-up always takes place.

The product develops hydrogen in an aqueous solution in contact with metals.

Reactions with damp air.

Plastics may be corroded.

Reactions with strong alkalies.

Reactions with alkalies and metals.

10.2 Chemical stability

Exothermic reaction with:

Water

Formation of:

Gases/vapours, corrosive

Reactions with alkalies and metals.

10.3 Possibility of hazardous reactions

Reactions with light metals in the presence of moisture, with evolution of hydrogen. Reactions with metals, with evolution of hydrogen.

Reactions with strong alkalies.

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10.4 Conditions to avoid

Corrosive to metals.

Reactions with base metals, with evolution of hydrogen.

exothermic reaction

Reactions with reducing agents. Evolution of corrosive gases/vapours.

If diluting or dissolving in water always strong heating up appears.

In aqueous solution, evolves hydrogen with metals.

As oxidising agent, attacks organic substances such as wood, paper, fats.

Violent vapour formation under influence of water.

Reactions with damp air.

Corrodes aluminium.

Reactions with alkalies and metals.

10.5 Incompatible materials

Light metals

Formation of:

Hydrogen

Corrodes copper and brass.

Corrosive to metals.

Metal, base

Substance, organic

If diluting put acid in water, not reverse.

During dilution or dissolving in water, strong heating-up always takes place.

The product develops hydrogen in an aqueous solution in contact with metals.

As oxidising agent, attacks organic substances such as wood, paper, fats.

Corrodes aluminium.

Reactions with metals, with evolution of hydrogen.

Reactions with alkalies and metals.

10.6 Hazardous decomposition products

Gases/vapours, corrosive Sulphur oxides Sulphuric acid

Additional information

SECTION 11: Toxicological information

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

Acute toxicity

Animal data

	Effective dose	Method,Evaluation	Source, Remark
Acute oral toxicity	510 mg/kg Species not determined	not determined	none not determined
Acute dermal toxicity	Species not determined	not applicable	none not determined
Acute inhalation toxicity	510 mg/m³ Species Rat Exposure time 2 h	not applicable	none

Skin corrosion/irritation

Animal data

Result / Evaluation	Method	Source, Remark	
Corrosive. Species not determined	not determined	none	

Serious eye damage/irritation

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Animal data

Result / Evaluation Method Source, Remark

Corrosive not determined none

Species not determined

Assessment/classification Risk of serious damage to eyes.

Sensitisation to the respiratory tract

Assessment/classification

not applicable

Skin sensitisation

Animal data

Result / Evaluation	Dose / Concentration	Method	Source, Remark
not applicable		not applicable	none
	Species not determined	• •	

Germ cell mutagenicity

	Value	Method	Result / Evaluation	Remark
In vitro mutagenicity/genotox icitv	Species not determined	not determined	none	not determined

icity Carcinogenicity

Animal data

	Value	Method	Result / Evaluation	Remark
Carcinogenicity	Species not	not determined	none	not determined

Reproductive toxicity

determined

determined

Animal data

	Value	Method	Result / Evaluation	Remark
Reproductive toxicity		not determined	none	not determined
	Species not			

STOT-single exposure

STOT SE 1 and 2

Animal data

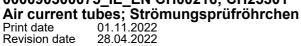
	Effective dose	Method	Specific effects:	Organs affected:	Source, Remark
Oral specific target organ toxicity (single exposure)	Species not determined	not determined			none not determined
Dermal specific target organ toxicity (single exposure)	Species not determined	not determined			none not determined
Inhalative specific target organ toxicity (single exposure)	Species not determined	not determined			none not determined

STOT-repeated exposure

Animal data

/ tillinai data					
	Effective dose	Method	Specific effects:	Organs affected:	Source, Remark
Oral specific target		not determined			none
organ toxicity	Species not				not determined
(repeated exposure)	determined				





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	Effective dose	Method	Specific effects:	Organs affected:	Source, Remark
Oral specific target organ toxicity (repeated exposure)	Species not determined	not determined			none not determined
Dermal specific target organ toxicity (repeated exposure)	Species not determined	not determined			none not determined
Dermal specific target organ toxicity (repeated exposure)	Species not determined	not determined			none not determined
Inhalative specific target organ toxicity (repeated exposure)	Species not determined	not determined			none not determined
Inhalative specific target organ toxicity (repeated exposure)	Species not determined	not determined			none not determined

11.2 Information on other hazards

No data available

Other information

Acute oral toxicity not determinable.

Causes corrosions.

Product may cause irreversible eye injuries.

The product has not been tested. The information is derived from products of similar composition.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

	Effective dose	Method, Evaluation	Source, Remark
Acute (short-term) fish toxicity	Species not determined	not determined	none
Chronic (long-term) fish toxicity	not determined		
Acute (short-term) toxicity to crustacea	Species not determined	not determined	none
Chronic (long-term) toxicity to aquatic invertebrate	not determined		
Acute (short-term) toxicity to algae and cyanobacteria	Species not determined	not determined	none
Chronic (long-term) toxicity to aquatic algae and cyanobacteria	not determined		
Toxicity to other aquatic plants/organisms	not determined		
Toxicity to microorganisms	Species not determined	not determined	none
Persistence and degradability			
	Value	Method	Source, Remark
Biodegradation			not determined
Biodegradation			not determined

12.3 Bioaccumulative potential

Assessment/classification

not determined

12.4 Mobility in soil

Assessment/classification

not determined

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12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Additional ecotoxicological information

	Value	Method	Source, Remark
Chemical oyxgen demand (COD)		not determined	none not determined
Biochemical oxygen demand		not determined	none not determined
Total organic carbon (TOC):		not determined	none not determined
AOX			not applicable

Additional information

Product does not cause biological oxygen loss.

Ecological dates are not available.

Do not allow uncontrolled discharge of product into the environment.

Product is not allowed to be discharged into aquatic environment, drains or sewage treatment plants.

The information about ecology refers to the main components.

The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste codes/waste designations according to EWC/AVV

Waste code product	Waste name
160303 *	inorganic wastes containing hazardous substances
160507 *	discarded inorganic chemicals consisting of or containing hazardous substances
170204 *	glass, plastic and wood containing or contaminated with hazardous substances

Appropriate disposal / Product

Dispose of waste according to applicable legislation.

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Dispose of waste according to "Kreislaufwirtschaftsgesetz (KrWG)".

Appropriate disposal / Package Completely emptied packages can be recycled. Recycle sales packaging via DSD (Duales System Deutschland).

Collect the waste separately.
The local / national waste disposal regulations are observed.

SECTION 14: Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA- DGR)
14.1 UN number or ID number	3260	3260	3260
14.2 UN proper shipping name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Schwefelsäure, Gemisch)	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, mixture)	Corrosive solid, acidic, inorganic, n.o.s. (Sulphuric acid, mixture)
14.3 Transport hazard class(es)	8	8	8
14.4 Packing group	II	II	II
14.5 Environmental hazards	No	No	No

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14.6 Special precautions for user

none

14.7 Maritime transport in bulk according to IMO instruments

not applicable

All transport carriers

Regulations concerning free quantities are to be observed.

Preferably shipment as Excepted Quantity (E2).

Land transport (ADR/RID)

UN number or ID number 3260

CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Schwefelsäure, Gemisch) UN proper shipping name

Transport hazard class(es) 8 Hazard label(s) 8 Classification code C2 Packing group Ш Environmental hazards No Limited quantity (LQ) 1 kg Special provisions 274 Tunnel restriction code Ε

Sea transport (IMDG)

UN number or ID number 3260

UN proper shipping name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, mixture)

Transport hazard class(es) 8 II Packing group **Environmental hazards** No Limited quantity (LQ) 1 kg Marine pollutant No EmS F-A, S-B

Air transport (ICAO-TI / IATA-DGR)

3260 UN number or ID number

UN proper shipping name Corrosive solid, acidic, inorganic, n.o.s. (Sulphuric acid, mixture)

Transport hazard class(es) 8 Ш Packing group **Environmental hazards** No

SECTION 15: Regulatory information

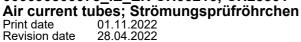
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture **EU** legislation

Authorisations not applicable

Restrictions on use

none

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Other regulations (EU)

To follow:

Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work none

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Key literature references and sources for data

not determined

Training advice

not determined

Additional information

National and local regulations concerning chemicals shall be observed.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Relevant H- and EUH-phrases (Number and full text)

H314 Causes severe skin burns and eye damage.

Indication of changes

Data changed compared with the previous version