

according to UK REACH Regulation

Säuregemisch hochrein Schwefelsäure 48,7 % / Phosphorsäure 42,3 %

Revision date: 05.09.2023 Product code: 20992 Page 1 of 12

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

1.1. Product identifier

Säuregemisch hochrein Schwefelsäure 48,7 % / Phosphorsäure 42,3 %

UFI: R84V-Y1YC-W00M-SC3H

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

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

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH Street: Stempelstraße 6 Place: D-47167 Duisburg

Telephone: 0203/5194-0 Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire,

<u>number:</u> Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada:

1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls

accepted)

Further Information

inapplicable, this product is a mixture REACH registration number see section 3

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Met. Corr. 1; H290 Acute Tox. 4; H302 Skin Corr. 1A; H314 Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

sulphuric acid phosphoric acid

Signal word: Danger

Pictograms:







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Hazard statements

H290 May be corrosive to metals. H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

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.

P310 Immediately call a POISON CENTER/doctor.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Chemical name					
	EC No	EC No Index No REACH No					
	Classification (GB CLP	Classification (GB CLP Regulation)					
7664-93-9	sulphuric acid	sulphuric acid					
	231-639-5	016-020-00-8 01-211945883					
	Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1; H290 H314 H318						
7664-38-2	phosphoric acid	phosphoric acid					
	231-633-2	231-633-2 015-011-00-6 01-2119485924-2					
	Met. Corr. 1, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1; H290 H302 H314 H318						

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

opcome cone: Emine, in factors and ATE						
CAS No	EC No	Chemical name	Quantity			
	Specific Conc	Limits, M-factors and ATE				
7664-93-9	231-639-5	231-639-5 sulphuric acid				
		oral: LD50 = 2140 mg/kg Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15				
7664-38-2	231-633-2 phosphoric acid					
	oral: ATE = 500 mg/kg Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25					

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

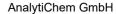
General information

First aider: Pay attention to self-protection!

After inhalation

Provide fresh air.

Call a physician immediately.





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After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water.

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing. Protect uninjured eye.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

Risk of serious damage to eyes.

Causes burns.

Irritant

Cough

Dyspnoea

Vomiting

Gastric perforation

Nausea

Abdominal pain

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated:

Sulphur oxides

Phosphorus oxides

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

(Full protection suit)

In case of fire and/or explosion do not breathe fumes.

Additional information

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

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Corrosive to metals.

Do not breathe vapour/aerosol.





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For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders: Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

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

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff.

Use personal protection equipment. Use extractor hood (laboratory).

Provide adequate ventilation. Do not breathe vapour/aerosol.

Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

Further information on handling

Draw up and observe skin protection programme.

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

Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.



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Unsuitable container/equipment material: Metal

Hints on joint storage

national regulations

Further information on storage conditions

Corrosive to metals.

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

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
7664-38-2	Orthophosphoric acid	-	1		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance					
DNEL type		Exposure route	Effect	Value		
7664-93-9	sulphuric acid					
Worker DNEL,	long-term	inhalation	local	0,05 mg/m³		
7664-38-2	phosphoric acid					
Worker DNEL, acute		inhalation	local	2 mg/m³		
Worker DNEL, long-term		inhalation	local	2,92 mg/m³		
Consumer DNEL, long-term		inhalation	systemic	4,57 mg/m³		
Consumer DNEL, long-term		inhalation	local	0,36 mg/m³		
Consumer DNEL, long-term		oral	systemic	0,1 mg/kg bw/day		
Worker DNEL, long-term		inhalation	systemic	10,7 mg/m³		

PNEC values

CAS No	Substance				
Environmental compartment Value					
7664-93-9	sulphuric acid				
Micro-organisms in sewage treatment plants (STP) 8,8 mg/l					

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

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

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection:

goggles

Face protection shield



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Hand protection

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN 374):

By long-term hand contact

Recommended glove articles: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with permanent contact: > 480 min

By short-term hand contact

Recommended glove articles: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: colourless
Odour: odourless
Odour threshold: No data available

Melting point/freezing point:

Boiling point or initial boiling point and

No data available

No data available

boiling range:

Flammability:

Lower explosion limits:

Upper explosion limits:

No data available

No data available

No data available

Flash point:

X

Auto-ignition temperature:

Decomposition temperature:

Ph-Value:

No data available

No data available

No data available

Viscosity / kinematic:

Water solubility:

No data available
very soluble

Solubility in other solvents

No data available

Dissolution rate:

Partition coefficient n-octanol/water:

Dispersion stability:

No data available

No data available

No data available



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Vapour pressure:No data availableVapour pressure:No data availableDensity (at 20 °C):1,7871 g/cm³Relative density:No data availableBulk density:No data availableRelative vapour density:No data availableParticle characteristics:No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

No data available

Sustaining combustion: No data available

Self-ignition temperature

Solid: No data available
Gas: No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate: No data available Solvent separation test: No data available Solvent content: 0 Solid content: 0 Sublimation point: No data available Softening point: No data available Pour point: No data available No data available: No data available

Viscosity / dynamic:

Flow time:

No data available

No data available

Further Information Corrosive to metals.

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals. Possibility of hazardous reactions.

Oxidising agent, strong

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Alkali metals, Ammonia, aldehydes Alkaline earth metal, Alkali (lye), Metal Combustible substance, Solvent, Aniline Peroxides, Amines, Hydrogen peroxide

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Keep away from: Metal.

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

10.6. Hazardous decomposition products

In case of fire may be liberated: SECTION 5: Firefighting measures



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Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1182 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name							
	Exposure route	Dose		exposure route Dose		Species	Source	Method
7664-93-9	sulphuric acid							
	oral	LD50 mg/kg	2140	Rat	, , ,	The study was performed as part of a ser		
7664-38-2	phosphoric acid							
	oral	ATE mg/kg	500					

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Information on likely routes of exposure

There are no data available on the mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.



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Other information

There are no data available on the mixture itself.

Further information

Risk of serious damage to eyes.

Causes burns.

Irritant

Cough

Dyspnoea

Vomiting

Gastric perforation

Nausea

Abdominal pain

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name							
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method	
7664-93-9	sulphuric acid							
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Desmodesmus subspicatus	Study report (2009)	OECD Guideline 201	
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (2009)	OECD Guideline 202	
	Fish toxicity	NOEC mg/l	0,025	65 d	Jordanella floridae	Water Research Vol. 11, 612 - 626, 1977	Groups of sexually mature flagfish	
7664-38-2	phosphoric acid							
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Desmodesmus subspicatus	Study report (2010)	EU Method C.3	
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (2010)	OECD Guideline 202	
	Acute bacteria toxicity	(EC50 mg/l)	> 1000	3 h	activated sludge of a predominantly domestic sewag	Study report (2010)	OECD Guideline 209	

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Avoid release to the environment.

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.



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Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

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

Send to a physico-chemical treatment facility under observation of official regulations.

Do not allow to enter into surface water or drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

14.1. UN number or ID number: UN 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid,

phosphoric acid)

14.3. Transport hazard class(es): 8 14.4. Packing group: Ш Hazard label: 8 Classification code: C1 **Special Provisions:** 274 Limited quantity: 1 L Excepted quantity: E2 Transport category: 2 Hazard No: 80 Tunnel restriction code: F

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid,

phosphoric acid)

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8Classification code:C1Special Provisions:274Limited quantity:1 LExcepted quantity:E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid,

phosphoric acid)

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8Special Provisions:274Limited quantity:1 LExcepted quantity:E2EmS:F-A. S-B

Air transport (ICAO-TI/IATA-DGR)





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14.1. UN number or ID number: UN 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid,

phosphoric acid)

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8

Special Provisions:

Limited quantity Passenger:

Passenger LQ:

Excepted quantity:

A3 A803

0.5 L

Y840

Excepted quantity:

E2

IATA-packing instructions - Passenger:851IATA-max. quantity - Passenger:1 LIATA-packing instructions - Cargo:855IATA-max. quantity - Cargo:30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to 2012/18/EU Not subject to 2012/18/EU (SEVESO III)

(SEVESO III):

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile

work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

SECTION 16: Other information





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Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized 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 LC50: Lethal concentration, 50% LD50: Lethal dose, 50%

Met. Corr: Corrosive to metals Acute Tox: Acute toxicity Skin Corr: Skin corrosion Eye Dam: Eye damage

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure				
Met. Corr. 1; H290	On basis of test data				
Acute Tox. 4; H302	Calculation method				
Skin Corr. 1A; H314	Calculation method				
Eye Dam. 1; H318	Calculation method				

Relevant H and EUH statements (number and full text)

H290 May be corrosive to metals. H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

Further Information

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.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)