

# **Safety Data Sheet**

according to Regulation (EC) No 1907/2006

# Ameisensäure 37 % (± 0,5 % abs.) zur Analyse

Revision: 20.03.2024 Product code: 32412 Page 1 of 12

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

#### 1.1. Product identifier

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UFI: DRRV-22AU-Q005-0VU9

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

#### Use of the substance/mixture

Reagents and laboratory chemicals

Only for laboratory and analysis purposes.

#### 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

ACD

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**

This product is a mixture. REACH Registration Number see section 3.

#### **SECTION 2: Hazards identification**

# 2.1. Classification of the substance or mixture

### Regulation (EC) No 1272/2008

Acute Tox. 4; H332 Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

# Regulation (EC) No 1272/2008

### Hazard components for labelling

formic acid

Signal word: Danger

Pictograms:







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#### Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

### **Precautionary statements**

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

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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+P311 IF exposed or concerned: Call a POISON CENTER/doctor.

### 2.3. Other hazards

No data available

### **SECTION 3: Composition/information on ingredients**

### 3.2. Mixtures

### **Chemical characterization**

Mixtures in aqueous solution

### Relevant ingredients

CAS No	Chemical name	Chemical name			
	EC No Index No REACH No				
	Classification (Regulation (EC) No 1272/2008)				
64-18-6	formic acid				
	200-579-1	607-001-00-0	01-2119491174-37		
	Flam. Liq. 3, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1; H226 H331 H302 H314 H318 EUH071				

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

### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity	
	Specific Conc. I	imits, M-factors and ATE		
64-18-6	200-579-1	formic acid	35 - < 40 %	
	inhalation: LC50 = 7,85 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 730 mg/kg Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 10 - < 90 Skin Irrit. 2; H315: >= 2 - < 10 Eye Irrit. 2; H319: >= 2 - < 10			

#### **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! Remove affected person from the danger area and lay down. Take off immediately all contaminated clothing and wash it before reuse.

#### After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

### After contact with skin

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



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immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

#### 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.

#### After ingestion

Never give anything by mouth to an unconscious person or a person with cramps.

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

Dyspnoea

Irritation to respiratory tract

Risk of serious damage to eyes.

Conjunctival oedema (chemosis).

strongly corrosive.

#### 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

Water spray jet, Carbon dioxide (CO2), Foam, Extinguishing powder.

#### Unsuitable extinguishing media

no restriction

### 5.2. Special hazards arising from the substance or mixture

In case of warming: Vapours can form explosive mixtures with air.

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO2)

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

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

Avoid contact with skin, eyes and clothes.

### Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet.

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

Danger of bursting container.

#### **SECTION 6: Accidental release measures**

# 6.1. Personal precautions, protective equipment and emergency procedures

#### 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.



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#### 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.

Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Do not breathe vapour/aerosol.

### Advice on protection against fire and explosion

Usual measures for fire prevention.

In case of warming: Vapours can form explosive mixtures with air.

# Advice on general occupational hygiene

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.

### Further information on handling

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.

### 7.2. Conditions for safe storage, including any incompatibilities

### Requirements for storage rooms and vessels

Store in a well-ventilated place. Keep cool.

### Hints on joint storage

national regulations

### Further information on storage conditions

Protect against: Light

Keep cool. Protect from sunlight.

### 7.3. Specific end use(s)

Laboratory chemicals



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### **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

### Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
64-18-6	Formic acid	5	9		TWA (8 h)	

#### **DNEL/DMEL values**

CAS No	Substance						
DNEL type		Exposure route	Effect	Value			
64-18-6	formic acid						
Consumer DNE	EL, long-term	inhalation	local	3 mg/m³			
Worker DNEL, long-term		inhalation	local	9,5 mg/m³			

#### **PNEC values**

CAS No	Substance	
Environmen	tal compartment	Value
64-18-6	formic acid	
Freshwater		2 mg/l
Freshwater (intermittent releases)		1 mg/l
Marine water		0,2 mg/l
Freshwater	sediment	13,4 mg/kg
Marine sediment		1,34 mg/kg
Micro-organ	isms in sewage treatment plants (STP)	7,2 mg/l
Soil		1,5 mg/kg

### 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. Do not breathe gas/fumes/vapour/spray.

### Individual protection measures, such as personal protective equipment

### Eye/face protection

Suitable eye protection: goggles.

Face protection shield

# **Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 720 Camapren®



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CR (polychloroprene, chloroprene rubber) 0,65 mm Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 720 Camapren®

CR (polychloroprene, chloroprene rubber) 0,65 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.

Material, acid-resistant

### Respiratory protection

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

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### **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: stinging

Melting point/freezing point:

Boiling point or initial boiling point and

not determined

boiling range:

not applicable Flammability: Lower explosion limits: not determined not determined Upper explosion limits: not determined Flash point: Auto-ignition temperature: not determined Decomposition temperature: not determined pH-Value: acidic not determined Viscosity / kinematic: Water solubility: not determined

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:

Vapour pressure:

Vapour pressure:

Density:

Bulk density:

Relative vapour density:

not determined

### 9.2. Other information

### Information with regard to physical hazard classes



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Explosive properties

In case of warming: Vapours can form explosive mixtures with air.

Sustained combustibility:

No data available

Self-ignition temperature

Solid: not applicable
Gas: not applicable

Oxidizing properties not determined

Other safety characteristics

Evaporation rate:

Solvent separation test:

not determined
Solvent content:

not determined
Solid content:

not determined
Sublimation point:

not determined
Softening point:

not determined
Pour point:

not determined
not determined
not determined

not determined:

Viscosity / dynamic: not determined
Flow time: not determined

**Further Information** 

not determined

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

In case of warming: Vapours can form explosive mixtures with air.

# 10.2. Chemical stability

Protect against:

Light

Heat

### 10.3. Possibility of hazardous reactions

for formic acid: explosion hazard when in contact with: hydrogen peroxide, furfuryl alcohol, sodium hypochlorite (heat), nickel catalysts, nitromethane. The substance may react dangerously with: bases, aluminium, oxidizing agents, nitric acid, sulfuric acid, alkali hydroxides (conc.), alkaline earth hydroxides (conc.), heat, palladium charcoal (hydrogen generation), phosphorus pentoxide, thallium trinitrate trihydrate.

# 10.4. Conditions to avoid

Light

In case of warming: Vapours can form explosive mixtures with air.

# 10.5. Incompatible materials

No data available

### 10.6. Hazardous decomposition products

**SECTION 5: Firefighting measures** 

#### **Further information**

No data available

# **SECTION 11: Toxicological information**

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

### Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.



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### **Acute toxicity**

Harmful if inhaled.

Harmful if swallowed.

#### **ATEmix** calculated

ATE (oral) 1973 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) 1,351 mg/l

CAS No	Chemical name	Chemical name						
	Exposure route	Dose		Species	Source	Method		
64-18-6	formic acid							
	oral	LD50 mg/kg	730	Rat	Study report (1985)	OECD Guideline 401		
	dermal	LD50 mg/kg	> 2000	Rat	Study report (2007)	OECD Guideline 402		
	inhalation (4 h) vapour	LC50	7,85 mg/l	Rat	Study report (1980)	OECD Guideline 403		
	inhalation dust/mist	ATE	0,5 mg/l					

#### Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/eye irritation: Causes serious eye damage.

Corrosive to the respiratory tract.

### Sensitising effects

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

### Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

Reproductive toxicity: 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.

### **Practical experience**

No data available

### 11.2. Information on other hazards

# Other information

gastric perforation

Pulmonary oedema, Conjunctival oedema (chemosis)., Risk of serious damage to eyes.

Resorption (oral)

Resorption (by inhalation)

# **Further information**

No data available

# **SECTION 12: Ecological information**

# 12.1. Toxicity

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



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CAS No	Chemical name						
	Aquatic toxicity	Dose		[h]   [d]	Species	Source	Method
64-18-6	formic acid						
	Acute fish toxicity	LC50	130 mg/l	96 h	Danio rerio	Study report (2005)	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	1240	72 h	Pseudokirchneriella subcapitata	Study report (2005)	OECD Guideline 201
	Acute crustacea toxicity	EC50	365 mg/l	48 h	Daphnia magna	Study report (2005)	OECD Guideline 202
	Crustacea toxicity	NOEC mg/l	>= 100	21 d	Daphnia magna	Study report (2007)	OECD Guideline 211

### 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.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-18-6	formic acid	-2,1

#### **BCF**

CAS No	Chemical name	BCF	Species	Source
64-18-6	formic acid	3,16		Other company data (

#### 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 REACH, annex XIII.

### 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

No data available

### **Further information**

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

### **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.

#### 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**

### Land transport (ADR/RID)



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14.1. UN number or ID number:UN 341214.2. UN proper shipping name:FORMIC ACID

14.3. Transport hazard class(es): Ш 14.4. Packing group: R Hazard label: Classification code: C3 1 I Limited quantity: F2 Excepted quantity: Transport category: 2 80 Hazard No: Ε Tunnel restriction code:

### Inland waterways transport (ADN)

**14.1. UN number or ID number:** UN 3412 **14.2. UN proper shipping name:** FORMIC ACID

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8Classification code:C3Limited quantity:1 LExcepted quantity:E2

### Marine transport (IMDG)

14.1. UN number or ID number:UN 341214.2. UN proper shipping name:FORMIC ACID

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

# Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 3412
14.2. UN proper shipping name: FORMIC ACID

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8Limited quantity Passenger:0.5 LPassenger LQ:Y840Excepted 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: Combustible liquid. strongly corrosive.

### 14.7. Maritime transport in bulk according to IMO instruments

not applicable

# **SECTION 15: Regulatory information**



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### 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, Entry 40, Entry 75

### National regulatory information

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

work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or

nursing mothers.

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

#### 15.2. Chemical safety assessment

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

### **SECTION 16: Other information**

#### Changes

This data sheet contains changes from the previous version in section(s): 1,9,12.

#### Abbreviations and acronyms

Flam. Liq. 3: Flammable liquids, hazard category 3 Acute Tox. 3: Acute toxicity, hazard category 3 Skin Corr. 1A: Skin corrosion, sub-category 1A Eye Dam. 1: Serious eye damage, hazard category 1

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%

#### Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

	<u> </u>
Classification	Classification procedure
Acute Tox. 4; H332	Calculation method
Acute Tox. 4; H302	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method

### Relevant H and EUH statements (number and full text)

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H331 Toxic if inhaled.
H332 Harmful if inhaled.

# **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



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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 relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)