

AnalytiChem GmbH

Entkalker Ameisensäure / Salzsäure

Revision date: 21.02.2023

Product code: 21252

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

1.1. Product identifier

Entkalker Ameisensäure / Salzsäure

UFI:

NFP1-7GMW-PKPU-HP5E

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 Danger	ous Goods] Incidents Spill, Leak, Fire,
<u>number:</u>	•	REC Day or Night Within USA and Canada: anada: +1 703-741-5970 (collect calls

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

Met. Corr. 1; H290 Acute Tox. 4; H332 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

Hydrochloric acid

Signal word:







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Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
Precautionary statemer	nts
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves and eye/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

Chemical characterization

Mixtures in aqueous solution

Hazardous components

CAS No	Chemical name				
	EC No	Index No REACH No			
	Classification (Regulation				
64-18-6	formic acid				
	200-579-1	200-579-1 607-001-00-0 01-2119491174-37			
	Flam. Liq. 3, Acute Tox. 3,	, Acute Tox. 4, Skin Corr. 1A; H226	6 H331 H302 H314 EUH071		
7647-01-0	/647-01-0 Hydrochloric acid				
	231-595-7				
	Skin Corr. 1B, STOT SE 3				

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. Limits, M-factors and ATE					
64-18-6	200-579-1 formic acid					
	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					
7647-01-0	231-595-7	231-595-7 Hydrochloric acid				
	Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 STOT SE 3; H335: >= 10 - 100					

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

No data available



according to Regulation (EC) No 1907/2006

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After inhalation

Provide fresh air. Call a physician immediately.

After contact with skin

Wash immediately with: 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.

After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

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

Irritant — skin irritation and eye damage corrosive Cough Dyspnoea

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: Hydrochloric gas

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

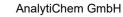
6.1. Personal precautions, protective equipment and emergency procedures

General advice

Corrosive to metals.

For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment. Avoid contact with skin, eyes and clothes. Remove persons to safety. Emergency procedures





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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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Read label before use. Handle and open container with care. When using do not eat, drink, smoke, sniff. Keep container tightly closed. Use personal protection equipment. Use extractor hood (laboratory). Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Usual measures for fire prevention.

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

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.

Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool place.

Further information on storage conditions

Unsuitable container/equipment material: Metal

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)	
7647-01-0	Hydrogen chloride	5	8		TWA (8 h)	
		10	15		STEL (15 min)	

DNEL/DMEL values

CAS No	Substance							
DNEL type		Exposure route	Effect	Value				
64-18-6	formic acid	formic acid						
Consumer DNEL, long-term inhalation local 3 mg/m ³								
Worker DNEL, long-term inhalation local 9,5 mg/m³								
7647-01-0	17-01-0 Hydrochloric acid							
Worker DNEL, long-term		inhalation	local	8 mg/m³				
Worker DNEL	., acute	inhalation	local	15 mg/m³				
Consumer DNEL, long-term		inhalation	local	8 mg/m³				
Consumer DN	IEL, acute	inhalation	local	15 mg/m³				

PNEC values

CAS No	Substance					
Environment	al compartment	Value				
64-18-6	formic acid					
Freshwater 2 mg/l						
Freshwater (intermittent releases) 1 mg/l						
Marine water		0,2 mg/l				
Freshwater s	13,4 mg/kg					
Marine sedin	1,34 mg/kg					
Micro-organia	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: Face protection shield goggles.

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



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

By short-term hand contact Trade name/designation: KCL 730 Camatril® Velours Suitable material: NBR (Nitrile rubber) 0,4 mm Wearing time with occasional contact (splashes): > 120 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.

Protective clothing acid-resistant

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation Filtering device with filter or ventilator filtering device of type: E-(P2)

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	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and		No data available
boiling range:		
Flammability:		not applicable
		not applicable
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		Х
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		0,2
Viscosity / kinematic:		No data available
Water solubility:		easily soluble
Solubility in other solvents		
not determined		



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Partition coefficient n-octanol/water: Vapour pressure: Vapour pressure: Density (at 20 °C): Bulk density: Relative vapour density: 9.2. Other information Information with regard to physical hazard classe Explosive properties No data available Self-ignition temperature Solid: Gas: Oxidizing properties	No data available No data available No data available 1,03851 g/cm³ No data available No data available Ses				
No data available Other safety characteristics Evaporation rate: Solvent separation test: Solvent content: Solid content: Sublimation point: Softening point: Pour point: No data available: Viscosity / dynamic: Flow time: Further Information	No data available No data available				
Corrosive to metals					

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Exothermic reaction with: Amines, permanganates, e.g. potassium permanganate, aldehydes Ignition hazard: Carbide, Fluorine Possibility of hazardous reactions: Aluminium, Formaldehyde, Metal, Alkali (lye) Danger of explosion: Alkali metals, Sulphuric acid, concentrated

10.4. Conditions to avoid

Heat

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

Further information

No data available



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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.

Acute toxicity

Harmful if inhaled. Pulmonary oedema

ATEmix calculated

ATE (inhalation dust/mist) 4,167 mg/l

CAS No	Chemical name								
	Exposure route	Dose		Species	Source	Method			
64-18-6	formic acid								
	oral LD50 730 mg/kg			Rat	Study report (1985)	OECD Guideline 401			
	dermal	LD50 > 2000 mg/kg		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

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.

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

Other information

There are no data available on the mixture itself.

Further information

Irritant — skin irritation and eye damage Cough

Dyspnoea

SECTION 12: Ecological information



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12.1. Toxicity

There are no data available on the mixture itself.

CAS No	Chemical name								
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method		
64-18-6	6 formic acid								
	Acute fish toxicity LC50 130 mg/l				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		
7647-01-0	Hydrochloric acid			-					
	Acute fish toxicity	LC50	862 mg/l	96 h	Leuciscus idus				

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. The substance in the mixture does 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

Discharge into the environment must be avoided.

Further information

Do not empty into 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 empty into 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



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to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)	
<u>14.1. UN number or ID number:</u>	UN 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (formic acid, Hydrochloric acid)
<u>14.3. Transport hazard class(es):</u>	8
14.4. Packing group:	II
Hazard label:	8
Classification code:	C9
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E
Inland waterways transport (ADN)	
14.1. UN number or ID number:	UN 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (formic acid, Hydrochloric acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Classification code:	C9
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Marine transport (IMDG)	
14.1. UN number or ID number:	UN 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (formic acid, Hydrochloric acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	
Hazard label:	8
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-A, S-B
Air transport (ICAO-TI/IATA-DGR)	,
<u>14.1. UN number or ID number:</u>	UN 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (formic acid, Hydrochloric acid)
	8
<u>14.3. Transport hazard class(es):</u> 14.4. Packing group:	o II
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	0.5 L
Passenger LQ:	V840
Excepted quantity:	E2
IATA-packing instructions - Passenger:	851
IATA-packing instructions - Lassenger: IATA-max. quantity - Passenger:	1 L
IATA-max. quantity - Fassenger. IATA-packing instructions - Cargo:	855
IATA-packing instituctions - Cargo: IATA-max. quantity - Cargo:	30 L
	50 L
14.5. Environmental hazards	
ENVIRONMENTALLY HAZARDOUS:	No



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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, Entry 40 Information according to 2012/18/EU Not subject to 2012/18/EU (SEVESO III) (SEVESO III): 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

Changes

This data sheet contains changes from the previous version in section(s): 1,2,4,7,8,9,11,14.

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%

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 4; H332	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.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
EUH071	Corrosive to the respiratory tract.

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.



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