

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Acetic acid 99.5 % - 100 % (glacial acetic acid) pure

Revision date: 21.07.2023

Product code: 05121

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

### 1.1. Product identifier

Acetic acid 99.5 % - 100 % (glacial acetic acid) pure

REACH Registration Number: 01-2119475328-30-XXXX  
CAS No: 64-19-7  
Index No: 607-002-00-6  
EC No: 200-580-7

### 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  
E-mail: info@analytichem.de  
Contact person: Abteilung Produktsicherheit  
E-mail: produktsicherheit@analytichem.de  
Internet: www.analytichem.de  
Responsible Department: Abteilung Produktsicherheit  
Telefax: 0203/5194-290  
Telephone: 0203/5194-107/117

### 1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, 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

No data available

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Flam. Liq. 3; H226  
Skin Corr. 1A; H314

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

Signal word: Danger

Pictograms:



#### Hazard statements

H226 Flammable liquid and vapour.  
H314 Causes severe skin burns and eye damage.

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#### Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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

#### 3.1. Substances

Sum formula: CH<sub>3</sub>COOH  
Molecular weight: 60,05 g/mol

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
64-19-7	acetic acid			100 %
	200-580-7	607-002-00-6	01-2119475328-30-XXXX	
	Flam. Liq. 3, Skin Corr. 1A; H226 H314			

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	
64-19-7	200-580-7	acetic acid	100 %
		inhalation: LC50 = 11,4 mg/l (vapours); oral: LD50 = 3310 mg/kg Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 25 - < 90 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

Self-protection of the first aider

##### 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

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

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ophthalmologist immediately.  
Remove contact lenses, if present and easy to do. Continue rinsing.

#### After ingestion

Rinse mouth immediately and drink plenty of water.  
Do NOT induce vomiting.  
Do not allow a neutralisation agent to be drunk.  
Call a physician immediately.

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

Irritant  
corrosive  
Dyspnoea  
Gastrointestinal complaints  
Vomiting  
Circulatory collapse  
Corneal opacity.  
Risk of serious damage to eyes.

#### 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

Combustible liquids  
Hazardous combustion products  
In case of fire may be liberated:  
Carbon dioxide (CO<sub>2</sub>) Carbon monoxide  
Acetic acid vapour  
Vapours are heavier than air, spread along floors and form explosive mixtures with air.  
Heating causes rise in pressure with risk of bursting.

#### 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

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

Keep away from sources of ignition - No smoking.  
This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).  
Take action to prevent static discharges.

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

#### 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. Keep container tightly closed.
- Use personal protection equipment. Use extractor hood (laboratory).
- Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation.

#### Advice on protection against fire and explosion

Take action to prevent static discharges. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

#### Further information on handling

- Take off immediately all contaminated clothing and wash it before reuse.
- Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

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

#### Requirements for storage rooms and vessels

- Store in a well-ventilated place. Keep container tightly closed.
- Store in a dry place.

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Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### Further information on storage conditions

storage temperature +15°C - +25°C

#### 7.3. Specific end use(s)

Laboratory chemicals

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
64-19-7	Acetic acid	10	25		TWA (8 h)	
		20	50		STEL (15 min)	

#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
64-19-7	acetic acid			
	Worker DNEL, long-term	inhalation	local	25 mg/m <sup>3</sup>
	Worker DNEL, acute	inhalation	local	25 mg/m <sup>3</sup>
	Consumer DNEL, long-term	inhalation	local	25 mg/m <sup>3</sup>
	Consumer DNEL, acute	inhalation	local	25 mg/m <sup>3</sup>

#### PNEC values

CAS No	Substance	Value
64-19-7	acetic acid	
	Freshwater	3,058 mg/l
	Freshwater (intermittent releases)	30,58 mg/l
	Marine water	0,306 mg/l
	Freshwater sediment	11,36 mg/kg
	Marine sediment	1,136 mg/kg
	Micro-organisms in sewage treatment plants (STP)	85 mg/l
	Soil	0,47 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.

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

##### Eye/face protection

goggles

Face protection umbrella

##### Hand protection

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

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By long-term hand contact  
Trade name/designation KCL 897 Butoject®  
Suitable material: Butyl caoutchouc (butyl rubber) 0,3 mm  
Wearing time with permanent contact: > 480 min

By short-term hand contact  
Trade name/designation KCL 890 Vitoject®  
Suitable material: FKM (fluoro rubber) 0,7 mm  
Wearing time with occasional contact (splashes): > 60 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](http://www.kcl.de)).

#### Skin protection

Take off immediately all contaminated clothing and wash it before reuse.  
Wear fire resistant or flame retardant clothing.  
Wash hands and face before breaks and after work and take a shower if necessary.  
Draw up and observe skin protection programme.

#### Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.  
Filtering device (full mask or mouthpiece) with filter: E-(P2)

#### Environmental exposure controls

Do not allow to enter into surface water or drains.  
Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.  
Danger of explosion

## 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:	17 °C
Boiling point or initial boiling point and boiling range:	116-118 °C
Flammability:	No data available
Lower explosion limits:	4 vol. %
Upper explosion limits:	19,9 vol. %
Flash point:	39 °C
Auto-ignition temperature:	463 °C
Decomposition temperature:	No data available
pH-Value (at 20 °C):	2,5 (50 g/l)
Viscosity / kinematic: (at 20 °C)	1,17 mm <sup>2</sup> /s
Water solubility: (at 25 °C)	602,9 g/L
Solubility in other solvents	
No data available	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available

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Vapour pressure: (at 20 °C)	16 hPa hPa
Vapour pressure:	No data available
Density:	1,05 g/cm <sup>3</sup>
Relative density:	No data available
Bulk density:	No data available
Relative vapour density:	No data available
Particle characteristics:	No data available

#### 9.2. Other information

##### Information with regard to physical hazard classes

###### Explosive properties

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

Sustaining combustion: Sustaining combustion

###### 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: No data available

Solid content: No data available

Sublimation point: No data available

Softening point: No data available

Pour point: No data available

Viscosity / dynamic: 1,22 mPa·s

(at 20 °C)

Flow time: No data available

##### Further Information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Oxidising agent

peroxides, for example hydrogen peroxide

permanganates, e.g. potassium permanganate

Oxidising agent, strong

Metal

iron and steel

Zinc

Alkali (lye)

aldehydes

Alcohols

Nitric acid

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**10.4. Conditions to avoid**

storage temperature < 17 °C

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**10.5. Incompatible materials**

Metal

**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**

**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

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

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-19-7	acetic acid				
	oral	LD50 mg/kg	3310	Rat	J Ind Hyg Toxicol, Vol 23, PP 78-82 (194)
	inhalation (4 h) vapour	LC50	11,4 mg/l	Rat	Study report (1980)
					The sodium salt of acetic acid was admin
					OECD Guideline 403

**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.

Observe risk of aspiration if vomiting occurs.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards**

**Endocrine disrupting properties**

No data available



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**Other information**

Irritant  
corrosive  
Dyspnoea  
Gastrointestinal complaints  
Vomiting  
Circulatory collapse  
Corneal opacity.  
Risk of serious damage to eyes.

**Further information**

kidneys

**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
64-19-7	acetic acid					
	Acute fish toxicity	LC50 mg/l	> 1000	96 h	Oncorhynchus mykiss	Study report (2005) other: SOP E257
	Acute algae toxicity	ErC50 mg/l	> 1000	72 h	Skeletonema costatum	Study report (2005) ISO 10253
	Acute crustacea toxicity	EC50 mg/l	> 1000	48 h	Daphnia magna	Study report (1990) OECD Guideline 202

**12.2. Persistence and degradability**

99 %; 30 d  
Readily biodegradable (according to OECD criteria).

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
64-19-7	acetic acid	-0,17

**BCF**

CAS No	Chemical name	BCF	Species	Source
64-19-7	acetic acid	3,16	fish	Environ. Toxicol. Ch

**12.4. Mobility in soil**

No data available

**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**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**12.7. Other adverse effects**

Do not allow to enter into surface water or drains.  
Avoid release to the environment.

**Further information**

No data available

**SECTION 13: Disposal considerations**

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**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 to the industry and process.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number or ID number:** UN 2789  
**14.2. UN proper shipping name:** Acetic acid, glacial  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
Hazard label: 8+3  
Classification code: CF1  
Limited quantity: 1 L  
Excepted quantity: E2  
Transport category: 2  
Hazard No: 83  
Tunnel restriction code: D/E

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 2789  
**14.2. UN proper shipping name:** Acetic acid, glacial  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
Hazard label: 8+3  
Classification code: CF1  
Limited quantity: 1 L  
Excepted quantity: E2

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 2789  
**14.2. UN proper shipping name:** Acetic acid, glacial  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
Hazard label: 8+3  
Special Provisions: -  
Limited quantity: 1 L  
Excepted quantity: E2  
EmS: F-E, S-C

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

**14.1. UN number or ID number:** UN 2789  
**14.2. UN proper shipping name:** Acetic acid, glacial  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
Hazard label: 8+3  
Limited quantity Passenger: 0.5 L  
Passenger LQ: Y840  
Excepted quantity: E2  
IATA-packing instructions - Passenger: 851

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

## 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 (SEVESO III): P5c FLAMMABLE LIQUIDS

#### 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): 12.

#### Abbreviations and acronyms

Flam. Liq: Flammable liquid

Skin Corr: Skin corrosion

Eye Dam: Eye damage

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

H226 Flammable liquid and vapour.

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 information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.