



# Acetic Acid ACS

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 07/22/2016

Revision date: 26/09/2018

Version No.: 2.0

### SECTION 1: Identification

#### 1.1. Product identifier

Product form	: Substance
Trade name	: Acetic Acid ACS
Substance type	: Mono-constituent
Type of product	: Pure substance
CAS No	: 64-19-7
Product code	: 6000
Formula	: C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>
Product group	: Trade product

#### 1.2. Recommended use and restrictions on use

Recommended uses and restrictions	: Industrial uses: Uses of substances as such or in preparations* at industrial sites Scientific research and development Solvent
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#### 1.3. Supplier

Regent Chemical Products Ltd.  
600 Avenue Delmar  
H9R 4A8 Pointe Claire  
T 514-630-3309 - F 514-630-5951  
[info@regentchem.com](mailto:info@regentchem.com) - <http://www.regentchem.com/>



#### 1.4. Emergency telephone number

Emergency number	: Terrapure environmental: 1-800-567-7455(24/24)
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

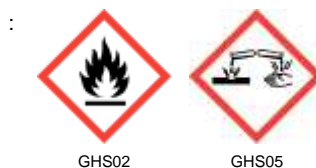
##### Classification (GHS-CA)

Flammable liquids, Category 3	H226
Skin corrosion/irritation, Category 1A	H314

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS-CA)



Signal word (GHS-CA)

: Danger

Hazard statements (GHS-CA)

: H226 - Flammable liquid and vapour, class II-Flash point equal to or greater than 100°F, but less than 140°F.  
H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS-CA)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical/ventilating/lighting equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P260 - Do not breathe mist/vapours/spray  
P264 - Wash hands, forearms and face thoroughly after handling  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

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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 or doctor  
 P321 - Specific treatment  
 P363 - Wash contaminated clothing before reuse  
 P370+P378 - In case of fire: Use media other than water to extinguish  
 P403+P235 - Store in a well-ventilated place. Keep cool  
 P405 - Store locked up  
 P501 - Dispose of contents / container to a hazardous or special waste collection point in accordance with municipal, provincial and federal regulations.

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-CA)

No data available

## SECTION 3 : Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

Name	Chemical name/Synonyms	Product identifier	%wt/wt	Classification (GHS-CA)
Acetic Acid ACS (Main constituent)	Acetic acid glacial, ethanoic acid, methane carboxylique acid, vinegar acid	(CAS No) 64-19-7	99 - 100	Flam. Liq. 3, H226 Skin Corr. 1A, H314

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove the victim into fresh air. Immediately consult a doctor/medical service. Doctor: administration of corticoid spray.

First-aid measures after skin contact : Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Give milk to drink. Do not induce vomiting. Do not give activated charcoal. Immediately consult a doctor/medical service. Call Poison Information Centre. Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital. Do not give chemical antidote. Doctor: gastric lavage is not recommended.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/injuries after inhalation : Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coughing. EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Respiratory difficulties. Possible inflammation of the respiratory tract. Risk of pneumonia. Risk of lung oedema.

Symptoms/injuries after skin contact : Caustic burns/corrosion of the skin.

Symptoms/injuries after eye contact : Corrosion of the eye tissue. Permanent eye damage.

Symptoms/injuries after ingestion : Risk of aspiration pneumonia. Burns to the gastric/intestinal mucosa. Possible esophageal perforation. Blood in vomit. Diarrhoea. Shock. Change in the haemogramme/blood composition. Change in urine composition. Decreased renal function.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. May stain the skin. Slight irritation. Inflammation/damage of the eye tissue. Dry/sore throat. Possible inflammation of the respiratory tract. Affection/discolouration of the teeth. Gastrointestinal complaints.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Polyvalent foam. Alcohol-resistant foam. BC powder. Carbon dioxide.

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### 5.2. Unsuitable extinguishing media

Unsuitable extinguishing media : No unsuitable extinguishing media known.

### 5.3. Specific hazards arising from the hazardous product

Fire hazard : DIRECT FIRE HAZARD. Flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard : DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

### 5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Evacuate area.

Personal Precautions, Protective Equipment and Emergency Procedures : EN 1073-2 - protective clothing.

### 6.2. Methods and materials for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute combustible/toxic gases/vapours with water spray. Take account of toxic/corrosive precipitation water. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.

Methods for cleaning up : Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite or kieselguhr, powdered limestone. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Use corrosionproof equipment. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe very strict hygiene - avoid contact. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Exhaust gas must be neutralised.

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

Storage conditions : Store in a well-ventilated place. Keep cool.

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Storage temperature : > 17 °C

Storage area : Store in a dry area. Ventilation at floor level. Keep out of direct sunlight. Fireproof storeroom. Keep locked up. Protect against frost. Provide for a tub to collect spills. Provide the tank with earthing. Detached building. Store only in a limited quantity. Meet the legal requirements.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) bases. metals. alcohols. amines. water/moisture.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers. Flammable liquid and vapour, class II-Flash point equal to or greater than 100 °F, but less than 140°F.

Packaging materials : SUITABLE MATERIAL: aluminium. glass. MATERIAL TO AVOID: steel. iron. zinc. lead. copper. bronze.

Other information : Flammable liquid and vapour, NFPA 30: class II-Flash point equal to or greater than 100°F, but less than 140°F.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Acetic Acid ACS (64-19-7)		
USA - ACGIH	ACGIH TWA (ppm)	10 ppm (Acetic acid; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA - ACGIH	ACGIH STEL (ppm)	15 ppm (Acetic acid; USA; Short time value; TLV - Adopted Value)
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	25
USA - OSHA	OSHA PEL (TWA) (ppm)	10 ppm
USA - OSHA	OSHA PEL (STEL) (ppm)	15 ppm

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

#### 8.3. Individual protection measures/Personal protective equipment

Personal protective equipment : EN 1146 - respiratory protection. EN 207 - eye protection. EN 374-3 - protective gloves.

Materials for protective clothing : GIVE EXCELLENT RESISTANCE: butyl rubber. polyethylene/ethylenevinylalcohol. viton. GIVE GOOD RESISTANCE: neoprene. GIVE LESS RESISTANCE: natural rubber. PVC. GIVE POOR RESISTANCE: polyethylene. PVA.

Hand protection : Gloves.

Eye protection : Safety glasses.

Skin and body protection : Head/neck protection. Corrosion-proof clothing.

Respiratory protection : Wear gas mask with filter type A if conc. in air > exposure limit. High vapour/gas concentration: self-contained respirator.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Liquid.

Molecular mass : 60.05 g/mol

Colour : Colourless.

Odour : Irritating/pungent odour. Vinegar odour.

Odour threshold : 1 ppm  
2.5 mg/m<sup>3</sup>

pH : 2.4 (6 % solution)

pH solution : 6 %

Relative evaporation rate (butylacetate=1) : 0.97

Relative evaporation rate (ether=1) : 11

Melting point : 17 °C

Freezing point : No data available

Boiling point : 118 °C

Flash point : 40 °C

Critical temperature : 322 °C

Auto-ignition temperature : 485 °C

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : 16 hPa (20 °C)

Vapour pressure at 50 °C : 75 hPa (50 °C)

Critical pressure : 45300 hPa

Relative vapour density at 20 °C : 2.1

Relative density : 1.0

Relative density of saturated gas/air mixture : 1.0

Density : 1.049 kg/m<sup>3</sup>

Relative gas density : No data available

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Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in tetrachloromethane. Soluble in glycerol. Soluble in dimethyl sulfoxide. Water: Complete Ethanol: Complete Ether: Complete Acetone: Complete
Log Pow	: -0.17 (Experimental value; 25 °C)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.0012 Pa.s (20 °C)
Viscosity, kinematic (calculated value) (40 °C)	: 1.14394662 mm <sup>2</sup> /s
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 4 - 19 vol % 100 - 430 g/m <sup>3</sup>
Lower explosive limit (LEL)	: No data available
Upper explosive limit (UEL)	: No data available

### 9.2. Other information

Specific conductivity	: 600000 pS/m
VOC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Hygroscopic. Volatile. Substance has acid reaction.

## SECTION 10 : Stability and reactivity

### 10.1. Reactivity

Reactivity	: Flammable liquid and vapor. On heating: release of corrosive/combustible gases/vapours (acetic acid vapours). Upon combustion: CO and CO <sub>2</sub> are formed. Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) bases. Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen).
Chemical stability	: Hygroscopic.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: keep away from heat, sparks and flame. Avoid freezing and sources of ignition.
Incompatible materials	: Incompatible with metals, oxidizers and reducing agent.
Hazardous decomposition products	: Monoxide and carbon dioxide. Reacts with metals to form hydrogen, a flammable and / or explosive gas.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Oral: Not classified.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Acetic Acid ACS (64-19-7)	
LD50 oral rat	3310 mg/kg bodyweight (Rat; Other; Read-across)
LD50 dermal rabbit	≈ 1.112 µg/kg
LC50 inhalation rat (ppm)	≈ 5620 ppm/1h
ATE CA (oral)	3310.00000000 mg/kg bodyweight

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 2.4 (6 % solution)
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 2.4 (6 % solution)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

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Specific target organ toxicity (repeated exposure) : Not classified  
 Aspiration hazard : Not classified

Acetic Acid ACS (64-19-7)	
Viscosity, kinematic (calculated value) (40 °C)	1.14394662 mm <sup>2</sup> /s

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.  
 Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/II.  
 Ecology - water : Slightly harmful to fishes (LC50(96h) >100 mg/l). Slightly harmful to invertebrates (Daphnia) (EC50 (48h) > 100 mg/l). Not harmful to algae (EC50 (72h) >1000 mg/l). pH shift. Inhibition of activated sludge.

Acetic Acid ACS (64-19-7)	
LC50 other aquatic organisms 1	≈ 1 mg/l 96 h
EC50 Daphnia 1	> 300.82 mg/l 48 h

#### 12.2. Persistence and degradability

Acetic Acid ACS (64-19-7)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.6 - 0.74 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.03 g O <sub>2</sub> /g substance
ThOD	1.07 g O <sub>2</sub> /g substance

#### 12.3. Bioaccumulative potential

Acetic Acid ACS (64-19-7)	
BCF fish 1	3.16 (BCF; Pisces)
Log Pow	-0.17 (Experimental value; 25 °C)
Log Koc	log Koc,0.06; QSAR
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

#### 12.4. Mobility in soil

Acetic Acid ACS (64-19-7)	
Surface tension	0.028 N/m (20 °C)
Log Pow	-0.17 (Experimental value; 25 °C)
Log Koc	log Koc,0.06; QSAR
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove for physico-chemical/biological treatment. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into drains or the environment. May be discharged to wastewater treatment installation.  
 Additional information : Dispose of contents / container to a hazardous or special waste collection point in accordance with municipal, provincial and federal regulations.

### SECTION 14: Transport information

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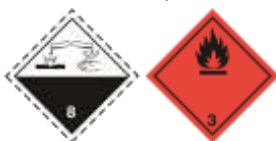
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### 14.1. Basic shipping description

In accordance with TDG

#### TDG

UN-No. (TDG)	: UN2789
Packing group	: II - Medium Danger
TDG Primary Hazard Classes	: 8 - Class 8 - Corrosives
TDG Subsidiary Classes	: 3
Transport document description	: UN2789 ACETIC ACID, GLACIAL, 8, II
TDG Proper Shipping Name	: ACETIC ACID, GLACIAL
Hazard labels (TDG)	: 8 - Corrosive substances 3 - Flammable liquids



ERAP Index	: 3 000
Explosive Limit and Limited Quantity Index	: 1 L
Excepted quantities (TDG)	: E2
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 1 L

### 14.2. Transport information/DOT

#### DOT

UN-No.(DOT)	: 2789
Proper Shipping Name	: ACETIC ACID, GLACIAL
Packing group	: II - Medium Danger
Class (DOT)	: 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT)	: 8 - Corrosive 3 - Flammable liquid



Dangerous for the environment	: No
Other information	: No supplementary information available.

### 14.3. Air and sea transport

#### IMDG

UN-No. (IMDG)	: 2789
Transport document description	: UN2789 ACETIC ACID, GLACIAL, 8, II
Class (IMDG)	: 8 - Corrosive substances
Subsidiary risk (IMDG)	: 3
EmS-No. (1)	: F-E
EmS-No. (2)	: S-C

#### IATA

UN-No. (IATA)	: 2789
Transport document description	: UN2789 ACETIC ACID, GLACIAL, 8, II
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: II - Medium Danger
Subsidiary risk (IATA)	: 3

## SECTION 15: Regulatory information

### 15.1. National regulations

No additional information available



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### 15.2. International regulations

No additional information available

### SECTION 16: Other information

Date of issue : 22/07/2016

Revision date : 26/09/2018

Full text of H-statements:

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

SDS CA Regent

*IMPORTANT: The information presented herein is believed to be accurate and is offered only as a guide. Users should make their own tests to determine the suitability of these products for their own particular purposes. Users assume all risk of use, storage and handling of the product. No warranty, express or implied, is made including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. Nothing contained herein shall be construed as a license to operate under, or recommendation to infringe any patents.*