

Material Safety Data Sheets (MSDS)

Acetic Acid Glacial

Identification of Product

Chemical Code: CHE-A1

Chemical Name: Acetic Acid Glacial

Chemical Grade: AR

Chemical Formula: $C_2H_4O_2$

Chemical Weight: 60.05 g/mol

CAS No: 64-19-7

Chemical Synonyms: Glacial Acetic Acid,
Acetic Acid

Hazards Identification

REACH No: 01-2119475328-30-XXXX

Signal Word: Danger

Supplemental Hazard Information:

Additional Hazard Information: This substance contains no components considered to be either persistent, bio-accumulative and toxic (PBT), or very persistent and very bio-accumulative (vPvB) at levels of 0.1% or higher.



Hazards statements

H226 - Flammable liquid and vapour.

H314 - Causes severe skin burns and eye damage.

Precautionary statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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/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.

P370 + P378 - In case of fire: Use dry powder or dry sand to extinguish.

Composition of Chemical

Chemical Formula: $C_2H_4O_2$

EC No 1272/2008: 01-2119475328-30-XXXX

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

If: Inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

If: Skin Contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

If: Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If: Swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Important Symptoms: The most important known symptoms and effects are described in the labelling section.

Immediate Medical Attention: No Data Available

Firefighting Measures

Extinguishing Media: Use Water spray, Alcohol-resistant foam, Dry chemical or Carbon Dioxide.

Hazards Arising: No Data Available

Advice for Firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Info for Firefighting: Use water spray to cool unopened containers.

Accidental Release Measures

Personal Precautions: Use personal protective equipment.
Avoid breathing vapours, mist or gas.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations.
Vapours can accumulate in low areas.

Environmental Precautions: Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.

Method for Containment: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

Handling and Storage

Personal Precautions: Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking.
Take measures to prevent the build up of electrostatic charge.

Environmental Precautions: Store in cool place.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Moisture sensitive.

Exposure Controls | Personal Protection

Derived No Effect Level (DNEL)

Workers | Application Area | Exposure Routes | Health Effect | Value

Workers - Inhalation - Acute local effects - 25 mg/m³

Workers - Inhalation - Long-term local effects - 25 mg/m³

Workers - Skin contact - Long-term local effects - 10mg/kg BW/d

Consumers | Application Area | Exposure Routes | Health Effect | Value

Consumers - Inhalation - Acute local effects - 25 mg/m³

Consumers - Inhalation - Long-term local effects - 25 mg/m³

Predicted No Effect Concentration (PNEC)

Soil - 0.478 mg/Kg

Marine Water - 0.3058 mg/L

Fresh Water - 3.058 mg/L

Marine Sediment - 1.136 mg/Kg

Fresh Water Sediment - 11.36 mg/Kg

Sewage Treatment Plant - 85 mg/l

Aquatic Intermittent Release - 30.58 mg/l

Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Eye/Face Protection: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact -

Material: Bbutyl-rubber. Minimum layer thickness: 0,3 mm

Break through time: 480 min. Material tested: Butoject®

Splash contact -

Material: Nature latex/Chloroprene. Minimum layer thickness: 0,6 mm

Break through time: 32 min. Material tested: Lapren®

Data source: KCL GmbH, D-36124, Test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection: Complete suit protecting against chemicals. Flame retardant anti-static protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator with multi-purpose combination, type OV/AG (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Physical and Chemical Properties

Appearance: Clear, Colourless Liquid

Odour: Pungent

Odour Threshold: No Data Available

pH: 2.4 at 60.05 g/l

Melting Point: 16.2 °C (lit).

Boiling Point: 117 - 118 °C (lit).

Flash Point: 40.0 °C (closed cup)

Evaporation: No Data Available

Flammability: No Data Available

Upper/Lower Flammability or Explosive Limits: Upper explosion limit: 19.9% (V),

Lower explosion limit: 4% (V)

Vapour pressure: 73.3 hPa at 50.0°C,
15.2 hPa at 20.0°C

Vapour density: No Data Available

Relative density: 1,049 g/cm³ at 25°C

Water solubility: Completely miscible

Partition Coefficient: Log Pow: - 0.169

Auto-ignition Temperature: 485.0°C

Decomposition Temperature: No Data Available

Viscosity: No Data Available

Explosive properties: No Data Available

Oxidizing properties: No Data Available

Other Safety Info: Surface tension - 28.8 mN/m at 10.0°C

Stability and Reactivity

Reactivity: No Data Available

Chemical Stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No Data Available

Conditions to Avoid: Heat, flames and sparks

Incompatible Materials: Oxidizing agents, Soluble Carbonates and Phosphates, Hydroxides, Metals, Peroxides, Permanganates (e.g. Potassium Permanganate), Amines, Alcohols, Nitric Acid.

Hazardous Decomposition Products: Hazardous decomposition products formed under fire conditions - Carbon Oxides

Toxicological Information

Acute Toxicity: LD50 Oral - Rat - 3.310 mg/kg.

LC50 Inhalation - Mouse - 1 h - 5620 ppm.

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste).

Eye: Conjunctive irritation.

Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Other.

Blood: Other changes.

LC50 Inhalation - Rat - 4 h - 11,4 mg/l.

LD50 Dermal - Rabbit - 1.112 mg/kg.

Skin Corrosion/Irritation: Rabbit

Result: Causes severe burns

Serious Eye damage | Eye Irritation: Rabbit -

Result: Corrosive to eyes

Cell Mutagenicity: No Data Available

Carcinogenicity: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: No Data Available

Specific Target Organ Toxicity - Single Exposure: No Data Available

Specific Target Organ Toxicity - Repeated Exposure: No Data Available

Aspiration Hazard: No Data Available

Ecological Information

Ecological Toxicity: Toxicity to fish:

Semi-static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - > 1.000 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates:

EC50 - *Daphnia magna* (Water flea) - > 300.82 mg/l - 48 h (OECD Test Guideline 202)

Ecological Persistence and degradability: Biodegradability:

Aerobic: Exposure time - 30 d - Result: 99% - Readily biodegradable.

Remarks: Expected to be biodegradable.

Biochemical Oxygen Demand (BOD): 880 mg/g

Bioaccumulative Potential: No Data Available

Mobility in Soil: No Data Available

Results of PBT and vPvB Assessment: This substance contains no components considered to be either persistent, bio-accumulative and toxic (PBT), or very persistent and very bio-accumulative (vPvB) at levels of 0.1% or higher.

Other Adverse Effect: No Data Available

Disposal Considerations

Waste Treatment Methods: Product -

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging -

Dispose of as unused product.

Transport Information

UN Number: ADR/RID: 2789

IMDG: 2789

IATA: 2789

UN Shipping Hazard: ADR/RID: ACETIC ACID, GLACIAL

IMDG: ACETIC ACID, GLACIAL

IATA: Acetic Acid, Glacial

Transport Hazard Class: ADR/RID: 8 (3)

IMDG: 8 (3)

IATA: 8 (3)

Packaging Group: ADR/RID: II

IMDG: II

IATA: II

Environmental Hazards: ADR/RID: no

IMDG Marine pollutant: no

IATA: no

Special Precautions: No Data Available

Regulatory Information

Safety, Health and environmental regulations: This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Chemical Safety Assessment: A Chemical Safety Assessment has been carried out for this substance.

Additional Info: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin.

Spasm, inflammation and edema of the larynx.

Spasm, inflammation and edema of the bronchi.

Pneumonitis, Pulmonary edema, Burning sensation, Cough, Wheezing, Laryngitis, Shortness of breath, Headache, Nausea, Vomiting.

Ingestion or inhalation of concentrated Acetic Acid causes damage to tissues of the respiratory and digestive tracts.

Symptoms include: Hematemesis, Bloody diarrhea, Edema and/or perforation of the Esophagus and Pylorus, Pancreatitis, Hematuria, Anuria, Uremia, Albuminuria, Hemolysis, Convulsions, Bronchitis, Pulmonary Edema, Pneumonia, Cardiovascular collapse, Shock and Death.

Direct contact or exposure to high concentrations of vapor with skin or eyes can cause:

Erythema, Blisters, Tissue destruction with slow healing, Skin blackening, Hyperkeratosis, Fissures, Corneal erosion, Opacification, Iritis, Conjunctivitis, and possible blindness.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS: AF1225000

Disclaimer

The information stated above is considered to be correct, but does not claim to be inclusive and shall only be used as a guideline. The information provided by this document is confirmed by our continuous updating of knowledge and adheres to the products appropriate safety precautions. It does not represent any guarantee of the product's properties. RLS Chemicals and its Associates shall not be held accountable for any damage's consequent of handling the above product.
