

MATERIAL SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name: Acetic acid
Product code: A028, A038, A067, A114, A552, A557, AA01
Brand: LEONID
CAS-No.: 64-19-7
Index No.: 607-002-00-6
REACH No.: 01-2119475328-30-XXXX

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

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Leonid Chemicals Pvt. Ltd
Plot No. 30P2, KIADB Industrial Area
Dobaspet – 562111
Taluk – Nelamangala
District – Bangalore Rural
State – Karnataka
India

1.4 Emergency telephone number

Emergency phone number: +91 23377126 / 23378254

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 3), H226
Skin corrosion (Sub-category 1A), H314
Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H226

Flammable liquid and vapour.

H314

Causes severe skin burns and eye damage.

Precautionary statement(s)

P210

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

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.

P304 + P340 + P310

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P370 + P378

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Supplemental Hazard Statements None

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Lachrymator.

3. Composition/information on ingredients

3.1 Substances

Synonyms: Glacial acetic acid
Formula: $C_2H_4O_2$
Molecular weight: 60.05 g/mol
CAS-No.: 64-19-7
EC-No.: 200-580-7
Index-No.: 607-002-00-6

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Acetic acid		
	Flam. Liq. 3; Skin Corr. 1A; H226, H314 Concentration limits: $\geq 90\%$: Skin Corr. 1A, H314; $25 - < 90\%$: Skin Corr. 1B, H314; $10 - < 25\%$: Skin Irrit. 2, H315; $10 - < 25\%$: Eye Irrit. 2, H319;	$\leq 100\%$

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1 Description of 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.

In case of skin contact

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

In case of 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.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Dry powder, Dry sand.

Unsuitable extinguishing media

Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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.

For personal protection see section 8.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other section

For disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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.

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Application Area	Exposure routes	Health effect	Value
Workers	Skin contact	Long-term local effects	10mg/kg BW/d
Workers	Inhalation	Acute local effects	25 mg/m3
Workers	Inhalation	Long-term local effects	25 mg/m3
Consumers	Inhalation	Acute local effects	25 mg/m3
Consumers	Inhalation	Long-term local effects	25 mg/m3

Predicted No Effect Concentration (PNEC)

Compartment	Value
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

8.2 Exposure control

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (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 glove's 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 Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Butyl 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

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 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 antistatic 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 (US) or type ABEK (EN 14387) respirator cartridges as a backup to engine 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).

Control of environmental exposure

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

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Liquid
b) Odour	Pungent
c) Odour Threshold	No data available
d) pH	2.4 at 60.05 g/l
e) Melting point/freezing point	Melting point/range: 16.2°C – Lit.
f) Initial boiling point and boiling range	117 – 118 °C - lit.
g) Flash point	40.0°C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 19.9%(V) Lower explosion limit: 4.0%(V)
k) Vapour pressure	73.3 hPa at 50.0°C 15.2 hPa at 20.0°C
l) Vapour density	No data available
m) Relative density	1.049 g/cm ³ at 25°C
n) Water solubility	Completely miscible
o) Partition coefficient: n-octanol/water	log Pow: -0.17
p) Auto-ignition temperature	485.0°C
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

Surface tension	28.80 mN/m at 10.0°C
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10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks

10.5 Incompatible materials

Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, for example potassium permanganate, Amines, Alcohols, Nitric acid.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 3.310 mg/kg

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Causes burns.

Remarks: (IUCLID)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes burns.

Remarks: (IUCLID)

Causes serious eye damage

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Ames test

Salmonella typhimurium

Result: negative

Mutagenicity (mammal cell test): chromosome aberration.

Result: negative

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

Additional Information

RTECS: AF1225000

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.

12. Ecological information

12.1 Toxicity

Toxicity to fish	Semi-static test LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) – 300.8 mg/l 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	EC5 - <i>E.sulcatum</i> - 78 mg/l - 72 h Remarks: neutral (maximum permissible toxic concentration) (Lit.) EC50 - <i>Daphnia magna</i> (Water flea) – 47.00 mg/l - 24 h Remarks: (Lit.)
Toxicity to algae	IC5 - <i>Scenedesmus quadricauda</i> (Green algae) - 4.000 mg/l - 16 h Remarks: (maximum permissible toxic concentration) (Lit.)
Toxicity to bacteria	EC5 - <i>Pseudomonas putida</i> - 2.850 mg/l - 16 h Remarks: neutral (maximum permissible toxic concentration) (Lit.) microtox test EC50 - <i>Photobacterium phosphoreum</i> - 11 mg/l – 15 min Remarks: (IUCLID)

12.2 Persistence and degradability

Biodegradability	Result: 99% - Readily biodegradable. (OECD Test Guideline 301D) Remarks: (HSDB) Result: 95 % - Readily eliminated from water (OECD Test Guideline 302B)
Biochemical Oxygen Demand (BOD)	880 mg/g Remarks: (Lit.)
Ratio BOD/ThBOD	76 % Remarks: (IUCLID)

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Additional ecological information No data available

13. Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

14. Transport information

14.1 UN number

ADR/RID: 2789

IMDG: 2789

IATA: 2789

14.2 UN proper shipping name

ADR/RID: ACETIC ACID, GLACIAL

IMDG: ACETIC ACID, GLACIAL

IATA: Acetic acid, glacial

14.3 Transport hazard class(es):

ADR/RID: 8 (3)

IMDG: 8 (3)

IATA: 8 (3)

14.4 Packaging group

ADR/RID: - II

IMDG: - II

IATA: - II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

Further information



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