

MATERIAL SAFETY DATA SHEET

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

1.1 Product identifiers

Product name: Acetonitrile
Product code: A024, A025, A029, A117, A129, A130, A276, A314, A393, A548, A900, A998
Brand: LEONID
CAS-No.: 75-05-8
Index No.: 608-001-00-3

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 2), H225

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312 Eye irritation (Category 2), H319

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

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H225

H302 + H312 + H332

H319

Highly flammable liquid and vapour.

Harmful if swallowed, in contact with skin or if inhaled.

Causes serious eye irritation.

Precautionary statement(s)

P210

P261

P280

P305 + P351 + P338

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

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Wear protective gloves/ protective clothing.

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.

P403 + P235

Store in a well-ventilated place. Keep cool.

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.

3. Composition/information on ingredients

3.1 Substances

Synonyms: Methyl cyanide
ACN
Formula: C_2H_3N
Molecular weight: 41.05 g/mol
CAS-No.: 75-05-8
EC-No.: 200-835-2
Index-No.: 608-001-00-3
Registration No.: 01-2119471307-38-XXXX

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

Component	Classification	Concentration
Acetonitrile		
CAS-No.: 75-05-8	Flam. Liq. 2; Acute Tox. 4;	<= 100 %
EC-No.: 200-835-2	Eye Irrit. 2; H225, H302,	
Index-No.: 608-001-00-3	H332, H312, H319	
Registration No.: 01-2119471307-38-XXXX		

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

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

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x)

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 an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local 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 contact with skin and eyes. 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.

Handle and store under inert gas.

Storage class (TRGS 510): Flammable liquids

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	Inhalation	Acute local effects, Acute systemic effects	68 mg/m ³
Workers	Skin contact	Long-term systemic effects	32.2mg/kg BW/d
Workers	Inhalation	Long-term local effects, Long-term systemic effects	68 mg/m ³
Consumers	Inhalation	Acute local effects	220 mg/m ³
Consumers	Skin contact	Acute systemic effects	22 mg/m ³
Consumers	Inhalation	Long-term systemic effects	4.8 mg/m ³

Predicted No Effect Concentration (PNEC)

Compartment	Value
Water	10 mg/l
Soil	2.41 mg/kg
Marine water	1 mg/l
Fresh water	10 mg/l
Fresh water sediment	7.53 mg/kg
Onsite sewage treatment plant	32 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

Face shield and safety glasses 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 EU Directive 89/686/EEC 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: Butyl rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject

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 engineer 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	Clear colourless liquid
b) Odour	Ether-like
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: -48°C.
f) Initial boiling point and boiling range	81.0 – 82.0°C
g) Flash point	2.0°C – closed cup
h) Evaporation rate	5.8
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 16.0%(V) Lower explosion limit: 3.0%(V)
k) Vapour pressure	73.18 hPa at 15°C 121.44 hPa at 25°C 413.23 hPa at 55°C 98.64 hPa at 20°C
l) Vapour density	1.42 – (Air = 1.0)
m) Relative density	0.786 g/mL at 25°C
n) Water solubility	Completely soluble
o) Partition coefficient: n-octanol/water	log Pow: -0.54 at 25°C
p) Auto-ignition temperature	524.0°C
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	Not explosive
t) Oxidizing properties	The substance or mixture is not classified as oxidizing

9.2 Other safety information

Surface tension	29.0 mN/m at 20.0°C
Relative vapour density	1.42 – (Air = 1.0)

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. Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Acids, Bases, Oxidizing agents, Reducing agents, Alkali metals

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x).

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 – male – 1,320 – 6,690 mg/kg (Acetonitrile)

LC50 Inhalation – Mouse – 4 h – 3587 ppm (Acetonitrile)

(OECD Test Guideline 403)

LC50 Inhalation – Rat – 4 h – 26.8 mg/l (Acetonitrile)

LD50 Dermal – Rabbit – male and female – > 2,000 mg/kg (Acetonitrile)

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin – Rabbit (Acetonitrile)

Result: No skin irritation

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes – Rabbit (Acetonitrile)

Result: Irritating to eyes.

(OECD Test Guideline 405)

Respiratory or skin sensitisation

Buehler Test – Guinea pig (Acetonitrile)

Did not cause sensitisation on laboratory animals.

(OECD Test Guideline 406)

Germ cell mutagenicity

Hamster (Acetonitrile)

ovary

Result: negative

Mutation in mammalian somatic cells.

Ames test (Acetonitrile)

S. typhimurium

Result: Not mutagenic in Ames Test

Hamster (Acetonitrile)

ovary

Result: Equivocal evidence.

Sister chromatid exchange

Mutagenicity (micronucleus test) (Acetonitrile)

Mouse

Result: Positive results were obtained in some in vivo tests.

Carcinogenicity

No evidence of carcinogenicity in animal studies. (Acetonitrile)

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

Animal testing did not show any effects on fertility. (Acetonitrile)

Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure. (Acetonitrile)

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification (Acetonitrile)

Additional Information

RTECS: AL7700000

Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis, excitement, depression, Drowsiness, impaired judgment, Lack of coordination, stupor, death (Acetonitrile)

12. Ecological information

12.1 Toxicity

Toxicity to fish	LC50 – Pimephales promelas (fathead minnow) – 1,640.00 mg/l – 96 h (Acetonitrile) NOEC – Oryzias latipes – 102 mg/l – 21 d (Acetonitrile)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) – 3,600 mg/l – 48 h (Acetonitrile) (OECD Test Guideline 202) NOEC – Daphnia magna (Water flea) – 160 mg/l – 21 d (Acetonitrile)

12.2 Persistence and degradability

Biodegradability	Result: 84% – Readily biodegradable. (OECD Test Guideline 301C)
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12.3 Bioaccumulative potential

No bioaccumulation is to be expected (log Pow <= 4).

12.4 Mobility in soil

Not expected to adsorb on soil. (Acetonitrile)

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

Avoid release to the environment.	
Stability in water	(Acetonitrile) Remarks: Hydrolyses slowly.

13. Disposal considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport information

14.1 UN number			
ADR/RID: 1648	IMDG: 1648	IATA: 1648	
14.2 UN proper shipping name			
ADR/RID: ACETONITRILE			
IMDG: ACETONITRILE			
IATA: Acetonitrile			
14.3 Transport hazard class(es):			
ADR/RID: 3	IMDG: 3	IATA: 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.

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Further information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Leonid Chemicals Pvt. Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Leonid Chemicals Pvt. Ltd. has been advised of the possibility of such damages.