Product Name	Acetonitrile

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:

Product Description: Acetonitrile

Synonyms: Methyl cyanide; Ethanenitrile

CAS-No: 75-05-8

EC-No.: 200-835-2

Molecular Formula: $C_2 H_3 N$

REACH Registration No: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Recommended Use: Laboratory chemicals, not for food or drug, Used as pharma Excipient.

1.3. Details of the supplier of the safety data sheet:

- **Company** — **Finar Limited**
  184-186/P, Chacharwadi Vasna,
  Sarkhej-Bavla Highway,
  Ta.: Sanand, Dist.: Ahmedabad-382110, Gujarat, India.
  Web: www.finarchemicals.com
- **E-Mail Address** — safety.finar@actylis.com; info.finar@actylis.com

1.4. Emergency Telephone Number:

- For Emergency contact on: +91 - 2717 - 616 717

Product Name	Acetonitrile

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008

Flammable liquid, Category 2, H225

Acute toxicity, Category 4, Oral, H302

Acute toxicity, Category 4, Inhalation, H332

Acute toxicity, Category 4, Dermal, 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:

Labeling according Regulation (EC) No 1272/2008

Pictogram

Signal word : Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.

H319 Causes serious eye irritation.

Precautionary statement(s)

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P240 Ground/bond container and receiving equipment.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

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

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Reduced labelling (≤125 ml)

Pictogram

Signal word: **Danger**

2.3. Other Hazards:

None Known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: Acetonitrile

3.2. Mixtures:

Component	CAS-No	EC-No.	Weight %
Acetonitrile	75-05-8	200-835-2	>95

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice**

  Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

- **If inhaled**

  Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

- **If Contact with skin**

  Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

- **In case of eye contact**

  Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

- **If swallowed**

  Immediately make victim drink water (two glasses at most). Consult a physician.

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

May cause headache and dizziness.

The following applies to cyanogen compounds/ nitriles in general: utmost caution!

Release of hydrocyanic acid is possible - blockade of cellular respiration.

Cardiovascular disorders, dyspnoea, unconsciousness.

irritant effects, Nausea, Vomiting, Convulsions, Shortness of breath, respiratory arrest, cardiac arrest, Unconsciousness

4.3. Indication of any immediate medical attention and special treatment needed:

No information Available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable Extinguishing Media- Use water, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture:

Combustible.

Pay attention to flashback.

Forms explosive mixtures with air at ambient temperatures.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Fire may cause evolution of: nitrogen oxides, Hydrogen cyanide (hydrocyanic acid)

5.3. Advice for firefighters:

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus.

Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further Information:

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area,

observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2. Environmental precautions:

Do not let product enter drains. Risk of explosion.

6.3. Methods and material for containment and cleaning up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

6.4. Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Advice on safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection.

Wash hands and face after working with substance.

7.2. Conditions for safe storage, including any incompatibilities:

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Recommended storage temperature see product label.

7.3. Specific end use(s):

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Contains no substances with occupational exposure limit values.

8.2. Exposure Controls:

- **Appropriate Engineering Controls:**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

- **Eye & Face Protection-**

  Tightly fitting safety goggles

- **Hand Protection -**

  Full contact: -

Glove material:	Butyl-Rubber
Glove thickness:	0.70 mm
Break through time:	480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 720 Camapren® (splash contact).

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).

- **Other Protective equipment-**

  Flame retardant antistatic protective clothing.

- **Respiratory Protection-**

  Required when vapours/aerosols are generated.

  Recommended Filter type: Filter A- (acc. To DIN 3181)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

- **Environmental Exposure Controls-**

  Do not let product enter drains. Risk of explosion.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

- **Appearance:** Colorless
- **Physical State:** Liquid
- **Odour:** Aromatic
- **Odour Threshold:** 39.8 ppm
- **pH:** No data available
- **Melting Point:** -45.7 °C
- **Critical Temperature:** No data available
- **Vapor Pressure:** 97 hPa at 20 °C
- **Relative Vapor Density:** 1.42
- **Density:** 0.786 g/cm3 at 20 °C
- **Ignition Temperature:** 524 °C
- **Volatility:** No data available
- **Bulk Density:** No data available
- **Viscosity, dynamic:** 0.316 mPa.s at 25 °C
- **Odor Threshold:** No data available
- **Water/Oil Dist. Co eff.:** No data available
- **Ionicity (in Water):** No data available
- **Lower Explosion Limit:** 3.0 % (V)
- **Upper Explosion Limit:** 17 % (V)
- **Boiling Point/Range:** 81.6 °C at 1.013 hPa
- **Flash Point:** 2 °C
- **Specific Gravity / Density:** 1.07 g/cm³ at 25 °C
- **Water Solubility:** At 20 °C Soluble

9.2. Other information:

Molecular Formula: $C_2 H_3 N$

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Vapours may form explosive mixture with air.

10.2. Chemical stability:

Heat-sensitive. Distillable in an undecomposed state at normal pressure.

10.3. Possibility of hazardous reactions:

Violent reactions possible with: Strong bases, strong reducing agents

Risk of explosion with: nitrates, perchlorates, perchloric acid, conc. sulfuric acid, with, Heat

Risk of ignition or formation of inflammable gases or vapours with: Oxidizing agents, Nitric acid nitrogen dioxide, with, Catalyst

Generates dangerous gases or fumes in contact with: Acids

10.4. Conditions to avoid:

Warming.

10.5. Incompatible materials:

Rubber, various plastics

10.6. Hazardous decomposition products:

In the event of fire: See section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute Oral toxicity

LD50 Mouse: 617 mg/kg

OECD Test Guideline 401

Symptoms: Nausea, Vomiting

Acute Inhalation toxicity

Symptoms: Possible damages:, mucosal irritations

Acute Dermal toxicity

This information is not available.

Skin corrosion/irritation

Rabbit

Result: No skin irritation

OECD Test Guideline 404

Serious eye damage/eye irritation

Rabbit

Result: Eye irritation

OECD Test Guideline 405

Causes serious eye irritation.

Respiratory or skin sensitization

Buehler Test Guinea pig

Result: negative

Method: OECD Test Guideline 406

Germ cell mutagenicity

Genotoxicity in vivo

In vivo micronucleus test

Mouse

male and female

i.p.

Result: negative

Method: OECD Test Guideline 474

Genotoxicity in vitro Ames test

Salmonella typhimurium

Result: negative

(External MSDS)

Mutagenicity (mammal cell test):

Mouse lymphoma test

Result: negative

Method: OECD Test Guideline 476

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

No data available

11.2 Further Information:

After absorption:

Systemic effect:

Shortness of breath, Headache, Dizziness, Nausea, Convulsions, respiratory arrest, cardiac arrest, Unconsciousness

Symptoms may be delayed.

The following applies to cyanogen compounds/ nitriles in general: utmost caution!

Release of hydrocyanic acid is possible - blockade of cellular respiration.
Cardiovascular disorders, dyspnoea, unconsciousness.
Other dangerous properties cannot be excluded.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to fish
semi-static test LC50 Oryzias latipes (Orange-red killifish): > 100 mg/l; 96 h
OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates
semi-static test EC50 Daphnia magna (Water flea): > 1,000 mg/l; 48 h
OECD Test Guideline 202
semi-static test NOEC Daphnia magna (Water flea): 960 mg/l; 21 d
OECD Test Guideline 202
Toxicity to algae
static test EC50 Pseudokirchneriella subcapitata (green algae): > 1,000 mg/l; 72 h
OECD Test Guideline 201
static test NOEC Pseudokirchneriella subcapitata (green algae): > 1,000 mg/l; 72 h
OECD Test Guideline 201
IC5 Scenedesmus quadricauda (Green algae): 7,300 mg/l; 8 d
(IUCLID) (maximum permissible toxic concentration)
Toxicity to bacteria
EC5 Pseudomonas putida: 680 mg/l; 16 h
(IUCLID) (maximum permissible toxic concentration)

12.2 Persistence and degradability:

Biodegradability
70 %; 21 d
OECD Test Guideline 310
Readily biodegradable

12.3 Bioaccumulate potential:

Partition Coefficient: - n-Octanol/water

Log Pow: -0.34

(IUCLID) Bioaccumulation is not expected.

Bioaccumulation

Bioconcentration factor (BCF): 0.3

Lepomis macrochirus (Bluegill sunfish)

Does not significantly accumulate in organisms.

Information taken from reference works and the literature.

12.4 Mobility in soil:

Distribution among environmental compartments

Adsorption/Soil

log Koc: 1.21

Mobile in soils (Lit.)

12.5 Results of PBT and vPvB assessment:

Substance(s) in the mixture does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other adverse effects:

Stability in water

DT50

> 9,999 d

at pH: 7

(calculated) Hydrolyses slowly.

Additional ecological information

Biological effects:

Hazard for drinking water supplies.

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. Handle un cleaned containers like the product itself.

Product Name	Acetonitrile

SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	UN 1648	UN 1648	UN 1648
14.2 Proper shipping name	ACETONITRILE	ACETONITRILE	ACETONITRILE
14.3 Class	3	3	3
14.4 Packing group	II	II	II
14.5 Environmentally hazardous	--	--	--
14.6 Special precautions for user	Yes Tunnel Restriction code – D/E	No	Yes EmS F-E S-D
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not Relevant			

SECTION 15: Regulatory information

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

National Legislation Storage class- 3

15.2 Chemical safety assessment:

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

SECTION 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.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H332	Harmful if inhale

Training advice

Provide adequate information, instruction and training for operators.

References: Not available

Created: 27/07/2021

Product Name	Acetonitrile

Updated On: 29/09/2022

Disclaimer:

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 Finar Limited 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 Finar Limited has been advised of the possibility of such damages.