# SAFETY DATA SHEET

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

| | |
|---|---|
| Product name: | Acetonitrile |
| CAS number: | 75-05-8 |
| Synonyms: | Ethanenitrile ; Methyl cyanide ; Cyanomethane |

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

Identified Uses: General purpose solvent.

### 1.3 Details of the supplier of the safety data sheet

| | |
|---|---|
| Company | : Lab Alley, LLC<br>22111 Highway 71 West, Suite 601<br>Spicewood, Texas 78669<br>U.S.A. |
| Telephone | : 512-668-9918 |
| Fax | : 512-886-4008 |

### 1.4 Emergency telephone

| | | |
|---|---|---|
| **Emergency Phone #** | : US & Canada: 1-800-535-5053 | INFOTRAC |
| | International 1-352-323-3500 | INFOTRAC |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 2)
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 4)
Acute toxicity, Dermal (Category 4)
Eye irritation (Category 2A)

## 2.2 GHS Label elements, including precautionary statements

Pictogram:

Signal Word: **Danger**

Hazard statement(s): Highly flammable liquid and vapor. Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Causes serious eye irritation.

Precautionary statement(s): **Prevention** - Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing. Wear protective gloves/eye protection/face protection. **Response** - If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. In case of fire: Use appropriate media to extinguish.

**Hazards not otherwise classified**

None.

# SECTION 3: Composition/information on ingredients

## 3.1 Components

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| Acetonitrile | Ethanenitrile ; Methyl cyanide ; Cyanomethane | 75-05-8 | 100 |

# SECTION 4: First aid measures

## 4.1 Description of first-aid measures

**General advice:** Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

**If inhaled:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a poison center or doctor/physician if you feel unwell.

**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

**In case of eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**In case of ingestion:** Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

### 4.2 Most important symptoms and effects, both acute and delayed

Convulsions. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

### 4.3 Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable (and unsuitable) extinguishing media** Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide ($CO_2$). Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2 Specific hazards arising from the substance or mixture

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Combustion products may include: carbon oxides, nitrogen oxides, hydrogen cyanide.

### 5.3 Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

### 5.4 Further information

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Use standard firefighting procedures and consider the hazards of other involved materials. Highly flammable liquid and vapor. Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/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

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors and spray mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

### 6.2 Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

## 6.3 Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

## 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

## 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. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Test for peroxide formation periodically and before distillation. Storage class (TRGS 510): 3: Flammable liquids.

# SECTION 8. Exposure controls/personal protection

## 8.1 Occupational exposure limits

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Material | Type | Value |
|---|---|---|
| Acetonitrile (CAS 75-05-8) | PEL | 70 mg/m3 |
| | | 40 ppm |

**US. ACGIH Threshold Limit Values**

| Material | Type | Value |
|---|---|---|
| Acetonitrile (CAS 75-05-8) | TWA | 20 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Material | Type | Value |
|---|---|---|
| Acetonitrile (CAS 75-05-8) | TWA | 34 mg/m3 |
| | | 20 ppm |

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines**

**US - California OELs: Skin designation**

| | |
|---|---|
| Acetonitrile (CAS 75-05-8) | Can be absorbed through the skin. |

**US - Minnesota Haz Subs: Skin designation applies**

| | |
|---|---|
| Acetonitrile (CAS 75-05-8) | Skin designation applies. |

**US ACGIH Threshold Limit Values: Skin designation**

| | |
|---|---|
| Acetonitrile (CAS 75-05-8) | Can be absorbed through the skin. |

## 8.2 Exposure controls

### Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.

#### Skin and body protection

Flame retardant antistatic protective clothing. Wear appropriate chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier. Wear appropriate thermal protective clothing, when necessary.

#### Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Chemical respirator with organic vapor cartridge. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.

#### Control of environmental exposure

Do not let product enter drains. Risk of explosion.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Physical State** | Liquid. |
| **Appearance** | Colorless. |
| **Odor** | Ethereal (Ether-like) |
| **Odor Thresh** | 39.8 ppm |
| **pH** | No data available. |
| **Melting Point/Range** | -50.8 °F (-46 °C) |
| **Boiling Point/Range** | 178.9 °F (81.6 °C) 101.325 kPa |
| **Flash Point** | 55.0 °F (12.8 °C) Closed Cup |
| **Evaporation Rate** | Expected to rapid. |
| **Flammability (solid, gas)** | Not applicable. |
| **Flammability or explosive limit** | |
| **Upper** | : 16 % v/v |
| **Lower** | : 4 % v/v |
| **Vapor Pressure** | 119.81 hPa (77 °F (25 °C) |
| **Vapor Density** | 1.42 - (Air = 1.0) |
| **Density** | 0.786 g/ml (77 °F (25 °C)) |
| **Solubility** | Soluble. |
| **Partition coefficient; n-octanol/water** | log Pow: -0.54 at 25 °C (77 °F) - Bioaccumulation is not expected. |
| **Autoignition Temp** | 975.2 °F (524 °C) |
| **Decomposition Temp** | No data available. |
| **Viscosity** | No data available. |
| **Molecular Formula** | C2-H3-N |
| **Molecular Weight** | 41.05 g/mol |
| **VOC Content(%)** | No data available. |
| **Oxidizing properties** | None. |

### 9.2 Other safety information

| | |
|---|---|
| Surface tension | 29.0 mN/m at 20.0 °C (68.0 °F) |
| Relative vapor density | 1.42 - (Air = 1.0) |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

## 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

## 10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

## 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

## 10.5 Incompatible materials

Strong oxidizing agents.

## 10.6 Hazardous decomposition products

Hydrogen cyanide. Nitrogen oxides.

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | Harmful if inhaled. |
| **Skin contact** | Harmful in contact with skin. |
| **Eye contact** | Causes serious eye irritation. |
| **Ingestion** | Harmful if swallowed. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Convulsions. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing. redness, swelling, and blurred vision. |

**Information on toxicological effects**

**Acute toxicity** Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed.

| Product | Species | Test Results |
|---|---|---|
| Acetonitrile (CAS 75-05-8) | | |
| **Acute** | | |
| **Inhalation** | | |
| *Vapor* | | |
| LC50 | Mouse | 3587 ppm, 4 Hours |
| **Oral** | | |
| LD50 | Mouse | 617 mg/kg |

| | |
|---|---|
| **Skin corrosion/irritation** | Prolonged skin contact may cause temporary irritation. May be absorbed through the skin. |
| **Serious eye damage/eye irritation** | Causes serious eye irritation. |
| **Respiratory or skin sensitization** | |
| **Respiratory sensitization** | Not a respiratory sensitizer. |
| **Skin sensitization** | This product is not expected to cause skin sensitization. |
| **Germ cell mutagenicity** | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| **Carcinogenicity** | Not classifiable as to carcinogenicity to humans. |

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

**NTP Report on Carcinogens**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

| | |
|---|---|
| **Reproductive toxicity** | This product is not expected to cause reproductive or developmental effects. |
| **Specific target organ toxicity - single exposure** | Not classified. |
| **Specific target organ toxicity - repeated exposure** | Not classified. |
| **Aspiration hazard** | Not an aspiration hazard. |
| **Chronic effects** | Prolonged inhalation may be harmful. |

## 11.2 Additional information

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, Diarrhea, Headache, Dizziness, Rash, Cyanosis, excitement, depression, Drowsiness, impaired judgment, Lack of coordination, stupor, death. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

# SECTION 12. Ecological information

## 12.1 Toxicity

| | |
|---|---|
| Toxicity to fish | flow-through test LC50 - Pimephales promelas (fathead minnow) - 1,640 mg/l - 96 h<br>Remarks: (ECHA) |
| Toxicity to algae | static test NOEC - Phaeodactylum tricornutum - 400 mg/l - 72 h (ISO 10253)<br>static test ErC50 - Phaeodactylum tricornutum - 9,696 mg/l - 72 h (ISO 10253) |
| Toxicity to bacteria | |
| Toxicity to fish(Chronic toxicity) | flow-through test NOEC - Oryzias latipes - 102 mg/l - 21 d<br>(OECD Test Guideline 204) |

* The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

## 12.2 Persistence and Degradability

No data is available on the degradability of this substance.

## 12.3 Bioaccumulative Potential

No bioaccumulation is to be expected.

## 12.4 Mobility in Soil

The product is completely soluble in water. Expected to be mobile in soil.

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Endocrine disrupting properties

No data available.

## 12.7 Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

# SECTION 13. Disposal considerations

## 13.1 Waste Disposal Methods

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Dispose of contents/container in accordance with local/regional/national/ international regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. The waste code should be assigned in discussion between the user, the producer, and the waste disposal company.

# SECTION 14: Transport information

**DOT (US)**
UN number: 1648 Class: 3 Proper shipping name: Acetonitrile Reportable Quantity (RQ): 5000 lbs
Poison Inhalation Hazard: No
Packing group: II

**IMDG**
UN number: 1648 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: ACETONITRILE

**IATA**
UN number: 1648 Class: 3 Packing group: II
Proper shipping name: Acetonitrile

## SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Acetonitrile (CAS 75-05-8) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Toxic Substances Control Act (TSCA)** This substance is on the TSCA 8(b) inventory and is designated “active”.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation

**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|---|---|---|
| Acetonitrile | 75-05-8 | 100 |

### Other federal regulations

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Acetonitrile (CAS 75-05-8)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

### US state regulations

**US. Massachusetts RTK - Substance List**

Acetonitrile (CAS 75-05-8)

**US. New Jersey Worker and Community Right-to-Know Act**

Acetonitrile (CAS 75-05-8)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Acetonitrile (CAS 75-05-8)

**US. Rhode Island RTK**

Acetonitrile (CAS 75-05-8)

**California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Acetonitrile (CAS 75-05-8)

**International Inventories**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## SECTION 16: Other information

Issue Date 04/19/2019
Revision Date 06/28/2023

**Disclaimer:**
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.