



## ACETONITRILE

### 1. Product Identification

Synonyms: Methyl Cyanide; Cyanomethane; Ethyl nitrile

CAS No.: 75-05-8

Molecular Weight: 41.05

Chemical Formula: CH<sub>3</sub>CN

Product Codes: 50001, 50002, 42031

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Acetonitrile	75-05-8	99.5 - 100%
Acrylonitrile	107-13-1	< 0.001%

### 3. Hazards Identification

Inhalation: Effects of overexposure are often delayed, possibly due to the slow formation of cyanide anions in the body. These cyanide anions prevent the body from using oxygen and can lead to internal asphyxiation. Early symptoms may include nose and throat irritation, flushing of the face, and chest tightness. Higher concentrations may produce headache, nausea, vomiting, respiratory depression.

Ingestion: Gastric irritation may occur. Other symptoms parallel those from inhalation exposure.

Skin Contact: May cause irritation. May be absorbed through skin with health effects to parallel those of inhalation.

Eye Contact: Splashes may cause eye irritation with redness and pain.

Chronic Exposure: Long term exposures may affect liver, kidneys, and central nervous system.

Aggravation of Pre-existing Conditions: Those with history of central nervous system, heart or lung diseases, or liver, kidney, or thyroid problems may be more susceptible to the effects of this substance.

### 4. First Aid Measures

Ingestion: If swallowed, get medical attention immediately; do not induce vomiting. Never give anything by mouth to an unconscious person. If not breathing, begin artificial respiration. Do not give mouth-to-mouth resuscitation.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

### 5. Fire Fighting Measures

Fire: Flash point: 2C (36F) CCAutoignition temperature: 524C (975F)

Flammable limits in air % by volume: lel: 4.4; uel: 16.0

Explosion: Above flash point, vapor-air mixtures are explosive within flammable limits noted above.

Vapors can flow along surfaces to distant ignition source and flash back. Sealed containers may rupture when heated. Sensitive to static discharge.

The information contained herein is in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. We do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.



Fire Extinguishing Media: Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

Special Information: In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. May emit toxic and flammable fumes of cyanide if involved in a fire.

#### 6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust.

#### 7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

#### 8. Exposure Controls/Personal Protection

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Respirators If the exposure limit is exceeded and engineering controls are not feasible, wear a supplied air, full-face piece respirator, airtight hood, or full-facepiece self-contained breathing apparatus.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

#### 9. Physical and Chemical Properties

Appearance: Clear, colorless liquid.

Odor: Ether odor.

Solubility: Miscible in water.

Specific Gravity: 0.780-0.783

pH: No information found.

% Volatiles by volume @ 21C (70F): 100

Boiling Point: 81.6C (180F)

Melting Point: -46C (-51F)

Vapor Density (Air=1): 1.4

Vapor Pressure (mm Hg): 73 @ 20C (68F)

Evaporation Rate (BuAc=1): 5.79

#### 10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Burning may produce fumes of cyanide, carbon monoxide, carbon dioxide, nitrogen oxides and sulfur oxides.

Hazardous Polymerization: Will not occur.

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Incompatibilities: Incompatible with oxidizing materials, sulfuric acid, oleum, chlorosulfonic acid, n-fluoro compounds, nitrating agents and perchlorates.

Conditions to Avoid: Heat, flames, ignition sources and incompatibles.

#### 11. Toxicological Information

Oral rat LD50: 2460 mg/kg; skin rabbit LD50: 1250 uL/kg; inhalation rat LC50: 7551 ppm/8H.

Investigated as a tumorigen, mutagen, reproductive effector.

#### 12. Ecological Information

This material is not expected to be toxic to aquatic life.

#### 13. Disposal Considerations

Dispose of container and unused contents in accordance with federal, state and local requirements.

#### 14. Transport Information

Land

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Proper Shipping Name: ACETONITRILE

Hazard Class: 3

UN/NA: UN1648

Packing Group: II

Water, I.M.O.

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#### 15. Regulatory Information

SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No

Reactivity: No (Mixture / Liquid)

#### 16. Other Information

Product Use:

Laboratory Reagent.