Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

SAFETY DATA SHEET

ACETONITRILE, 99+%

1. Identification

Product identifier: Acetonitrile
Product Code Number: 1201
Trade Name: Acetonitrile
Synonyms: Methyl cyanide, cyanomethane, ethyl nitrile
Chemical Formula: (CH3)2CO

Product Use: Process chemical, Laboratory and scientific research and development
Restrictions on use: None known.

Company Identification: Corco Chemical Corporation
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Fairless Hills, PA 19030
Phone: 215-295-5006
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24 Hour Emergency Telephone Number:
CHEMTREC (U.S.): 1-800-424-9300
CHEMTREC (Outside U.S.): 1-703-527-3887

SDS Date of Preparation: 07/31/2024

2. Hazard(s) identification

Classification of the Substance or Mixture:
Flammable Liquid Category 2
Eye Irritant Category 2A
Acute Toxicity (oral) Category 4
Acute Toxicity (dermal) Category 4
Acute Toxicity (inhalation) Category 4

Label Elements:
Danger!

Hazard Statements:
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H302 + H312 + H332 Harmful if swallowed, in contact with skin, or if inhaled

Precautionary Statements:
P210 Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground or bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating, or lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing mist or vapors.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER or doctor if you feel unwell.
P303+P361+P353 IN ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical attention.
P370+P378 In case of fire: Use water spray, dry chemical, alcohol foam, or carbon dioxide to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents and container in accordance with local and national regulations.

Other Hazards: None known.

3. Composition/information on ingredients

Ingredient	CAS Number	Percent	Hazardous Chemical
Acetonitrile	75-05-8	90-100%	Yes

4. First-aid measures

Inhalation: If symptoms develop move victim to fresh air. Get medical attention if symptoms develop.

Skin contact: Flush thoroughly with water. Get medical attention if irritation or symptoms of exposure develop. Remove and launder contaminated clothing before re-use.

Eye contact: Immediately flush eyes with large quantities of water for several minutes, while holding the eyelids apart. Remove contact lenses if easy to do so. Continue rinsing. Get medical attention if irritation persists.

Ingestion: Rinse mouth with water. Give up to two glasses of water to dilute. Do not induce vomiting unless directed to do so by a medical professional. Get medical attention if you fell unwell.

Most important symptoms/effects, acute and delayed: Direct contact with liquid may cause moderate eye irritation. Inhalation of mists or vapors may cause headache, dizziness, nausea and other symptoms of central nervous system depression.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is not required.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media: Use water fog, alcohol-resistant foam, carbon dioxide and dry chemical.

Specific hazards arising from the chemical: Highly flammable liquid and vapor. Vapors are heavier than air and may flow along surfaces to remote ignition sources and flash back. Sensitive to static discharge.

Special protective equipment and precautions for fire-Fighters: Wear an approved, positive pressure, self-contained breathing apparatus and full protective clothing. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Evacuate spill area and keep unprotected personnel away. Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Minimize generation of static electricity which may cause

sparking. Avoid contact with eyes. Wear appropriate protective clothing. Avoid breathing vapors or mists. Ventilate area with explosion proof equipment.

Methods and materials for containment and cleaning up: Do not allow to go to drains. 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. Do not flush to sewer! 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.

7. Handling and storage

Precautions for safe handling: Avoid contact with eyes. Wear protective clothing and equipment as described in Section 8. Avoid breathing vapors or mists. Use with adequate ventilation. Wash hands with soap and water after use. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. Use with non-sparking tools and explosion proof equipment. Electrically bond and ground containers for transfer.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated location away from heat and open flames. Keep away from incompatible materials. Protect container from physical damage. Keep containers closed when not in use. Keep out of the reach of children.

8. Exposure controls/personal protection

Chemical Name	Exposure Limits
Acetonitrile	20 ppm STEL ACGIH TLV 40 ppm TWA OSHA PEL

Appropriate engineering controls: 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. Use explosion proof electrical equipment and wiring where required. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal protective equipment:

Respiratory protection: If the exposure limit is exceeded, a full face piece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full face

piece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Neoprene and nitrile rubber are recommended materials.

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

9. Physical and chemical properties

Appearance: Clear, colorless, volatile liquid
Odor: Ether-like
Odor Threshold: Not determined
pH: N/E
Volatiles by volume @2lC (70F): N/E
Melting Point/Freezing Point: -54°F (-48°C)
Boiling Point / Boiling Range: 81-82°C (177-180°F) @ 760 mmHg
Flash Point: 2°C (35-36°F) CC
Evaporation Rate: (BuAC=1) 5.8
Flammability (solid, gas): Not applicable
Upper / Lower Flammability or Explosive Limits: LEL: 4.4%, UEL: 16%
Vapor Pressure (hPa): 99 @ 20C (68F)
Vapor Density (Air=l): 1.42
Specific Gravity 0.786 (25C)
Solubility: Soluble / Miscible in all proportions in water
Partition Coefficient: n-octanol / water: log Pow: -0.54 (25C)
Auto-ignition Temperature: 522°C (970°F)
Decomposition Temperature: N/E
Viscosity: 0.35 Pas at20oC

10. Stability and reactivity

Reactivity: Not reactive under normal conditions of use.

Chemical stability: Stable under ordinary conditions of use and storage.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Keep away from heat, sparks, flames and other sources of ignition.

Incompatible materials: Strong oxidizing agents, strong acids, alkalis, chlorine compounds, reducing agents, and phosphorous oxychloride.

Hazardous decomposition products: Carbon Dioxide and Carbon Monoxide may form when heated to decomposition. May form nitrogen oxides at extreme temperatures.

11. Toxicological information

Potential Health Effects:

Inhalation: Inhalation of mists or vapors may cause nose and throat irritation with the possibility of central nervous system depression. Symptoms of central nervous system depression include headache, dizziness, drowsiness, nausea and unconsciousness. Treat as cyanide poisoning.

Skin Contact: Prolonged contact may cause skin irritation with drying and dermatitis.

Eye Contact: Direct contact with eyes may cause moderate eye irritation.

Ingestion: Swallowing may cause gastrointestinal irritation and central nervous system depression with symptoms similar to those described under inhalation. Treat as cyanide poisoning.

Chronic Exposure: None known.

Aggravation of Pre-existing Conditions: Persons with pre-existing eye and skin disorders or impaired respiratory function may be more susceptible to the effects of this material.

Carcinogenicity: None of the components of this product are listed as a carcinogen or suspected carcinogen by OSHA, IARC, and NTP.

Reproductive Effects: Reproductive harm is not expected from this product.

Mutagenic Effects: Not expected to cause mutagenic activity.

Acute Toxicity:
Acetonitrile: Oral mouse LD50 – 610 mg/kg, Inhalation rat – 6.022 mg/L/4hr, Skin rabbit – no skin irritation

12. Ecological information

Exotoxicity:

Product	Species	Test Results
Acetonitrile	Fathead minnow	1640 mg/L 96 hr LC50
	Oryzias latipes	102 mg/L 21 day
	Activated Sludge	>1000 mg/L 30 min EC50

This material is expected to be harmful to aquatic life.

Persistence and Degradability: Degradation half life >9,999 d, pH 7, hydrolyzes slowly

Bioaccumulative Potential: This material is not expected to significantly bioaccumulate.

Mobility in Soil: Not expected to adsorb into soil

Other adverse effects: None known.

13. Disposal considerations

Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F.

14. Transportation information

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
US DOT	UN1648	Acetonitrile	3	II	Not applicable
IMDG	UN1648	Acetonitrile	3	II	Not applicable
IATA	UN1648	Acetonitrile	3	II	Not applicable

***Hazardous Substance (49CFR172.101):** Acetonitrile (RQ 5,000 lbs) (5,000 lbs. product)

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Special Precautions for User: Not applicable

15. Regulatory information

US federal regulations:

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

US, OSHA Specifically Regulated Substances (29 CFR 1910,1001-1050)
Not on regulatory list.

CERCLA Hazardous Substance List (40 CFR 302,4)
This product has a Reportable Quantity (RQ) of 5,000 lbs. (based on the RQ for Acetonitrile of 5,000 lbs present at 100%). Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories:
SARA 311/312
Refer to Section 2 for OSHA Hazard Classification.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

SARA 302 Extremely hazardous substance
None

Other federal regulations

Clean Air Act (CAA) Section ll2Hazardous Air Pollutants (HAPs) List
Not regulated.
Clean Air Act (CAA) Section ll2(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.
Safe Drinking Water Act (SDWA) - Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR1310.02(b) and 1310.04(0(2) and Chemical Code Number
Not regulated.
Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310,12(c))
Not regulated.
DEA Exempt Chemical Mixtures Code Number Not regulated.
Food and Drug Administration (FDA) Not regulated.

US state regulations 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.

US. Massachusetts RTK - Substance List
ACETONITRILE (CAS 75-05-8)

US, New Jersey Worker and Community Right-to-Know Act
Not regulated.
US. Pennsylvania RTK - Hazardous Substances
ACETONITRILE (CAS 75-05-8)
US. Rhode Island lLTK ACETONITRILE (CAS 75-05-8)
US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT):
Not listed.

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
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
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)

16. Other information

Date of Current Revision: 07/31/2024
Revision Summary: Updated all sections.
Date of Previous Revision: IR

Disclaimer - The information in the SDS is based on the data available at the time. While believed to be accurate, Corco does not claim it to be all inclusive. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. It is not intended to provide product performance or applicability information, and no express or implied warranty of any kind is made with respect to the product, the underlying product data, or the information contained herein. We will not provide advice on such matters, or be responsible for any injury or damage resulting from the use of the product described herein.