PHARMCO-AAPER
THE POWER OF THREE[3]

Product Information: 203.740.3471 Emergency Assistance (CHEMTREC): 1.800.424.9300 (USA) +1.703.527.3887 (INT)

SAFETY DATA SHEET

Acetonitrile

This MSDS is valid for all grades that start with catalog number 300

1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals

Synonyms: Methyl cyanide; cyanomethane; ethanenitrile;

Other means of identification: CAS No. 75-05-8
EINECS No. 200-835-2

Recommended use of the chemical and restrictions on use:
General purpose organic solvent

Supplier Details:

Pharmco Products, Inc.
58 Vale Road, Brookfield,
CT 06804, USA.
Tel: 203.740.3471
Fax: 203.740.3481
CCN17213

Pharmco Products, Inc.
1101 Isaac Shelby Drive, Shelbyville,
KY 40065, USA.
Tel: 502.232.7600
Fax: 502.633.6100
CCN17213

Emergency Contact: **CHEMTREC: 1.800.424.9300 (USA) / +1.703.527.3887 (International)**

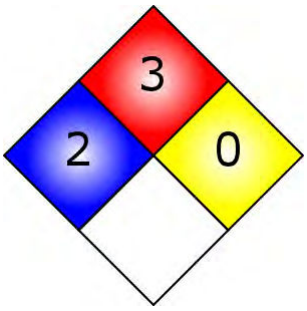
2. HAZARDS IDENTIFICATION

Emergency Overview:
Flammable liquid. Moderate health hazard. Combustion by-products may include hydrogen cyanide and oxides of nitrogen.

OSHA Hazards:
Flammable liquid, Target Organ Effect, Irritant, Harmful by ingestion, Harmful by skin absorption

Target Organs:
Blood, Central nervous system, Kidney, Liver

NFPA



GHS label elements, including precautionary statements

Signal Word:
DANGER!

Hazard statement(s)

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H312	Harmful in contact with skin
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Precautionary statement(s)

P210	Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye and face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.
P312	Call a POISON CENTER or doctor/ physician if you feel unwell.
P233	Keep container tightly closed.
P501	Dispose of contents and container to an approved waste disposal plant.
P240	Ground/bond container and receiving equipment.

P241	Use explosion-proof electrical, ventilating, and lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fumes/gas/mist/vapors.
P301 + P330	IF SWALLOWED: Rinse mouth.
P303 + P361 + P352	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P322	Specific measures (see first aid measures on this label)
P337 + P313	If eye irritation persists: Get medical attention.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

GHS Classification(s)
Acute Toxicity, Dermal (Category 4)
Acute Toxicity, Inhalation (Category 4)
Acute toxicity, Oral (Category 4)
Eye irritation (Category 2A)
Flammable Liquids (Category 2)

Other hazards which do not result in classification:

Potential Health Effects:

Organ	Description
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Skin	Harmful if absorbed through skin. Causes skin irritation.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical identity:	Acetonitrile
Common name / Synonym:	Methyl Cyanide; Cyanomethane; Ethanenitrile; Ethyl nitrile
CAS number:	75-05-8
EINECS number:	200-835-2
ICSC number:	0088
RTECS #:	AL7700000
UN #:	UN1648
EC #:	608-001-00-3

% Weight	Material	CAS
100	Acetonitrile	75-05-8

4. FIRST AID MEASURES

General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing/shoes and acquire medical attention. Note contaminated clothing can become a fire hazard.

Inhalation

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Eyes

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

Note to Physician

Acetonitrile will metabolize as cyanide. Since signs of cyanide poisoning may take several hours to be observed proper treatment, and use of a cyanide antidote, must be determined on a case to case basis. Watch for signs and symptoms of methemoglobinemia. Administer oxygen alone or with Methylene Blue based on the concentration of methemoglobin in the blood.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

SMALL FIRE: Use dry chemicals, CO2, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam. Cool all affected containers with flooding quantities of water.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Carbon oxides (CO, CO2), Nitrogen Oxides (NO, NO2), Hydrogen Cyanide (HCN)

Special protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

Unusual Fire and Explosion Hazards:

- Vapors may travel to source of ignition and flash back.
- Vapors may settle in low or confined spaces.

Flammable Properties

Classification

OSHA/NFPA Class IB Flammable Liquid.

Flash point

6°C (42.8°F) - open cup

Autoignition temperature

524°C (975°F)

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Do not inhale vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions:

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up:

Highly flammable liquid. Eliminate all sources of ignition. All equipment used when handling this product must be grounded. A vapor suppressing foam may be used to reduce vapors. Do not touch or walk through spilled material. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations. Use clean non-sparking tools to collect absorbed material.

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7. HANDLING AND STORAGE

Precautions for safe handling:

Do not get on skin or in eyes. Do not inhale vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Open and handle container with care. Metal containers involved in the transfer of this material should be grounded and bonded.

Conditions for safe storage, including any incompatibilites:

Inside storage should be in a standard flammable liquids storage warehouse, room, or cabinet. Separate from oxidizing materials. Outside or detached storage is preferred.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters, e.g., occupational exposure limit values or biological limit values:

Occupational Exposure Limits

Component	Source	Type	Value	Note
Acetonitrile	US (OSHA)	TWA	40 ppm	
Acetonitrile	US (OSHA)	STEL	60 ppm	
Acetonitrile	US (ACGIH)	TWA	20 ppm	

Appropriate engineering controls:

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

Individual protection measures, such as personal protective equipment:

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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).

Hand 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.

Eye protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection:

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

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance *(physical state, color, etc.)*	Liquid. Colorless liquid / invisible vapor.
Odor	Ethereal
Odor threshold	No Data Available.
pH	No Data Available.
Freezing point	-45.7°C (-50.26°F)
Initial boiling point and boiling range	81.6 °C (178.9°F)

Flash point	6°C (42.8°F) - open cup
Evaporation rate	Specific data not available - expected to be rapid.
Flammability (solid, gas)	Flammable
Upper / Lower flammability or explosive limits	3.0%(V) / 16%(V)
Vapor pressure	118.38 hPa (89.86 mmHg) at 25°C (77 °F)
Relative Density	0.79 g/mL at 20°C (77 °F)
Solubility(ies)	soluble
Partition coefficient n-octanol/water(ies)	No Data Available.
Auto-ignition temperature	524 °C (975°F)
Decomposition temperature	Not pertinent
Formula (ACETONITRILE)	C2H3N
Molecular Weight (ACETONITRILE)	41.05 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapors may form explosive mixture with air.
Conditions to avoid (e.g., static discharge, shock or vibration)	Heat, flames, and sparks. Extreme temperatures and direct sunlight.
Incompatible materials	Acids, Bases, Oxidizing agents, Reducing agents, Alkali metals
Hazardous decomposition products	Carbon oxides and nitrogen oxides are expected to be, under fire conditions, the primary hazardous decomposition products.

11. TOXICOLOGICAL INFORMATION

- Acetonitrile 75-05-8

Product Summary:
No data available for the mutagenic, teratogenic, or reproductive effects of the product.

Acute Toxicity:

LC50 (Inhalation)	Rat	7,551 ppm	8 hours
LD50 (Dermal)	Rabbit	2,000 mg/kg	
LD50 (Oral)	Rat	2,640 mg/kg	

Irritation:

Eyes
Rabbit - irritating to eyes

Skin
Rabbit- mild skin irritation

Signs and Symptoms of Exposure (ACETONITRILE)

The onset of symptoms is generally delayed pending conversion to cyanide. Symptoms include nausea, vomiting, diarrhea, headache, dizziness, rash, cyanosis, excitement, depression, drowsiness, impaired judgment, lack of coordination, stupor, and death.

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Other Hazards

Organ	Description
Eyes	Irritating to the eyes.
Ingestion	Harmful if ingested.
Inhalation	May be harmful if inhaled. Irritating to the respiratory tract.
Skin	Harmful if absorbed through skin. Irritating to skin.

12. ECOLOGICAL INFORMATION

- Acetonitrile 75-05-8

Ecotoxicity (aquatic and terrestrial, where available):
Acute Fish Toxicity (ACETONITRILE)
LC50 / 96 hours Fathead Minnow - 1,640 mg/L

Persistence and degradability:
No data available

Bioaccumulative potential:
No data available

13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

UN number	UN1648
UN proper shipping name	Acetonitrile
Transport hazard class(es)	3
Packing group *(if applicable)*	II

Reportable Quantity
5,000 lbs.
IMDG
UN-Number: UN1648 Class: 3 Packing Group: II
EMS-No: F-E, S-D
Proper shipping name: ACETONITRILE
Marine pollutant: No
IATA
UN-Number: UN1648 Class: 3 Packing Group: II
Proper shipping name: Acetonitrile

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question:

OSHA Hazards
Flammable liquid, Target Organ Effect, Irritant, Harmful by ingestion, Harmful by skin absorption

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA title III, Section 313:
ACETONITRILE CAS-No. 75-05-8 Revision Date 2007-07-01

SARA 311/312 Hazards
Acute Health Hazard
Chronic Health Hazard
Fire Hazard

CERCLA
Acetonitrile CAS-No. 75-05-8

Massachusetts Right To Know Components
Acetonitrile CAS-No. 75-05-8 Revision Date 2007-07-01

Pennsylvania Right To Know Components
Acetonitrile CAS-No. 75-05-8 Revision Date 2007-07-01

New Jersey Right To Know Components
Acetonitrile CAS-No. 75-05-8 Revision Date 2007-07-01

California Prop 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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16. OTHER INFORMATION:
INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

Disclaimer
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