

MATERIAL SAFETY DATA SHEET



Acetonitrile

Section 1 - Chemical Product and Company Identification

MSDS Name:	Acetonitrile
Synonyms:	AN; Methyl cyanide
Company Identification: (INDIA)	Veritas House, 70 Mint Road, Fort, Mumbai - 400 001. INDIA
For information in the INDIA, call:	Tel: +91 - 22 - 2275 5555 / 6184 0000, Fax: +91 - 22 - 2275 5556 / 6184 0001

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
75-05-8	Acetonitrile	>99%	200-835-2

Hazard Symbols:	XN F
	
Risk Phrases:	11 20/21/22 36

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes.

Potential Health Effects

Eye:	Causes eye irritation.
Skin:	Causes skin irritation. Harmful if absorbed through the skin. May cause dermatitis.
Ingestion:	May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, and death. May cause effects similar to those for inhalation exposure. May cause central nervous system depression.
Inhalation:	May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, tachycardia, dyspnea (labored breathing), and death. Causes irritation of mucous membrane. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. Causes upper respiratory tract irritation. Inhalation may lead to dizziness, weakness, and drowsiness, leading to stupor, unconsciousness, and even death. Inhalation may lead to hematemesis, convulsions, shock, coma, and possible death.
Chronic:	Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. May cause liver and kidney damage. May be metabolized to cyanide which in turn acts by inhibiting cytochrome oxidase impairing cellular respiration. Chronic exposure may cause dizziness, dry throat, sleepiness, anorexia, and nausea.

Section 4 - First Aid Measures

Eyes:	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin:	Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion:	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation:	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:	Exposure should be treated as a cyanide poisoning. Effects may be delayed. May be partially metabolized to cyanide in the body. For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood.
Antidote:	Always have a cyanide antidote kit on hand when working with cyanide compounds. Get medical advice to use. The combination of sodium thiosulfate and hydroxycobalamin has been used as an effective antidote.

Section 5 - Fire Fighting Measures

General Information:	Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.
Extinguishing Media:	Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide.

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Avoid runoff into storm sewers and ditches which lead to waterways. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Use a spark-proof tool. Provide ventilation.

Section 7 - Handling and Storage

Handling:	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage:	Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Keep from contact with oxidizing materials. Flammables-area. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

	Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits	
	CAS# 75-05-8:
	United Kingdom, WEL - TWA: 40 ppm TWA; 68 mg/m ³ TWA United Kingdom, WEL - STEL: 60 ppm STEL; 102 mg/m ³ STEL
	United States OSHA: 40 ppm TWA; 70 mg/m ³ TWA
	Belgium - TWA: 40 ppm VLE; 68 mg/m ³ VLE Belgium - STEL: 60 ppm VLE; 102 mg/m ³ VLE
	France - VME: 40 ppm VME; 70 mg/m ³ VME
	Germany: 20 ppm TWA; 34 mg/m ³ TWA Germany: skin notation
	Malaysia: 40 ppm TWA; 67 mg/m ³ TWA
	Netherlands: 40 ppm MAC; 70 mg/m ³ MAC
	Spain: 40 ppm VLA-ED; 68 mg/m ³ VLA-ED Spain: 60 ppm VLA-EC; 102 mg/m ³ VLA-EC
Personal Protective Equipment	
Eyes:	Wear chemical splash goggles.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Respirators:	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	Not available
Odor:	aromatic odor - sweetish odor
pH:	Not available
Vapor Pressure:	97mbar @20 deg C
Viscosity:	0.36 cP @20 deg C
Boiling Point:	81 - 82 deg C @760mmHg
Freezing/Melting Point:	-46 deg C (-50.80°F)
Autoignition Temperature:	525 deg C (977.00 deg F)
Flash Point:	2 deg C (35.60 deg F)
Explosion Limits: Lower:	3 Vol %
Explosion Limits: Upper:	16 Vol %
Decomposition Temperature:	Not available
Solubility in water:	Miscible
Specific Gravity/Density:	0.781
Molecular Formula:	C ₂ H ₃ N
Molecular Weight:	41.04

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials, ignition sources, excess heat, exposure to moist air or water.
Incompatibilities with Other Materials	Oxidizing agents, reducing agents, acids, bases, alkali metals, nitric acid, perchlorates, sulfuric acid, chlorosulfonic acid, oleum, dinitrogen tetroxide, indium, iodine, sulfur trioxide.
Hazardous Decomposition Products	Hydrogen cyanide, nitrogen oxides, carbon monoxide, carbon dioxide.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 75-05-8: AL7700000
LD50/LC50:	RTECS: CAS# 75-05-8: Draize test, rabbit, eye: 100 uL/24H Moderate; Inhalation, mouse: LC50 = 2693 ppm/1H; Inhalation, rabbit: LC50 = 2828 ppm/4H; Inhalation, rat: LC50 = 7551 ppm/8H; Oral, mouse: LD50 = 269 mg/kg; Oral, rabbit: LD50 = 50 mg/kg; Oral, rat: LD50 = 2460 mg/kg; Skin, rabbit: LD50 = >2 gm/kg;
Carcinogenicity:	Acetonitrile - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information. Mutagenicity: Ames-test: negative.

Section 12 - Ecological Information

Ecotoxicity:	Fish: Bluegill/Sunfish: LC50: 1000-1850 mg/l; 96H; . Fish: Fathead Minnow: LC50: 1640 mg/l; 96H;
Other:	This chemical is not likely to bioconcentrate. Biodegradable. Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	ACETONITRILE	ACETONITRILE	ACETONITRILE
Hazard Class:	3	3	3
UN Number:	1648	1648	1648
Packing Group:	II	II	II

USA RQ: CAS# 75-05-8: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

European/International Regulations	
	European Labeling in Accordance with EC Directives Hazard Symbols: XN F
Risk Phrases:	<ul style="list-style-type: none"> ➤ R 11 Highly flammable. ➤ R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed. ➤ R 36 Irritating to eyes.
Safety Phrases:	<ul style="list-style-type: none"> ➤ S 16 Keep away from sources of ignition - No smoking. ➤ S 36/37 Wear suitable protective clothing and gloves.
WGK (Water Danger/Protection)	➤ CAS# 75-05-8: 2
Canada	➤ CAS# 75-05-8 is listed on Canada's DSL List
US Federal	<ul style="list-style-type: none"> ➤ TSCA ➤ CAS# 75-05-8 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date:	July 20, 2015
Revision #2 Date	

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 the company 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 the company has been advised of the possibility of such damages.
