Material Safety Data Sheet (MSDS) - Acetonitrile

SECTION 1: IDENTIFICATION

Product Name: Acetonitrile
CAS#: 75-05-8
TSCA: TSCA 8(b) inventory: Acetonitrile
Synonym: Methyl Cyanide
Chemical Name: Acetonitrile
Chemical Formula: CH3CN

COMPANY IDENTIFICATION

Supplier: PURE CHEMICALS CO.
CHENNAI, TAMILNADU, INDIA

24 Hour Health Emergency (91) 8939878447
(91) 9444038694

Transportation Phone (91) 9444038517
Emergency

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Place</th>
<th>EMERGENCY TELEPHONE NUMBER</th>
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<tbody>
<tr>
<td>Pure Chemicals Co.</td>
<td>CHENNAI</td>
<td>Day Emergency – 044-26161803-26161809</td>
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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Composition:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>% by Weight</th>
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<tbody>
<tr>
<td>Acetonitrile</td>
<td>75-05-8</td>
<td>100</td>
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</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator). Severe overexposure can result in death.
Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED]. The substance is toxic to blood, kidneys, lungs, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS). The substance may be toxic to the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

SECTION 4: FIRST AID MEASURES

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.
**Ingestion:**
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**SECTION 5: FIRE-FIGHTING MEASURES**

*Flammability of the Product:* Flammable.
*Auto-Ignition Temperature:* 524°C (975.2°F)
*Flash Points:* CLOSED CUP: 2°C (35.6°F). OPEN CUP: 5.6°C (42.1°F) (Cleveland).
*Flammable Limits:* LOWER: 4.4% UPPER: 16%
*Products of Combustion:* These products are carbon oxides (CO, CO2).
*Fire Hazards in Presence of Various Substances:* Highly flammable in presence of open flames and sparks, of heat, of oxidizing materials.
*Fire Fighting Media and Instructions:* Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.
*Special Remarks on Fire Hazards:* Store under nitrogen.
*Special Remarks on Explosion Hazards:* Not available.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

*Small Spill:* Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
*Large Spill:* Flammable liquid, Poisonous liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.
SECTION 7: HANDLING AND STORAGE

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alkalis, moisture.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 23°C (73.4°F).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles, Lab coat, Vapor respirator. Be sure to use an approved/certified respirator or equivalent Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles, Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 40 (ppm) from ACGIH (TLV) [United States] [1999] STEL: 60 from ACGIH (TLV) [United States] [1999] TWA: 20 (ppm) from NIOSH TWA: 40 STEL: 60 (ppm) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance : Liquid. (Liquid.)
Odor : Aromatic; Ether-like (Strong.)
Taste : Burning, sweetish
**Molecular Weight**: 41.05 g/mole

**Color**: Colorless.

**pH (1% soln/water)**: 7 [Neutral.]

**Boiling Point**: 81.6 (178.9°F)

**Melting Point**: -46°C (-50.8°F)

**Critical Temperature**: Not available.

**Specific Gravity**: 0.783 (Water = 1)

**Vapor Pressure**: 9.7kPa (@ 20°C)

**Vapor Density**: 1.42 (Air = 1)

**Volatility**: Not available.

**Odor Threshold**: Not available.

**Water/Oil Dist. Coeff.**: Not available.

**Ionicity (in Water)**: Not available.

**Dispersion Properties**: See solubility in water, methanol.

**Solubility**: Soluble in cold water, hot water, methanol.

### SECTION 10: STABILITY AND REACTIVITY

**Stability**: The product is stable.

**Instability Temperature**: Not available.

**Conditions of Instability**: Not available.

**Incompatibility with various substances**: Reactive with oxidizing agents, reducing agents, acids, alkalis, moisture.

**Corrosivity**: Non-corrosive in presence of glass.

**Special Remarks on Reactivity**: High dielectric constant; high polarity; strongly reactive.

**Special Remarks on Corrosivity**: Not available.

**Polymerization**: Will not occur.

### SECTION 11: TOXICOLOGICAL INFORMATION

**Routes of Entry**: Absorbed through skin. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals**:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 269 mg/kg [Mouse]. Acute dermal toxicity (LD50): 1250 mg/kg [Rabbit.]. Acute toxicity of the vapor (LC50): 7551 8 hours [Rat.].

**Chronic Effects on Humans**:

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED]. Causes damage to the following organs: blood, kidneys,
lungs, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS). May cause damage to the following organs: the reproductive system.

**Other Toxic Effects on Humans:**
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Material is irritating to mucous membranes and upper respiratory tract.

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**SECTION 12: ECOLOGICAL INFORMATION**

**Ecotoxicity:** Ecotoxicity in water (LC50): 1020 mg/l 96 hours [Fish (Fathead Minnow)]. 1850 mg/l 96 hours [Fish (bluegill)].

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal:**
Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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**SECTION 14: TRANSPORT INFORMATION**

**DOT Classification:** CLASS 3: Flammable liquid.

**Identification:** Acetonitrile UNNA: UN1648 PG: II

**Special Provisions for Transport:** Not available.
SECTION 15: REGULATORY INFORMATION

Federal and State Regulations:
New York release reporting list: Acetonitrile Rhode Island RTK hazardous substances:
Acetonitrile Pennsylvania RTK: Acetonitrile Florida: Acetonitrile Minnesota: Acetonitrile
Massachusetts RTK: Acetonitrile New Jersey: Acetonitrile TSCA 8(b) inventory: Acetonitrile
TSCA 8(a) PAIR: Acetonitrile TSCA 8(d) H and S data reporting: Acetonitrile: 1992 SARA
313 toxic chemical notification and release reporting: Acetonitrile CERCLA: Hazardous
substances.: Acetonitrile: 5000 lbs. (2268 kg)

Other Regulations:
EINECS: This product is on the European Inventory of Existing Commercial Chemical
Substances.

SECTION 16: OTHER INFORMATION

Disclaimer:
The information and recommendations contained herein are, to the best of Pure Chemicals Co's knowledge and belief, accurate and reliable as of the date issued. You can contact Pure Chemicals Co to insure that this document is the most current available from Pure Chemicals Co. The information and recommendations are offered for the user's consideration and examination. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted.