

Material Safety Data Sheet

Acetonitrile MSDS

Section 1: Chemical Product and Company Identification

Product Name: Acetonitrile
Catalog Codes: 11001, 12002, 14004
CAS#: 75-05-8
TSCA: TSCA 8(b) inventory: Acetonitrile
CI#: Not applicable.
Synonym: Ethanenitrile; Methyl Cyanide; Cyanomethane; Ethyl Nitrile
Chemical Name: Acetonitrile
Chemical Formula: CH₃CN
Contact Information: **Runa Chemicals Pvt. Ltd.**
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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Acetonitrile	75-05-8	100

Section 3: Hazards Identification

LABEL PRECAUTIONARY STATEMENTS: FLAMMABLE
ROUTES OF ENTRY: INHALATION, ABSORPTION AND INGESTION
NFPA Ratings (SCALE 0-4): HEALTH=2 FIRE=3 REACTIVITY=0
MAJOR HEALTH HAZARDS: Respiratory tract irritation, eye irritation and blood damage.
PHYSICAL HAZARDS: Flammable liquid and vapor. Vapor may cause flash fire.
POTENTIAL HEALTH EFFECTS:
-INHALATION:
Short Term Exposure: Irritation, nausea, stomach pain, loss of voice, chest and stomach pain, wheezing, headache, symptoms of drunkenness, disorientation, suffocation, convulsions and coma.
Long Term Exposure: Lung damage.
-SKIN CONTACT: Same effects reported in short term inhalation.
-EYE CONTACT: Irritation and tearing.
-INGESTION: Same effects reported in short term inhalation.
CARCINOGEN STATUS:
-OSHA: No.
-NTP: No.

-IARC: No.

Section 4: First Aid Measures

SEEK MEDICAL ASSISTANCE FOR ANY OVEREXPOSURE.

SKIN: Wash thoroughly with soap and water.

EYES: Immediately flush thoroughly with water for at least 15 minutes.

INGESTION: Contact local Poison Control Center or physician immediately. Never give anything by mouth to an unconscious person.

ANTIDOTE: Amyl Nitrite, inhalation; Sodium Nitrite, intravenous; Sodium Thiosulfate, infusion; oxygen.

Section 5: Fire and Explosion Data

EXTINGUISHING MEDIA: Alcohol resistant foam, carbon dioxide, regular dry chemical or water.

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Water may be ineffective.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Hazardous polymerization will not occur. Fire hazard. Vapor/air mixtures are heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

FLASH POINT: 6°C

LOWER FLAMMABLE LIMIT: 3%

UPPER FLAMMABLE LIMIT: 16%

AUTOIGNITION: 524°C

FLAMMABILITY CLASS (OSHA): IB

Section 6: Accidental Release Measures

Evacuate all unnecessary personnel. Wear a respirator, chemical safety goggles, rubber boots and rubber gloves. Turn off all sources of ignition. Absorb with sand or vermiculite and place in a closed container. Wash spill site with soapy water.

Notify Local Emergency Planning Committee and State Emergency Response Commission for releases greater than or equal to RQ (U.S. SARA Section 304).

If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800) 424-8802 (USA) or (202) 426-2675 (USA).

Section 7: Handling and Storage

Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances. Store in a cool dry place.

Section 8: Exposure Controls/Personal Protection

PERSONAL PROTECTION

EXPOSURE LIMIT:

40ppm OSHA TWA

60ppm OSHA STEL

40ppm ACGIH TWA

60ppm ACGIH STEL

20ppm NIOSH recommended TWA 10 hours

40ppm UK OES TWA

60ppm UK OES STEL
MECHANICAL EXHAUST REQUIRED
CHEMICAL SAFETY GOGGLES.
NIOSH/MSHA-APPROVED RESPIRATOR.
SAFETY SHOWER AND EYE BATH.
COMPATIBLE CHEMICAL-RESISTANT GLOVES (RUBBER).
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
KEEP TIGHTLY CLOSED.
FLAMMABLE.
IRRITANT.
STORE IN A COOL DRY PLACE.

Section 9: Physical and Chemical Properties

APPEARANCE: Colorless liquid.
ODOR: Slightly sweet.
BOILING POINT: 82 °C
FREEZING POINT: -46 °C
WATER SOLUBILITY: Water Soluble.
SPECIFIC GRAVITY: 0.786
VAPOR DENSITY: 1.42
VAPOR PRESSURE: 73 mmHg @ 20 °C

Section 10: Stability and Reactivity Data

REACTIVITY: Stable at normal temperatures and pressure.
CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition.
Minimize contact with material. Avoid inhalation. Keep out of water supplies and sewers.
INCOMPATIBILITIES: Acids, metals, bases, oxidizing materials, combustible materials and reducing agents.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.
DECOMPOSITION PRODUCTS: carbon dioxide, carbon monoxide and oxides of nitrogen and ammonia, and hydrogen cyanide gas.

Section 11: Toxicological Information

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

CARCINOGEN STATUS: ACGIH: A4 –Not classifiable as a Human Carcinogen.

LOCAL EFFECTS: Irritant by inhalation and eye.

ACUTE TOXICITY LEVEL:

MODERATELY TOXIC: Dermal absorption and ingestion.

SLIGHTLY TOXIC: Inhalation.

TARGET ORGAN: Blood.

HEALTH EFFECTS:

INHALATION: Inhalation of 500ppm for a short duration may cause irritation of the nose and throat.

Humans exposed to 160ppm for 4 hours experienced delayed symptoms of slight flushing of the face and slight bronchial tightness. A burning sensation, wheezing and laryngitis may also occur.

SKIN CONTACT: Contact may cause irritation. Skin absorption may occur resulting in systemic toxicity as detailed in inhalation above.

Repeated or prolonged exposure may cause dermatitis.

EYE CONTACT: Vapors and liquid may cause irritation and tearing.

Repeated or prolonged exposure to irritants may cause conjunctivitis.

INGESTION: Ingestion of sufficient amounts may cause systemic toxicity as detailed in inhalation.

Reproductive effects have been reported in animals.

Section 12: Ecological Information

ECOTOXICITY DATA (Acetonitrile):

FISH TOXICITY: 1g/L for 96 hrs LC50 (Mortality) Fathead minnow (*Pimephales promelas*).

INVERTEBRATE TOXICITY: 0.024-0.199 µg/L for 4-72 hrs (residue) Benthosed clam (*Macoma nasuta*).

Section 13: Disposal Considerations

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number: U003. Dispose in accordance with all applicable regulations.

Section 14: Transport Information

U.S. DOT 49 CFR 172.101 HAZARD CLASS OR DIVISION: 3

U.S. DOT 49 CFR 172.101 PACKING GROUP: II

U.S. DOT 49 CFR 172.101 and SUBPART E LABELING REQUIREMENTS:

Flammable Liquid.

U.S. DOT 49 CFR 172.101 PACKAGING AUTHORIZATIONS:

EXCEPTIONS: 49 CFR 173.150.

NON-BULK PACKAGING: 49 CFR 173.202.

BULK PACKAGING: 49 CFR 173.242.

LAND TRANSPORT:

ITEM NUMBER: 3(b).

WARNING SIGN/LABEL: 3

HAZARD ID NUMBER: 33

AIR TRANSPORT:

IATA/ICAO CLASS: 3

PACKAGING GROUP: II

LABEL: Flammable Liquid.

MARITIME TRANSPORT:

IMDG CLASS: 3.2

PACKAGING GROUP: II

SUBSIDIARY RISK LABEL: POISON

EmS No.: 215

MFAG Table No.: 215

MARINE POLLUTANT: No.

Section 15: Other Regulatory Information

TSCA INVENTORY STATUS: Yes.

TSCA 12 (b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Yes.

ACETONITRILE: 5000 lbs RQ.

SARA SECTION 302 (40CFR355.30): No.

SARA SECTION 304 (40CFR355.40): No.

SARA SECTION 313 (40CFR372.65): Yes.

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE: Yes.

CHRONIC: No.

FIRE: Yes.

REACTIVE: No.

SUDDEN RELEASE: No.

OSHA PROCESS SAFETY (29CFR1910.119): No.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65: No.

EUROPEAN REGULATIONS:

EC NUMBER (EINECS): 200-835-2.

EC RISK AND SAFETY PHRASES:

R 11 Highly Flammable.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

S ½ Keep locked-up and out of reach of children.

S 16 Keep away from sources of ignition –no smoking.

S 27 Take off immediately all contaminated clothing.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

CONCENTRATION LIMITS:

C_{>=}20% T R 23//24/25

3%_{>=}C<20% Xn R 20/21/22

GERMAN REGULATIONS:

Water Hazard Class (WGK): 2

Section 16: Other Information

References:Not available.

Other Special Considerations: Not available.

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