Material Safety Data Sheet

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Acetonitrile
Chemical Name: Methyl Cyanide
Catalog Number: DN-3301 & DN-3301-SP
Synonym/Trade Name: Methyl Nitrile, Cyanomethane, Amidite diluent

Manufacturer or supplier's
Esscee Biotech India Pvt. Ltd
D-14, Sarojini Nagar Industrial Area, Kanpur Road, Lucknow-226008
Ph: +91-8687421036
Email: info@chemgenesindia.com

SECTION 2. COMPOSITION, INFORMATION ON INGREDIENTS

Component: Acetonitrile Anhydrous
CAS#: 75-05-8
EC # (EINECS): 200-835-2
Percentage: 100.0
M.W.: 41.05

SECTION 3. HAZARDS IDENTIFICATION

NFPA Ratings (Scale 0-4): Health=2 Fire=3 Reactivity=0
EC Classification (assigned): F= Highly Flammable T = Toxic
Emergency Overview
Physical Description: colorless liquid
Odor: Sweet ether-like odor
Major Health Hazards: Flammable liquid and vapor. Causes irritation to the eyes, skin, and respiratory tract. Can cause convulsion, can cause fatal cyanide poisoning.

Physical Hazards
Flammable liquid and vapor. Vapor may cause flash fire.
Potential Health Effects
Inhalation:
Respiratory depression. Irritant. Additional effects may include headache, nausea, disorientation, extreme weakness, convulsion, suffocation, shock and or coma and death.

Skin Contact:
Irritant. Additional effects may include headache, nausea, disorientation, convulsions, suffocation, shock and or coma (As for inhalation)

Eye Contact:
Irritant. Tearing may occur and be persistent.

Ingestion:
Respiratory depression. Additional effects may include headache, nausea, disorientation, extreme weakness, convulsion, suffocation, shock and or coma and death. Bluish skin color may accompany some symptoms.

Delayed Effects:
Several hours may elapse from time of exposure and onset of symptoms. Chronic exposure may produce liver and kidney damage.
Carcinogen Status: OSHA: N NTP: N IARC: N

SECTION 4. FIRST AID MEASURES

Inhalation: Remove from exposure area to fresh air. If victim is not breathing administer artificial respiration according to your level of training and obtain professional medical assistance immediately.

Skin Contact: Immediately rinse affected area of water for 15 minutes. Get medical attention immediately.

Eye Contact: Immediately flush eyes with plenty of water or normal saline for at least 15 minutes. Then get medical attention immediately.

Ingestion: Contact local poison control center or physician immediately. Do not induce vomiting. Get medical assistance immediately.

Antidote: Amyl nitrite, inhalation; sodium nitrite, intravenous; sodium thiosulfate, infusion; oxygen

Note to Physician: Acetonitrile is metabolized to cyanide. Patients with significant exposures must be observed for signs of cyanide poisoning and treated accordingly. For ingestion, consider gastric lavage. Consider oxygen.

SECTION 5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards: Dangerous fire hazard when exposed to heat and flame. Vapor/air mixtures are explosive. Vapor is heavier than air and damage of flashback exists.

Large Fires: Use alcohol resistant foam or flood with fire water spray.
Extinguishing Media: Carbon dioxide, dry chemical, water spray or alcohol resistant foam.
Fire Fighting:
Do not release runoff from firefighting efforts to sewers or waterways. Fire may produce toxic fumes. Always wear self contained breathing apparatus.

Flash Point:	42 F (6 °C) - Open cup
Lower Flammable Limit:	3.0%
Upper Flammable Limit:	16.0%
Flammability Class (OSHA):	IB

SECTION 6. ACCIDENTAL RELEASE MEASURES

Occupational Release:
(Always wear recommended personal protective equipment). Eliminate sources of ignition. Isolate the spill area. Stop leak in a safe practical manner. If leak cannot be stopped easily and safely, advice trained emergency response personnel of the situation. Using inert material, such as ground corncobs, dike the spilled solvent to prevent it from running into drains or waterways.

Small spills: absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Notify local Emergency Planning Committee and State Emergency Response Commission for release 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 STORAGE

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHAA 29 CFR 1910.106. Grounding and bonding required. See original container for storage recommendations. Keep separated from incompatible substances. Flammable liquid and vapor. Once liquid solvent has been completely dispensed, containers, which appear “empty”, should be handled in the same manner as when they were “full” of liquid solvent.

SECTION 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure limits Acetonitrile:
40 ppm (70 mg/m3) OSHA TWA
40 ppm (67 mg/m3) ACGIH TWA
60 ppm (101 mg/m3) ACGIH STEL
20 ppm (34 mg/m3) NIOSH recommended TWA
Ventilation: Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Eye Protection: Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Clothing: Wear appropriate chemical resistant clothing. Gloves: Wear appropriate chemical resistant gloves.
Respirator: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. Any chemical cartridge respirator with organic vapor cartridges.
Any chemical cartridge respirator with a full face piece and organic vapor cartridges. Any air-purifying respirator with a full face piece and an organic vapor canister. For Unknown Concentrations of Immediately Dangerous to Life of Health. Any supplied-air respirator with full face piece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self- contained breathing apparatus with a full face piece.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Description:	Liquid
Color:	Colorless
Odor:	Ether odor
Boiling Point:	82 ℃ (180 F)
Freezing Point:	-46 C (-51 F)
Vapor Pressure:	73 mm Hg at 20 ℃
Vapor Density (air=1):	1.3 (Acetonitrile)
Density	0.780 g/ml @ 20℃
Specific Gravity:	N/A
Water Solubility:	100.0%
PH:	N/A
Volatility:	N/A
Odor Threshold:	40 ppm
Evaporation Rate:	5.8 (butyl acetate=1)

Coefficient of Water/Oil Distribution: N/A

SECTION 10. STABILITY AND REACTIVITY

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 of material or combustion by-products. Keep out of water supplies and sewers.
Incompatibilities: Acids, metals, bases, oxidizing materials, combustible materials, and reducing agents.
Hazardous Decomposition:
Thermal decomposition products: cyanides, oxides of carbon, oxides of nitrogen.
Polymerization: Will not polymerize.

SECTION 11. TOXICOLOGICAL INFORMATION

Irrigation Data for Acetonitrile: 500mg
open skin-rabbit mild; 100 ul/24 hours eyes-rabbit moderate.
Toxicity Data for Acetonitrile:
500 mg/kg oral-woman TDLo; 800 mg/kg oral-child TDLo; 571 mg/kg oral-man TDLo;64 mg/kg oral-man TDLo; 160 ppm/4 hours inhalation-human TCLo; 2460 mg/kg oral- rat LD50; 7551 ppm/8 hours inhalation-rat LC50; 269 mg/kg oral-mouse LD50; 2693 ppm/1 hours inhalation-mouse LC50; 50 mg/kg oral-rabbit LD50; 2828 ppm/4 hours inhalation-rabbit LC50; > 2gm/kg skin-rabbit LD50.

Carcinogen Status:	ACGIH: A4-Not classifiable as a Human Carcinogen.
Local Effects:	irritant: inhalation, eye.
Acute Toxicity Level:	Moderately
Toxic:	ingestion
Slightly Toxic:	inhalation
Target Organs:	Blood.

Medical Conditions Aggravated By Exposure: Central nervous system disorders, heart or cardiovascular disorders, kidney disorders, liver disorders, skin disorders and allergies.
Additional: Tumorigemic Data: 400 ppm inhalation-rat TLCo/6 hours – 2 year intermittent.

Mutagenic Data:
Sex chromosome loss and non disjunction – Drosophilia melanogaster inhalation 131 ppm; sex chromosome loss and non disjunction – Saccharomyes cerevisae 47600 ppm; sister chromatid exchange – hamster ovary 5gm/L Reproductive Effects Data: 1800 ppm inhalation-rat TCLo/6 hours 6-2 days pregnant female continuous; 390 mg/kg oral-rabbit TDLo 6-18 days pregnant female continuous.

SECTION 12. ECOLOGICAL INFORMATION

N/A

SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION

Hazard Classification:	3, Flammable liquid,
UN Number:	UN 1648
Shipping Name:	Acetonitrile

SECTION 15. REGULATORY INFORMATION

TSCA Inventory Status: Acetonitrile is listed on the TSCA inventory. Other TSCA Issues: None.

CERCLA Section 103 (40CFR302.4): Y Acetonitrile: 5000 LBS RQ
SARA Section 302 (40CFR355.30): N SARA Section 304 (40CFR355.40): N SARA Section 313 (40CFR372.65): Y SARA Title III section 311/312 extremely hazardous categories (40 CFR 370.21): Acute: Yes Chronic: No Fire: Yes Reactive: No Sudden Release: No
SARA Title III Section 313 (40 CFR 372.65): Acetonitrile OSHA Process safety (29 CFR 1910.119): Not regulated.National Inventory Status: U.S. Inventory (TSCA): Not listed on inventory. This product is sold for Research and Development Use Only. TSCA 12(b) Export Notification: Not listed.

SECTION 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Esscee Biotech India Pvt. Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.
