SAFETY DATA SHEET

Product Name : Acetonitrile CAS No. : 75-05-8 Revision No. : 00

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	:	Acetonitrile
Product Number	:	10001, 10051, 10053, 10054, 10052,
Brand	:	AZYTUS MATERIAL SCIENCES PVT. LTD
CAS No.	:	75-05-8

1.2 Relevant identified user of the substance or mixture and uses advised against

Identified Uses	:	Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the Safety Data Sheet

Company	:	AZYTUS MATERIAL SCIENCES PVT. LTD. Block C, Survey No. 156, 157 & 174, Dhulapally Road, Kompally, Secunderabad – 500014, India

1.4 Emergency telephone number

Emergency Number, #	:	**+91-8418-232316**

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Flammable liquids (Category 2)	:	H225
Acute toxicity, Oral (Category 4)	:	H302
Acute toxicity, Inhalation (Category 4)	:	H332
Acute toxicity, Dermal (Category 4)	:	H312
Eye irritation (Category 2)	:	H319

2.2 Label elements

Pictogram

Signal word	:	Danger
Hazard statement(s)		
H225	:	Highly flammable liquid and vapour
H302 + H312 + H332	:	Harmful if swallowed, in contact with skin or if inhaled
H319	:	Causes serious eye irritation.
Precautionary statement(s)		
P210	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280	:	Wear protective gloves/ protective clothing.
P305 + P351 + P338	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	:	None

2.3 Other hazards : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

Substances

Synonyms	:	Methyl cyanide
Formula	:	CH3CN
Molecular Weight	:	41.05 g/mol
CAS-No.	:	75-05-8

Hazardous ingredients according to Regulation (EC) No 1272/2008		
Component	**Classification**	**Concentration**
Acetonitrile		
CAS-No 75-05-8	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2; H225, H302, H332, H312, H319	<= 100 %

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	:	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	:	Wash off with soap and plenty of water. Consult a physician.
In case of eye contact	:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

4.2 Most important symptoms and effects, both acute and delayed : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed : No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture : Carbon oxides, nitrogen oxides (NOx)

5.3 Advice for firefighters : Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information : Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions : Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up : Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations

6.4 Reference to other sections : For disposal see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling : Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge

7.2 Conditions for safe storage, including any incompatibilities : Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s) : Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)			
Application Area	**Exposure routes**	**Health effect**	**Value**
Workers	Inhalation	Acute local effects, Acute systemic effects	68 mg/m3
Workers	Skin contact	Long-term systemic effects	32.2mg/kg BW/d
Workers	Inhalation	Long-term local effects, Long-term systemic effects	68 mg/m3
Consumers	Inhalation	Acute local effects	220 mg/m3
Consumers	Inhalation	Acute systemic effects	22 mg/m3
Consumers	Inhalation	Long-term systemic effects	4.8 mg/m3
Predicted No Effect Concentration (PNEC)			
Compartment	**Value**		
Water	10 mg/l		
Soil	2.41 mg/kg		
Marine water	1 mg/l		
Fresh water	10 mg/l		
Fresh water sediment	7.53 mg/kg		
Onsite sewage treatment plant	32 mg/l		

8.2 Exposure controls

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

Personal protective equipment

Eye/face protection : Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 480 min

Splash contact Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection : Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection : Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee 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).

Control of environmental exposure : Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

Appearance	:	Clear colorless liquid.
Odour	:	Ether-like
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	-48 °C
Initial boiling point and boiling range	:	81 – 82 °C
Flash point	:	2.0 °C - closed cup
Evapouration rate	:	5.8
Flammability (solid, gas)	:	No data available
Upper/lower flammability or explosive limits	:	Upper explosion limit: 16 %(V) Lower explosion limit: 3 %(V)
Vapour pressure	:	73.18 hPa at 15 °C 121.44 hPa at 25 °C 413.23 hPa at 55 °C 98.64 hPa at 20 °C
Vapour density	:	1.42 - (Air = 1.0)
Relative density	:	0.786 g/mL at 25 °C
Water solubility	:	Completely soluble
Partition coefficient: noctanol/water	:	Log Pow: -0.54 at 25 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Surface tension	:	29.0 mN/m at 20.0 °C
Relative vapour density	:	1.42 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1	**Reactivity**	:	No data available
10.2	**Chemical stability**	:	Stable under recommended storage conditions.
10.3	**Possibility of hazardous reactions**	:	No data available
10.4	**Conditions to avoid**	:	Heat, flames and sparks. Extremes of temperature and direct sunlight
10.5	**Incompatible materials**	:	Acids, Bases, Oxidizing agents, Reducing agents, Alkali metals
10.6	**Hazardous decomposition products**	:	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) Other decomposition products - No data available

SECTION 11: Toxicological information

11.1	**Acute toxicity**	:	LD50 Oral - Rat - male - 1,320 - 6,690 mg/kg(Acetonitrile) LC50 Inhalation - Mouse - 4 h - 3587 ppm(Acetonitrile) (OECD Test Guideline 403) LC50 Inhalation - Rat - 4 h - 26.8 mg/l(Acetonitrile) LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg(Acetonitrile) (OECD Test Guideline 402)
	Skin corrosion/irritation	:	Skin - Rabbit(Acetonitrile) Result: No skin irritation (OECD Test Guideline 404)

Serious eye damage/eye irritation	:	Eyes - Rabbit(Acetonitrile) Result: Irritating to eyes. (OECD Test Guideline 405)
Respiratory or skin sensitisation	:	Buehler Test - Guinea pig(Acetonitrile) Did not cause sensitisation on laboratory animals. (OECD Test Guideline 406)
Germ cell mutagenicity	:	Hamster(Acetonitrile) ovary Result: negative Mutation in mammalian somatic cells. Ames test(Acetonitrile) S. typhimurium Result: Not mutagenic in Ames Test Hamster(Acetonitrile) ovary Result: Equivocal evidence. Sister chromatid exchange Mutagenicity (micronucleus test)(Acetonitrile) Mouse Result: Positive results were obtained in some in vivo tests.
Carcinogenicity	:	No evidence of carcinogenicity in animal studies.(Acetonitrile) IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC
Reproductive toxicity	:	Animal testing did not show any effects on fertility.(Acetonitrile)
Specific target organ toxicity - single exposure	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.(Acetonitrile)
Specific target organ toxicity - repeated exposure	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard	:	No aspiration toxicity classification(Acetonitrile)
Additional Information	:	Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis, excitement, depression, Drowsiness, impaired judgment, Lack of coordination, stupor, death(Acetonitrile)

SECTION 12: Ecological information

12.1	Toxicity	:	Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1,640.00 mg/l - 96 h(Acetonitrile) NOEC - Oryzias latipes - 102 mg/l - 21 d(Acetonitrile) Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 3,600 mg/l - 48 h(Acetonitrile) (OECD Test Guideline 202) NOEC - Daphnia magna (Water flea) - 160 mg/l - 21 d(Acetonitrile)
12.2	Persistence and degradability	:	Biodegradability Result: 84 % - Readily biodegradable. (OECD Test Guideline 301C)
12.3	Bioaccumulative potential	:	No bioaccumulation is to be expected (log Pow <= 4).
12.4	Mobility in soil	:	Not expected to adsorb on soil.(Acetonitrile)

12.5 Results of PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects : Avoid release to the environment.
Stability in water (Acetonitrile)
Remarks: Hydrolyses slowly.

SECTION 13: Disposal considerations

13.1 Waste treatment methods : **Product**
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
UN number	1648	1648	1648
UN proper shipping name	ACETONITRILE	ACETONITRILE	Acetonitrile
Transport hazard class(es)	3	3	3
Packaging group	II	II	II
Environmental hazard	No	No	No
Special precautions for user	No data available	No data available	No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture : This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment : For this product a chemical safety assessment was not carried out

SECTION 16: Other information

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Version : 00

Disclaimer:

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