



**Acetonitrile**  
**CAS No 75-05-8**

**MATERIAL SAFETY DATA SHEET**  
**SDS/MSDS**

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

**1.1 Product identifiers**

Product name : **Acetonitrile**  
CAS-No. : 75-05-8

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

**1.3 Details of the supplier of the safety data sheet**

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
Ansari Road Daryaganj  
New Delhi-110002  
INDIA  
  
Telephone : +91 11 49404040  
Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

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

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

F	Highly flammable	R11
Xn	Harmful	R20/21/22
Xi	Irritant	R36

For the full text of the R-phrases mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word

Danger

Hazard statement(s)  
H225

Highly flammable liquid and vapour.

H302 + H312 + H332 H319	Harmful if swallowed, in contact with skin or if inhaled 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

### 3.1 Substances

Synonyms	:	Methyl cyanide ACN
Formula	:	C <sub>2</sub> H <sub>3</sub> N
Molecular weight	:	41,05 g/mol
CAS-No.	:	75-05-8
EC-No.	:	200-835-2
Index-No.	:	608-001-00-3
Registration number	:	01-2119471307-38-XXXX

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>Acetonitrile</b>		
CAS-No.	75-05-8	Flam. Liq. 2; Acute Tox. 4; Eye
EC-No.	200-835-2	Irrit. 2; H225, H302 + H312 +
Index-No.	608-001-00-3	H332, H319
Registration number	01-2119471307-38-XXXX	<= 100 %

#### Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
<b>Acetonitrile</b>		
CAS-No.	75-05-8	F, Xn, R11 - R20/21/22 - R36
EC-No.	200-835-2	<= 100 %
Index-No.	608-001-00-3	
Registration number	01-2119471307-38-XXXX	

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

## 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**

No data available

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting 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. For personal protection see section 8.

**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 (see section 13).

**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 build up of electrostatic charge.

For precautions see section 2.2.

**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.

Handle and store under inert gas.

Storage class (TRGS 510): Flammable liquids

**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

#### Components with workplace control parameters

##### Derived No Effect Level (DNEL)

Application Area	Exposure routes	Health effect	Value
Workers	Inhalation	Acute local effects, Acute systemic effects	68 mg/m <sup>3</sup>
Workers	Skin contact	Long-term systemic effects	32,2mg/kg BW/d
Workers	Inhalation	Long-term local effects, Long-term systemic effects	68 mg/m <sup>3</sup>
Consumers	Inhalation	Acute local effects	220 mg/m <sup>3</sup>
Consumers	Inhalation	Acute systemic effects	22 mg/m <sup>3</sup>
Consumers	Inhalation	Long-term systemic effects	4,8 mg/m <sup>3</sup>

##### 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.

##### 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 a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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

### 9.1 Information on basic physical and chemical properties

- a) Appearance                      Form: clear, liquid  
   Colour: colourless

b) Odour	ether-like
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: -48 °C
f) Initial boiling point and boiling range	80- 82 °C
g) Flash point	2,0 °C - closed cup
h) Evaporation rate	5,8
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 16 %(V) Lower explosion limit: 3 %(V)
k) 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
l) Vapour density	1,42 - (Air = 1.0)
m) Relative density	0,780-0.783 g/mL at 20 °C
n) Water solubility	completely soluble
o) Partition coefficient: n-octanol/water	log Pow: -0,54 at 25 °C
p) Auto-ignition temperature	524,0 °C
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	Not explosive
t) Oxidizing properties	The substance or mixture is not classified as oxidizing.

## 9.2 Other safety information

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

Other decomposition products - No data available  
In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male - 1.320 - 6.690 mg/kg

LC50 Inhalation - Mouse - 4 h - 3587 ppm  
(OECD Test Guideline 403)

LC50 Inhalation - Rat - 4 h - 26,8 mg/l

LD50 Dermal - Rabbit - male and female - > 2.000 mg/kg  
(OECD Test Guideline 402)

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

#### Respiratory or skin sensitisation

Buehler Test - Guinea pig

Did not cause sensitisation on laboratory animals.

(OECD Test Guideline 406)

#### Germ cell mutagenicity

Hamster

ovary

Result: negative

Mutation in mammalian somatic cells.

Ames test

S. typhimurium

Result: Not mutagenic in Ames Test.

Hamster

ovary

Result: Equivocal evidence.

Sister chromatid exchange

Mutagenicity (micronucleus test)

Mouse

Result: Positive results were obtained in some in vivo tests.

#### Carcinogenicity

No evidence of carcinogenicity in animal studies.

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.

#### Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

#### 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

### Additional Information

RTECS: AL7700000

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

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1.640,00 mg/l - 96 h

NOEC - Oryzias latipes - 102 mg/l - 21 d

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 3.600 mg/l - 48 h (OECD Test Guideline 202)

NOEC - Daphnia magna (Water flea) - 160 mg/l - 21 d

### 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.

### 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

Remarks: Hydrolyses slowly.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as **unused product**

Dispose of as unused product

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 1648

IMDG: 1648

IATA: 1648

### 14.2 UN proper shipping name

ADR/RID: ACETONITRILE

IMDG: ACETONITRILE

IATA: Acetonitrile

<b>14.3 Transport hazard class(es)</b> ADR/RID: 3	IMDG: 3	IATA: 3
<b>14.4 Packaging group</b> ADR/RID: II	IMDG: II	IATA: II
<b>14.5 Environmental hazards</b> ADR/RID: no	IMDG Marine pollutant: no	IATA: no
<b>14.6 Special precautions for user</b> No data available		

### SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

#### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance.

### SECTION 16: Other information

#### Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H302 + H312 +	Harmful if swallowed, in contact with skin or if inhaled
H332	
H312	Harmful in contact with skin.

#### Full text of R-phrases referred to under sections 2 and 3

F	Highly flammable
Xn	Harmful
R11	Highly flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R36	Irritating to eyes.

#### Further 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. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.cdhfinechemical.com](http://www.cdhfinechemical.com) for additional terms and conditions of sale.