| Acetonitrile<br>CAS No 75-05-8 | MATERIAL SAFETY DATA SHEET<br>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
DGL 128-129, DLF The Galleria,
Mayur Vihar Phase 1 Extension,
New Delhi-110091
INDIA

Telephone : +91 11 49404040
Email : 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 | 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

### 3.1 Substances

| | | |
|---|---|---|
| Synonyms | : | Methyl cyanide<br>ACN |
| Formula | : | $C_2H_3N$ |
| 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 |
|---|---|---|---|
| **Acetonitrile** | | | |
| CAS-No. | 75-05-8 | Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2; H225, H302 + H312 + H332, H319 | <= 100 % |
| EC-No. | 200-835-2 | | |
| Index-No. | 608-001-00-3 | | |
| Registration number | 01-2119471307-38-XXXX | | |

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

| Component | | Classification | Concentration |
|---|---|---|---|
| **Acetonitrile** | | | |
| CAS-No. | 75-05-8 | F, Xn, R11 - R20/21/22 - R36 | <= 100 % |
| EC-No. | 200-835-2 | | |
| 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/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.

**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)<br>Lower explosion limit: 3 %(V) |
| k) | Vapour pressure | 73,18 hPa at 15 °C<br>121,44 hPa at 25 °C<br>413,23 hPa at 55 °C<br>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

### 14.3 Transport hazard class(es)

| | | |
|---|---|---|
| ADR/RID: 3 | IMDG: 3 | IATA: 3 |

### 14.4 Packaging group

| | | |
|---|---|---|
| ADR/RID: II | IMDG: II | IATA: II |

### 14.5 Environmental hazards

| | | |
|---|---|---|
| ADR/RID: no | IMDG Marine pollutant: no | IATA: no |

### 14.6 Special precautions for user

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 + H332 | Harmful if swallowed, in contact with skin or if inhaled |
| 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 for additional terms and conditions of sale.