

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

1.1 Product identifier

| | |
|--------------|--|
| Product name | ACETONITRILE |
| CAS-No. | 75-05-8 |
| Product code | AH1008, AH1009, AH1010, AR1005, CG1005, GP1005, IR1005, LC1005, LC1007, LC1219, LC1386, LM1005, PC1005, PS1005, RP1005, SG1005, SG1006 |

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

| | |
|-----------------|--------------------------------------|
| Identified uses | Chemical for analysis and production |
|-----------------|--------------------------------------|

1.3 Details of the supplier of the safety data sheet

| | |
|------------------|---|
| Company | RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand |
| Telephone number | (662) 613-7911-4 |
| Fax number | (662) 613-7915 |

1.4 Emergency Telephone Number

| | |
|-----------------|------------------|
| Emergency phone | (662) 613-7911-4 |
|-----------------|------------------|

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, Dermal (Category 4), H312
Acute toxicity, Inhalation (Category 4), H332
Eye irritation (Category 2), H319
For the full text of the H-Statements 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. |
| P233 | Keep container tightly closed. |
| P240 | Ground and bond container and receiving equipment. |
| P241 | Use explosion-proof [electrical/ventilating/lighting] equipment. |

| | |
|--------------------|--|
| P242 | Use non-sparking tools. |
| P243 | Take action to prevent static discharges. |
| P261 | Avoid breathing vapours. |
| P264 | Wash hand thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P301 + P312 | IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. |
| P302 + P352 | IF ON SKIN: Wash with plenty water. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P330 | Rinse mouth. |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |
| P362 + P364 | Take off contaminated clothing and wash it before reuse. |
| P370 + P378 | In case of fire: Use carbon dioxide, dry chemical or foam to extinguish. |
| P403 + P235 | Store in a well-ventilated place. Keep cool. |

2.3 Other hazards None

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms Methyl cyanide, Cyanomethane, Ethanenitrile.

| | | | | | |
|---------|-----------|--------------|--------------------|------------------|----------|
| CAS-No | EC-No | EC-Index-No | Formula | Molecular Weight | Weight % |
| 75-05-8 | 200-835-2 | 608-001-00-3 | CH ₃ CN | 41.05 g/mol | >99 |

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

| Component | Concentration | Classification |
|---|---------------|--|
| Acetonitrile | | |
| CAS-No 75-05-8 EC-No 200-835-2 EC-Index-No 608-001-00-3 | >99% | Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Dermal (Category 4), H312 Acute toxicity, Inhalation (Category 4), H332 Eye irritation (Category 2), H319 |

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

SECTION 4: First aid measures

4.1 Description of first aid measures

| | |
|----------------|---|
| General advice | Show this safety data sheet to the doctor in attendance. |
| Inhalation | Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. |
| Skin contact | Remove contaminated clothing and wash affected skin with soap and water. Obtain medical attention. If signs of poisoning appear, treat as for inhalation. Wash contaminated clothing before reuse. Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely. |

| | |
|-------------|--|
| Eye contact | If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention. |
| Ingestion | Rinse mouth. Immediately make victim drink water (two glasses at most). Do not induce vomit. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person. |

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11

4.3 Indication of any immediate medical attention and special treatment needed

Treat as cyanide poisoning. Always have a cyanide first-aid kit and proper instruction on hand. The oneself symptoms is generally delayed pending conversation to Cyanide, Nausea, Vomit, Headache, Dizziness, Rash, Cyanosis, Excitement, Depression, Drowsiness, Impaired Judgment, Lack of Coordination, Stupor and Death.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Extinguish with carbon dioxide, dry chemical, foam or water spray. In the event of fire, cool tanks with water spray.

5.2 Special hazards arising from the substance or mixture

Vapors may form explosive mixture with air. Flash back possible over considerable distance.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

5.4 Further information

Standard procedure for chemical fires. Take measures to prevent electrostatic charging. Prevent firefighting water from entering surface water or groundwater.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Remove all sources of ignition. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil or vegetation, advise police.

6.3 Methods and materials for containment and cleaning up

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

6.4 Reference to other sections

For disposal see **Section 13**.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed at room temperature in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible materials. Store in original container. Electrical equipment should be protected to the appropriate standard.

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 | Health Effects | Exposure | Value |
|------------------|----------------------------|--------------|------------------------|
| Worker | Acute Local effects | Inhalation | 68 mg/m ³ |
| Worker | Acute Systemic effects | Inhalation | 68 mg/m ³ |
| Worker | Long-term Local effects | Inhalation | 68 mg/m ³ |
| Worker | Long-term Systemic effects | Inhalation | 68 mg/m ³ |
| Worker | Long-term Systemic effects | Skin contact | 32.2 mg/kg Body weight |
| Consumer | Acute Local effects | Inhalation | 22 mg/m ³ |
| Consumer | Acute Systemic effects | Ingestion | 0.6 mg/kg Body weight |
| Consumer | Acute Systemic effects | Inhalation | 220 mg/m ³ |
| Consumer | Long-term Local effects | Inhalation | 4.8 mg/m ³ |
| Consumer | Long-term Systemic effects | Inhalation | 4.8 mg/m ³ |

Predicted No Effect Concentration (PNEC)

| Compartment | Value |
|------------------------|------------|
| Fresh water | 10 mg/l |
| Fresh water sediment | 7.53 mg/kg |
| Marine water | 1 mg/l |
| Sewage treatment plant | 32 mg/l |
| Soil | 2.41 mg/kg |
| Water | 10 mg/l |

8.2 Exposure controls

Appropriate engineering controls

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

Individual protection measures (Personal protective equipment, PPE)

Eye/face protection

Goggles giving complete protection to eyes.

Skin protection

Chemical resistant apron / flame retardant antistatic protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from butyl rubber material.
- Splash contact wears gloves from polychloroprene material.

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

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated filter A (EN 141 or EN 14387).

Environmental exposure controls

Prevent liquid entering sewers, basements and workpits.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

| | |
|---|---|
| Appearance: From | Liquid |
| : Color | Colorless |
| Odor | Ether-like |
| Odor Threshold | Not Available |
| pH | Not Available |
| Melting point/range | -45.7°C |
| Boiling point/range | 81.6°C |
| Flash point | 2.0 °C (closed cup) |
| Evaporation rate | Not Available |
| Flammability (solid, gas) | Not Available |
| Explosion limits: lower | 3.0 %(V) |
| upper | 17 %(V) |
| Vapor Pressure | 97 hPa at 20°C |
| Relative vapor density | 1.42 |
| Density | 0.786 g/ml at 20°C |
| Water solubility | Soluble at 20°C |
| Partition coefficient (n-octanol/water) | log Pow: -0.34 |
| Auto-Ignition temperature | 523 °C |
| Decomposition Temperature | Not Available |
| Viscosity | 0.316 mPa.s at 25°C |
| Explosive properties | Not Explosive |
| Oxidizing properties | The substance or mixture is not classified as oxidizing |

SECTION 10: Stability and reactivity**10.1 Reactivity**

Heat-sensitive/decomposition. Explosible with air in a vapors/gaseous state.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Risk of explosion in contact with sulfuric acid/heat, cyanopropyl nitrate, perchloric acid, metal perchlorates, nitrogen-fluorine-compounds.

The substance can react dangerously with oxidizing agents, acids, perfluoro urea, nitrogen dioxide/catalyst.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Acid, Bases, Oxidizing agents, Reducing agents.

Unsuitable working materials: various plastics, rubber

10.6 Hazardous decomposition products

Nitrogen oxides (NOX), carbon oxides, Hydrogen cyanide, Hydrocyanic acid (Hazardous decomposition

products from under fire condition).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD₅₀ (oral, rat): 2730-3800 mg/kg

LD₅₀ (dermal, rabbit): 988 mg/kg

LC₅₀ (inhalation, rat): 27.3 mg/l/4 h

Acute oral toxicity

Absorption: nausea, vomiting, headache, dizziness, spasms, unconsciousness, respiratory arrest, cardiac arrest, dyspnea.

Acute inhalation toxicity

Absorption

Skin corrosion/irritation

Slight irritations danger of skin absorption.

Serious eye damage/eye irritation

Irritations

Respiratory or skin sensitization

Not Available

Germ cell mutagenicity

Not Available

Carcinogenicity

Not Available

Reproductive toxicity

Not Available

Teratogenicity

Not Available

Specific target organ toxicity (STOT) - single exposure

Not Available

Specific target organ toxicity (STOT) - repeated exposure

Not Available

Aspiration hazard

Not Available

Further information

Systemic effects: nausea, vomiting, headache, dizziness, spasms, unconsciousness, respiratory arrest, cardiac arrest, dyspnea.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish

LC₅₀ P.promelas: 1640 mg/l /96h

Toxicity to daphnia

EC₅₀ Daphnia magna: >10000 mg/l /24h

and other aquatic invertebrates

Toxicity to algae IC₅ Sc.quadricauda: 7300 mg/l/8d

Toxicity to bacteria EC₅ Ps. Putida: 680 mg/l /16d

12.2 Persistence and degradability

Biodegradability 98%/28 d, Readily biodegradable, according to appropriate OECD test.

12.3 Bioaccumulative potential

Partition coefficient (n-octanol/water) log Pow: -0.34

No bioaccumulation is to be expected (log P o/w <1)

12.4 Mobility in soil

Not Available

12.5 Other adverse effects

Do not allow to enter waters, waste water or soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION 14: Transport information

Land Transport (ADR/RID)

| | |
|------------------------------|--------------|
| UN Number | 1648 |
| UN proper shipping name | ACETONITRILE |
| Transport hazard class(es) | 3 |
| Packing group | II |
| Environmental hazards | No |
| Special precautions for user | Yes |

Sea transport (IMDG)

| | |
|------------------------------|--------------|
| UN Number | 1648 |
| UN proper shipping name | ACETONITRILE |
| Transport hazard class(es) | 3 |
| Packing group | II |
| Marine pollutant | No |
| Special precautions for user | Yes |
| EmS | F-E S-D |

Air transport (IATA)

| | |
|-------------------------|--------------|
| UN Number | 1648 |
| UN proper shipping name | ACETONITRILE |

| | |
|------------------------------|----|
| Transport hazard class(es) | 3 |
| Packing group | II |
| Environmental hazards | No |
| Special precautions for user | No |

River transport (AND/ADNR)
(Not examined)

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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

Not Available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

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

| | |
|--------------------|---|
| H225 | Highly flammable liquid and vapour. |
| H302 + H312 + H332 | Harmful if swallowed, in contact with skin or if inhaled. |
| H319 | Causes serious eye irritation. |

Recommended restrictions

Take notice of labels and safety data sheets for the working. Chemicals Take necessary action to avoid static electricity discharge.

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.

Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.

Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany, Source: IFA for Databases on hazardous substances (GESTIS).

Further information

Contact to RCI Labscan Limited.

Revision Date

01/04/2020

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.