



Preparing for the New Era of Laboratories

# MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

## **ACETONITRILE 99,9% HPLC Gradient Grade**

PRODUCT CODE : B-3007

CAS No : 75-05-8

FORMULA :  $\text{CH}_3\text{CN}$

UN No : 1648

website : [www.labotiq.net](http://www.labotiq.net)

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## ACETONITRILE 99,9% HPLC Gradient Grade



MSDS Number : 0016

Date : Aug 15<sup>th</sup>, 2024

Version : 1.0

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

- 1.1 Product Name** : ACETONITRILE 99,9% HPLC Gradient Grade  
**Synonyms** : Methyl Cyanide; Cyanomethane; Ethanenitrile; Ethyl nitrile  
**CAS No.** : 75-05-8  
**HS Code** : 2915 21 00  
**Chemical Formula** : CH<sub>3</sub>CN  
**Molecular Weight** : 41.05 g/mol  
**Product Code** : B-3007  
**Brand** : Labotiq  
**1.2 Manufacturer** : Labotiq  
**Address** : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111  
**Website** : [www.labotiq.net](http://www.labotiq.net)  
**Email** : [labotiq.id@gmail.com](mailto:labotiq.id@gmail.com)  
**For information** : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710  
**Emergency number** : +6281316894650  
**1.3 Application** : Laboratory chemicals, Manufacture of substances, General Chemical reagent

### 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

#### 2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H225  
 H302 + H312 + H332  
 H319

Highly flammable liquid and vapour.  
 Harmful if swallowed, in contact with skin or if inhaled.  
 Causes serious eye irritation.

Precautionary statement(s)

P210  
 P280  
 P305 + P351 + P338

Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
 Wear protective gloves/ protective clothing.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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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  
 Formula : CH<sub>3</sub>CN  
 Molecular weight : 41.05 g/mol  
 CAS-No. : 75-05-8  
 EC-No. : 200-835-2  
 Index-No. : 608-001-00-3

### 3.2 Mixture

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

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

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

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. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

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

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### **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 (NO<sub>x</sub>)

#### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information**

No data available

### **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**

##### **Advice on safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Filled under nitrogen. Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

##### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

##### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

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### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

#### Storage class

Storage class (TRGS 510): 3: 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

#### 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/

### 8.2 Exposure control

#### Appropriat 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

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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: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  
Material tested: Dermatrill® (KCL 740, Size M)

### Splash contact

Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  
Material tested: Dermatrill® (KCL 740, Size M)

### Body Protection

Complete suit protecting against chemicals, 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 (EN 143) respirator cartridges as a backup to engineering controls. If the 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. Discharge into the environment must be avoided.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	Form: liquid, clear Colour: colourless
Odour	ether-like
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	Melting point/range: -48 °C - lit.
Initial boiling point and boiling range	81 - 82 °C - lit.
Flash point	2.0 °C - closed cup
Evaporation 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	No data available 73.18 hPa at 15 °C 121.44 hPa at 25 °C 413.23 hPa at 55 °C 98.64 hPa at 20 °C

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Vapour density	1.42 - (Air = 1.0)
Relative density	0.786 g/cm <sup>3</sup> at 25 °C
Water solubility	completely soluble
Partition coefficient: noctanol/water	log Pow: -0.54 at 25 °C
Auto-ignition temperature	524.0 °C
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	Not explosive
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 Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO<sub>x</sub>) 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(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 - &gt; 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)

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**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**

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(Acetonitrile)

### SECTION 12: Ecological information

*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 Immobilization*

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)



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**12.2 Persistence and degradability**

Biodegradability

Result: 84 % - Readily biodegrad

**12.3 Bioaccumulative potential**

No bioaccumulation is to be expected (log Pow &lt;= 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**

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

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****Further information**

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.

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### **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.**

H312 Harmful in contact with skin.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.

### **National Fire Protection Association (U.S.A.):**

Health: 2  
Flammability: 3  
Reactivity: 0

### **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. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.*

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