

MATERIAL SAFETY DATA SHEET (MSDS)



ACETONITRILE

CAS No.: 75-05-8

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

1.1. Product identifier

Product form	: Substance
Product name	: ACETONITRILE
Type of product	: SOLVENT
Product Grades (Applicable)	: HPLC, GRADIENT, SPECIAL GRADE, LC-MS , GC , AR,ACS, DRY
Product Code	: A0003H (Pack size(s):- 1LT, 2.5LT, 4LT) A0003GG (Pack size(s):- 1LT, 2.5LT, 4LT) A0003SP (Pack size(s):- 1LT, 2.5LT, 4LT) A0003LC (Pack size(s):- 1LT, 2.5LT, 4LT) A0003GC (Pack size(s):- 1LT, 2.5LT) A0003A (Pack size(s):- 1LT, 2.5LT) A0003D (Pack size(s):- 1LT)
CAS No	: 75-05-8
Formula	: CH ₃ CN

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

1.2.1. Relevant identified uses	: Industrial For professional use only
1.2.2. Uses advised against	: No additional information available

1.3. Details of the supplier of the safety data sheet

RYZE CHEMIE
W-68,Mankivli MIDC
Badlapur (E), Thane,
Maharashtra-421503
www.ryzechemie.com

1.4. Emergency Telephone Number

+91- 99-3006-04-04

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2	H225
Acute toxicity (oral), Category 4	H302

Acute toxicity (dermal), Category 4 H312
Acute toxicity (inhal.), Category 4 H332
Serious eye damage/eye irritation, Category 2 H319

Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11

Xi; R36

R67



Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label Elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)	:		
		GHS02	GHS07
Signal word (CLP)	:	Danger	
Hazard statements (CLP)	:	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 statements (CLP)	:	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P280 - Wear protective clothing, eye protection, face protection, protective gloves. 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. P501 - Dispose of contents and container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.	

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : ACETONITRILE HPLC
CAS No : 75-05-8
EC-No. : 200-835-2
EC Index-No. : 608-001-00-3

3.2. Mixture

Not applicable

SECTION 4: : First aid measures

4.1. Description of first aid measures

First-aid measures general	:	Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	:	Get medical advice/attention. Wash with plenty of soap and water.
First-aid measures after eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	:	Rinse mouth. Do not induce vomiting. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	:	Harmful if inhaled.
Symptoms/effects after skin contact	:	Harmful in contact with skin.
Symptoms/effects after eye contact	:	Causes serious eye irritation. Eye irritation.
Symptoms/effects after ingestion	:	Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Water spray. Foam. Dry powder. Carbon dioxide. Sand.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Highly flammable liquid and vapour.
Explosion hazard	:	May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire	:	Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel.
No open flames, no sparks, and no smoking.
Avoid contact with skin, eyes and clothing.
Avoid breathing dust, fume, gas, mist, spray, vapours.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required.
For further information refer to section 8:
Exposure controls/personal protection.

Emergency procedures : Ventilate area

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Collect spillage.
On land, sweep or shovel into suitable containers.
Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.
Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Ensure good ventilation of the work station. No open flames. No smoking. Use only non-sparking tools.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Ground/bond container and receiving equipment.
Take precautionary measures against static discharge.
Flammable vapours may accumulate in the container.
Use explosion-proof equipment. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing.
Use only outdoors or in a well-ventilated area.
Avoid breathing dust, fume, gas, mist, spray, vapours.

Hygiene measures : Do not eat, drink or smoke when using this product.
Wash hands, forearms and face thoroughly after handling.

Wash contaminated clothing before reuse.
Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions	: Keep in fireproof place. Keep container tightly closed. Store in a well-ventilated place. Keep cool.
Incompatible materials	: Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

ACETONITRILE LC-MS (75-05-8)

EU - Indicative Occupational Exposure Limit (IOEL)

Local name	Acetonitrile
IOEL TWA [ppm]	40 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC

Germany - Occupational Exposure Limits (TRGS 900)

AGW (OEL TWA) [1]	17 mg/m³
AGW (OEL TWA) [2]	10 ppm
Peak exposure limitation factor	2(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); H - hautresorptiv; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900

Portugal - Occupational Exposure Limits

Local name	Acetonitrilo
OEL TWA [ppm]	20 ppm
Remark	P (Toxicidade percutânea); A4 (Agente não classificável como carcinogénico no Homem)
Regulatory reference	Norma Portuguesa NP 1796:2014

ACETONITRILE LC-MS (75-05-8)

Spain - Occupational Exposure Limits

Local name	Acetonitrilo
VLA-ED (OEL TWA) [1]	68 mg/m³
VLA-ED (OEL TWA) [2]	40 ppm
Remark	Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT

United Kingdom - Occupational Exposure Limits

Local name	Acetonitrile
WEL TWA (OEL TWA) [1]	68 mg/m³

8.1.2. Recommended monitoring procedures
No additional information available

8.1.3. Air contaminants formed
No additional information available

8.1.4. DNEL and PNEC
No additional information available

8.1.5. Control banding
No additional information available

8.2. Exposure controls

Hand protection	:	Protective gloves
Eye protection	:	Chemical goggles or safety glasses
Skin and body protection	:	Wear suitable protective clothing
Respiratory protection	:	Wear respiratory protection. wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear liquid.
Molecular mass	:	41.05 g/mol
Colour	:	Colourless.
Odour	:	faint odour.
Odour threshold	:	No data available
pH	:	≈ 7
pH solution concentration	:	5%
Relative evaporation rate	:	5.79
Melting point	:	Not applicable
Freezing point	:	-46 – -44 °C
Boiling point	:	81 – 82 °C
Flash point	:	2 °C
Auto-ignition temperature	:	524 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Flammable

	: Highly flammable liquid and vapour, Not applicable
Vapour pressure	: 98.64 hPa at 20°C
Relative vapour density at 20 °C	: 1.4
Relative density	: No data available
Density	: 0.78 – 0.79 g/cm ³
Relative gas density	: 1.4
Solubility	: Water: Completely miscible
Partition coefficient n-octanol/water (Log Pow)	: -0.54 at 25°C - Bioaccumulation is not expected
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical Stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Open flame. Direct sunlight. Sparks. Overheating. Avoid contact with hot surfaces. Heat.
No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Harmful if inhaled.
Skin corrosion/irritation	: Not classified
	pH: ≈ 7

Serious eye damage/irritation	: Causes serious eye irritation. pH: \approx 7
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Harmful if swallowed, Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term(acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

ACETONITRILE LC-MS (75-05-8)

Partition coefficient n-octanol/water (Log Pow)	-0.54 at 25°C - Bioaccumulation is not expected.
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous waste disposal contractor or collection site except for empty clean containers which can be disposed of as non hazardous waste.

Additional information : Handle empty containers with care because residual vapours are flammable.
Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: UN 1648
UN-No. (IMDG)	: UN 1648
UN-No.(IATA)	: UN 1648
UN-No.(ADN)	: UN 1648
UN-No. (RID)	: UN 1648

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: ACETONITRILE
Proper Shipping Name (IMDG)	: ACETONITRILE
Proper Shipping Name (IATA)	: Acetonitrile
Proper Shipping Name (ADN)	: ACETONITRILE
Proper Shipping Name (RID)	: ACETONITRILE
Transport document description (ADR)	: UN 1648 ACETONITRILE, 3, II, (D/E)
Transport document description (IMDG)	: UN 1648 ACETONITRILE, 3, II (2°C c.c.)
Transport document description (IATA)	: UN 1648 Acetonitrile, 3, II
Transport document description (ADN)	: UN 1648 ACETONITRILE, 3, II
Transport document description (RID)	: UN 1648 ACETONITRILE, 3, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 3	
Danger labels (ADR)	: 3	

IMDG

Transport hazard class(es) (IMDG)	: 3	
Danger labels (IMDG)	: 3	


IATA

Transport hazard class(es) (IATA)	: 3	
Hazard labels (IATA)	: 3	

ADN

Transport hazard class(es) (ADN)	: 3	
Hazard labels (ADN)	: 3	

RID

Transport hazard class(es) (RID)	: 3	
Hazard labels (RID)	: 3	

14.4. Packing group

Packing group (ADR)	: II
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Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: II
Packing group (RID)	: II

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: F1
Limited quantities (ADR)	: 1L
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: E2
Mixed packing provisions (ADR)	: P001, IBC02, R001
Portable tank and bulk container instructions (ADR)	: MP19
Portable tank and bulk container special provisions (ADR)	: T7
Tank code (ADR)	: TP2
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20

Hazard identification number (Kemler No.)	: 33
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Orange plates	: 
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Tunnel restriction code (ADR)	: D/E
EAC code	: •2YE

- Transport by sea

Limited quantities (IMDG)	: 1L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: B
Flash point (IMDG)	: 2°C c.c.
Properties and observations (IMDG)	: Colourless, volatile liquid. Flashpoint: 2°C c.c. Explosive limits: 3% to 16% Miscible with water. When involved in a fire, evolves toxic cyanide fumes. Harmful if swallowed, by skin contact or by inhalation.

MFAG-No	: 127
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- Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L

CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
ERG code (IATA) : 3L

- Inland waterway transport

Classification code (ADN) : F1
Limited quantities (ADN) : 1L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VEO1
Number of blue cones/lights (ADN) : 1

- Rail transport

Classification code (RID) : F1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Mixed packing provisions (RID) : MP19

Portable tank and bulk container instructions (RID) : T7
Portable tank and bulk container special provisions (RID) : TP2
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(a)	ACETONITRILE FOR HPLC & UV SPECTROSCOPY
3(b)	ACETONITRILE FOR HPLC & UV SPECTROSCOPY
40.	ACETONITRILE FOR HPLC & UV SPECTROSCOPY

REACH Annex XIV (Authorisation List)

ACETONITRILE FOR HPLC & UV SPECTROSCOPY is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

ACETONITRILE FOR HPLC & UV SPECTROSCOPY is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

ACETONITRILE FOR HPLC & UV SPECTROSCOPY is not subject to Regulation (EU) No

649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

ACETONITRILE FOR HPLC & UV SPECTROSCOPY is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants.

Ozone Regulation (1005/2009)

ACETONITRILE is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water
(Classification according to AwSV; ID No. 8).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed

Denmark

Class for fire hazard	: Class I-1
Store unit	: 1 liter
Classification remarks	: F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product

must not be in direct contact with the product

Switzerland

Storage class (LK)

: LK 3 - Flammable liquids

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration

Abbreviations and acronyms:

STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:

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Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.