



Safety Data Sheet

Date of Issue: 22.10.2024

Date of Expiry: 22.10.2029

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
Address : PO Box 34125, Birkenhead, Auckland 0746
Telephone : +64 9 480 4386
Facsimile : +64 9 480 4385
Emergency phone number : 0800 243 622 (24 hours)

Manufacturer : Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200
Radnor, PA 19087

Product Name	Acetonitrile
Product Code	9012-03
CAS No.	75-05-8

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification

Flammable Liquids (Category 2)
Acute toxicity, Oral (Category 2)
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 3)
Serious eye damage/eye irritation (Category 2)

2.2 GHS Label elements, including precautionary statements

Pictogram



DANGER

Hazard statement(s)

H225 Highly flammable liquid and vapor.
H300 Fatal if swallowed.
H311 + H331 Toxic in contact with skin or if inhaled.
H319 Causes serious eye irritation.

Precautionary statement(s)

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
Rinse mouth.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed

3: Composition/information on ingredients

3.1 Substances

Chemical Identity	CAS Number	Content in percentage %
Acetonitrile	75-05-8	99 – 100%
Acrylonitrile	107-13-1	<0.1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume

4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). 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

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO_x)

Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel:

Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation.

Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®).

Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

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.

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.

Handle and store under inert gas.

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

8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Acetonitrile	75-05-8	WES-TWA	40 ppm 67 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Skin absorption		
		WES- STEL	60 ppm 101 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		Skin absorption		

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health Effect	Value
Workers	Inhalation	Acute local effects, Acute systemic effects	68 mg/m ³
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 ³
Consumers	Inhalation	Acute local effects	220 mg/m ³
Consumers	Inhalation	Acute systemic effects	22 mg/m ³
Consumers	Inhalation	Long-term systemic effects	4.8 mg/m ³

Predicted No Effect Concentration (PNEC)

Compartment	Value
Water	10 mg/l
Soil	2.41 mg/kg
Sea 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

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

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	Liquid
Form	:	Liquid
Color	:	Colorless
Odor	:	Ether-like odor
Odor threshold	:	No data available.
pH	:	No data available.
Melting point/freezing point	:	-46 °C
Initial boiling point and boiling range	:	81 °C
Flash Point	:	2 °C (Pensky-Martens Closed Cup)
Evaporation rate	:	5.79 (n-butyl acetate=1)
Flammability (solid, gas)	:	No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%)	:	16 %(V)
Flammability limit - lower (%)	:	4.4 %(V)
Explosive limit - upper (%)	:	No data available.
Explosive limit - lower (%)	:	No data available.
Vapor pressure	:	9.73 kPa (20 °C)
Vapor density	:	1.42
Density	:	0.79 g/ml (20 °C)
Relative density	:	0.79 (20 °C)
Solubility(ies)	:	
Solubility in water	:	Miscible
Solubility (other)	:	No data available.
Partition coefficient (n-octanol/water)	:	No data available.
Auto-ignition temperature	:	524 °C
Decomposition temperature	:	No data available.
Viscosity	:	No data available.

Other information

Liquid conductivity	:	0.7 µS/cm
Molecular weight	:	41.05 g/mol

10: Stability and reactivity

10.1 Reactivity

Vapours can form explosive mixtures with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Violent reaction with:

- Oxidising agent
- Reducing agent
- Acid
- Alkali metals

10.4 Conditions to avoid

- UV-radiation/sunlight
- Heat

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

10.5 Incompatible materials

Rubber articles

Plastic articles

10.6 Hazardous decomposition products

no data available

10.7 Additional information

no data available

11: Toxicological information

11.1 Information on toxicological effects

Acute effects

Acute oral toxicity:

LD50: < (Rat): 1,320 mg/kg

Acute dermal toxicity:

LD50: > (Rabbit) 2,000 mg/kg

Irritant and corrosive effects

Primary irritation to the skin:

not applicable

Irritation to eyes:

Causes serious eye irritation.

Irritation to respiratory tract:

not applicable

Respiratory or skin sensitisation

In case of skin contact: not sensitising

After inhalation: not sensitising

STOT-single exposure

not applicable

STOT-repeated exposure

not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No indication of human carcinogenicity.

Germ cell mutagenicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

Aspiration hazard

not applicable

Other adverse effects

no data available

Additional information

no data available

12: Ecological information

12.1 Ecotoxicity

Fish toxicity:

LC50: 1640 mg/l (96 h) - Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott 1984. Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*), Vol. 1. Center for Lake Superior Environmental Stud., Univ. of Wisconsin-Superior, Superior, WI :414

Daphnia toxicity:

LC50: 3600 mg/l (48 h) - Tong, Z., Z. Huailan, and J. Hongjun 1996.

Chronic Toxicity of Acrylonitrile and Acetonitrile to Daphnia

magna in 14-d and 21-d Toxicity Tests. Bull. Environ. Contam. Toxicol. 57(4):655-659

Algae toxicity:

no data available

Bacteria toxicity:

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: -0.34 (20 °C; IUCLID)

12.4 Mobility in soil:

no data available

12.5 Results of PBT/vPvB assessment

no data available

12.6 Other adverse effects

no data available

13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1648	1648	1648
14.2	UN Proper Shipping name	ACETONITRILE	ACETONITRILE	ACETONITRILE
14.3	Transport	3 (6.1B)	3 (6.1B)	3 (6.1B)

	Hazard Class			
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	No	No	no
14.6	Special precautions for user	none		
14.7	Incompatible materials	Rubber, Various Plastics		

Hazchem Code : 2YE

15: Regulatory information

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

National regulatory information

HSNO Approval Code: HSR001071

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: 6.1B

Approved Handler Cert.: Required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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