



Material Safety Data Sheet

Revision Date: 14-aug-2013

Version No.: 1

1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name/designation	Acetonitrile, Universal Chromatography Grade
Product No.	BDH83639 (VWR International)
Substance name	Acetonitrile
CAS No.	75-05-8
INDEX no.	608-001-00-3
other means of identification	Cyanomethane, Ethanenitrile, Methyl cyanide, Ethanoic acid nitrile

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

Relevant identified uses for laboratory use and chemical production.

Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

VWR International LLC

Street	100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P. O. Box 6660
Postal code/city	Radnor, PA 19087
country	United States of America
Telephone	+1-800-932-5000 toll-free within US/CA +1-610-386-1700
Telefax	+1-610-728-2103
E-mail	NAMSDS@vwr.com

Emergency telephone

Telephone	+1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA) +1-613-966-6666 (Canutec, 24 hrs/day, 7 days/week, Canada)
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2. Hazards identification

Classification of the substance or mixture

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

hazard classes and hazard categories	Hazard Statements	classification procedure	remark
Flammable liquid, category 2	H225		
Acute toxicity, category 4, oral	H302		
Acute toxicity, category 4, dermal	H312		
Acute toxicity, category 4, inhalation	H332		
Eye irritation, category 2	H319		

Label elements

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



Signal word

Danger

Hazard Statements

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

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309+P310	IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

Other hazards

Target Organs: Liver, Kidney, Central nervous system, Cardiovascular system., Blood

OSHA hazards: Flammable liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Irritant

WHMIS Classification

B2	Flammable liquid	Flammable liquid
D2B	Toxic Material Causing Other Toxic Effects	Moderate eye irritant

HMIS Classification

Health hazard:	3
Chronic health hazard:	*
Flammability:	3
Physical hazards:	0

NFPA Rating

Health hazard:	2
Fire:	3
Reactivity hazard:	0

SVHC

No

3. Composition/ Information on ingredients

Molecular formula	C ₂ H ₃ N
Molecular weight (g/mol)	41.05 g/mol
CAS No.	75-05-8
EC No	200-835-2
INDEX no.	608-001-00-3

4. First-aid measures**General information**

IF exposed: Immediately call a POISON CENTER or doctor/ physician. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

After inhalation

Immediately call a POISON CENTER or doctor/ physician. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Immediately call a POISON CENTER or doctor/ physician. Do not induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

Self-protection of the first aider

First aider: Pay attention to self-protection!

Information to physician:

Symptoms	No data available
Hazards	No data available
Treatment	No data available

5. Firefighting measures

Suitable extinguishing media

Water spray, ABC-powder, Carbon dioxide (CO₂), Nitrogen

Extinguishing media which must not be used for safety reasons:

no restriction

Special hazards arising from the substance or mixture

In case of fire may be liberated: Pyrolysis products, toxic

Advice for firefighters

DO NOT fight fire when fire reaches explosives. In case of fire: Wear self-contained breathing apparatus.

Additional information

Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Use water spray jet to protect personnel and to cool endangered containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Remove all sources of ignition. Use personal protection equipment. The accumulation in lowlying or closed rooms can cause increased danger of fire and explosion. The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration. In case of major fire and large quantities: Remove persons to safety.

Environmental precautions

Do not allow to enter into surface water or drains. Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Prevent spread over a wide area (e.g. by containment or oil barriers). Soak up inert absorbent and dispose as waste requiring special attention.

Additional information

Clear spills immediately.

7. Handling and storage

Precautions for safe handling

All work processes must always be designed so that the following is as low as possible: Inhalation. skin contact eye contact. Keep away from sources of ignition. - No smoking. Usual measures for fire prevention. Take precautionary measures against static discharge. Protect from moisture.

Conditions for safe storage, including any incompatibilities

storage temperature

15-25°C

Keep container tightly closed in a cool, well-ventilated place. Keep/Store away from combustible materials.

Specific end use(s)

No data available

8. Exposure controls / Personal protection

Control parameters

ACGIH – 20 ppm TWA

NIOSH – 20 ppm TWA; 34 mg/m³ TWA; 500 ppm IDLH

OSHA PELs – 40 ppm TWA; TWA 70 mg/m³ (8hrs)

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protective equipment

Wear suitable protective clothing. When handling with chemical substances, protective, NIOSH approved clothing must be worn.

Eye / face protection

Wear safety glasses with side protection.

Skin protection

When handling with chemical substances, chemical resistant, impermeous protective gloves should be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Protective clothing

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

9. Physical and chemical properties

Information on basic physical and chemical properties

(a) Appearance

Physical state

liquid

Colour

colourless

(b) Odour

No data available

(c) Odour threshold

No data available

Safety relevant basic data

(d) pH

No data available

(e) Melting point/freezing point

-45.7°C

(f) Initial boiling point and boiling range	81.6°C (1013 hPa)
(g) Flash point	2°C (closed cup)
(h) Evaporation rate	No data available
(i) Flammability (solid, gas)	Highly flammable liquid and vapour.
(j) Upper/lower flammability or explosive limits	
Lower explosion limit (Vol-%)	3
Upper explosion limit (Vol-%)	17
(k) Vapour pressure	97 hPa (20°C)
(l) Vapour density	1.42 (20°C)
(m) Relative density	0.782 g/cm ³ (20°C)
(n) Solubility(ies)	
Water solubility (g/l)	soluble
at °C:	20
Soluble (g/l) in	No data available
(o) Partition coefficient: n-octanol/water	-0.34 (20°C)
(p) Auto-ignition temperature	524°C
(q) Decomposition temperature	No data available
(r) Viscosity	
Kinematic viscosity	No data available
Dynamic viscosity	0.316 mPa*s (25°C)
(s) Explosive properties	not applicable
(t) Oxidising properties	not applicable

9.2 Other information

Bulk density	No data available
refraction index	1.34604 (589 nm, 20°C)
dissociation constant	No data available
Surface tension	No data available
Henry constant	No data available

10. Stability and reactivity

Reactivity

Vapours can form explosive mixtures with air.

Chemical stability

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

Possibility of hazardous reactions

Violent reaction with: Oxidising agent Reducing agent Acid. Alkali metals

Conditions to avoid

UV-radiation/sunlight Heating 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).

Incompatible materials

Rubber articles, Plastic articles

Hazardous decomposition products
No data available

Additional information
No data available

11. Toxicological information

Information on toxicological effects

Acute effects

Acute oral toxicity

Effective dose	LD50: 2730 to 3800 mg/kg
species:	rat

Exposure time

remark

source	Merck KGaA
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Acute dermal toxicity

Effective dose	LD50: 988 mg/kg
species:	rabbit

Exposure time

remark

source	IUCLID
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Acute inhalation toxicity

Effective dose	LC50: 27.3 mg/l
species:	rat

Exposure time	4h
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remark

source

Irritant and corrosive effects

Primary irritation to the skin

Exposure time

species:

Result

Irritation to eyes

Exposure time

species:

Result

Irritation to respiratory tract

Exposure time

species:

Result

Sensitization

In case of skin contact

Not sensitizing.

After inhalation

Not sensitizing.

Specific target organ toxicity (single exposure)

Not relevant

Specific target organ toxicity (repeated exposure)

Not relevant

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No indication of human carcinogenicity.

Germ cell mutagenicity/Genotoxicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

Aspiration hazard

Not relevant

Other adverse effects

No data available

Additional information

No data available

12. Ecological information

Ecotoxicity

Acute (short-term) fish toxicity

LC50: No data available

EC50

species:

Exposure time

Chronic (long-term) fish toxicity

LC50: No data available

EC50

species:

Exposure time

Acute (short-term) daphnia toxicity

LC50: No data available

EC50

species:

Exposure time

Chronic (long-term) daphnia toxicity

LC50: No data available

EC50

species:

Exposure time

Acute (short-term) algae toxicity

LC50: No data available

EC50

species:

Exposure time

Chronic (long-term) algae toxicity

LC50: No data available

EC50

species:

Exposure time

Persistence and degradability

No data available

Bioaccumulative potential

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

Mobility in soil

No data available

Results of PBT assessment

No data available

Other adverse effects
No data available

13. Disposal considerations

Waste treatment methods

Appropriate disposal / Product

Dispose in accordance with applicable federal, state and local regulations.

Waste code product	No data available
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Appropriate disposal / Package

Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself.

Additional information
No data available

14. Transport information

Land transport (DOT (US))

UN-No.	1648
Proper Shipping Name	ACETONITRILE
Class(es)	3
Classification code:	F1
Packing group	II
Hazard label(s)	3
Marine pollutant	No

Sea transport (IMDG)

UN-No.	1648
Proper Shipping Name	ACETONITRILE
Class(es)	3
Classification code:	F1

Packing group	II
Marine pollutant	No
Segregation group	

Air transport (ICAO-TI / IATA-DGR)

UN-No.	1648
Proper Shipping Name	ACETONITRILE
Class(es)	3
Classification code:	F1
Packing group	II

Additional information

No data available

15. Regulatory information

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

TSCA 8b Inventory: Listed

DSL/NDSL: Listed

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA): This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the CFR, Part 372. Threshold Values % 1.0

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313: Acetonitrile - CAS-No. 75-05-8 - Revision Date 2007-07-01

SARA 311/312 Hazards

Acute Health Hazard - Yes; Chronic Health Hazard - No; Fire Hazard - Yes;
Sudden Release of Pressure Hazard - No; Reactive Hazard - No.

Clean Water Act: This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA: Hazardous Substance (RQs): 5,000 lb

Massachusetts Right To Know Components

Acetonitrile - CAS-No. 75-05-8 - Revision Date 2007-07-01

Pennsylvania Right To Know Components

Acetonitrile - CAS-No. 75-05-8 - Revision Date 2007-07-01

New Jersey Right To Know Components

Acetonitrile - CAS-No. 75-05-8 - Revision Date 2007-07-01

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical Safety Assessment

No data available

16. Other information**16.1 Relevant H-phrases (Number and full text)**

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

WHMIS Classification

B2	Flammable liquid	Flammable liquid
D2B	Toxic Material Causing Other Toxic Effects	Moderate eye irritant

OSHA Hazards

Flammable liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Irritant

Canada WHMIS Hazard Class: B2 Flammable liquid, D2B Toxic materials**HMIS Classification****NFPA Rating**

Health hazard: 3
Chronic health hazard: *
Flammability: 3
Physical hazards: 0

Health hazard: 2
Fire: 3
Reactivity hazard: 0

SVHC

No

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.