SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.0
Prepared on : 14.03.2026
Revised on : -

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

1.1 Product identifiers

Product name	Acetonitrile
Product Number	PSR50337
Brand	PureSynth research chemicals
CAS No.	75-05-8

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company **PureSynth Research Chemicals GmbH**

64683 Einhausen Marie-Curie-StraBe. 3, Germany

1.4 Emergency telephone number

Worldwide Helpline No.: 1800-8908-260

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: Highly flammable liquid and vapour.
Acute toxicity, (Category 4)	H302: Harmful if swallowed.
Acute toxicity, (Category 4)	H332: Harmful if inhaled.
Acute toxicity, (Category 4)	H312: Harmful in contact with skin.
Eye irritation, (Category 2)	H319: Causes serious eye irritation.

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.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition / information on ingredients

3.1 Substances

Common names & Synonyms	Mol. formula	CAS number
Methyl cyanide ACN	C_2H_3N	75-05-8
Component	**Classification**	**Concentration**
Acetonitrile	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2; H225, H302, H332, H312, H319	<= 100 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Show this 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.
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
Indication of any immediate medical attention and special treatment needed	No data available

SECTION 5: Firefighting measures

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.
Special hazards arising from the substance or mixture	Carbon oxides Nitrogen oxides (NOx) Combustible. Pay attention to flashback. Vapours 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.
Advice for fire-fighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Further information	Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapours, 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.
Environmental precautions	Do not let product enter drains. Risk of explosion.
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. Dispose of properly. Clean up affected area.
Reference to other sections	For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling	**Advice on safe handling** Avoid contact with skin and eyes. Avoid inhalation of vapour 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.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Storage class (TRGS 510): 3: Flammable liquids
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 Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

Application Area	Exposure routes	Health effect	Value

Workers	Inhalation	Acute local effects, Acute systemic effects	68 mg/m3
Workers	Skin contact	Long-term systemic effects	32.2mg/kg BW/d
Workers	Inhalation	Long-term local effects, Long-term systemic effects	68 mg/m3
Consumers	Inhalation	Acute local effects	220 mg/m3
Consumers	Inhalation	Acute systemic effects	22 mg/m3
Consumers	Inhalation	Long-term systemic effects	4.8 mg/m3

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/l

8.2 Exposure controls

Appropriate engineering controls No data available

Personal protective equipment:

Eye / face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves
Full contact
Material: butyl-rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves
Splash contact
Material: Chloroprene
Minimum layer thickness: 0.65 mm
Break through time: 10 min

Body protection
Flame retardant antistatic protective clothing.

Respiratory protection
Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure
Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

Appearance	Form: Liquid Colour: Colourless
Odour	ether-like
pH - Value	No data available
Density	0.786 g/cm3 at 25 °C - lit.
Boiling Point	81 - 82 °C - lit.
Melting Point	-48 °C - lit.
Solubility in water	1000 g/l at 25 °C completely soluble
Flash point	2.0 °C - closed cup
Vapour pressure	98.64 hPa at 20 °C
Auto -ignition temperature	No data available
Vapour density	No data available
Flammability (solid, gas)	No data available
Evaporation rate	No data available
Partition coefficient: n- octanol / water	log Pow: -0.54 at 25 °C - Bioaccumulation is not expected.
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 0.350 Pas at 20.00 °C
Explosive properties	Not classified as explosive
Upper / lower flammability or explosive limits	Upper explosion limit: 16 %(V) Lower explosion limit: 4.4 %(V)
Oxidizing properties	none

Other safety information: No data available

SECTION 10: Stability and reactivity

Reactivity	Vapours may form explosive mixture with air.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions	Violent reactions possible with: Strong bases strong reducing agents Risk of explosion with: nitrates perchlorates perchloric acid conc. sulfuric acid with Heat Risk of ignition or formation of inflammable gases or vapours with: Oxidizing agents Nitric acid nitrogen dioxide with Catalyst Generates dangerous gases or fumes in contact with: Acids
Condition to avoid	Warming.
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	LD50 Oral - Mouse - male and female - 617 mg/kg (OECD Test Guideline 401) Acute toxicity Estimate Oral - 617 mg/kg (ATE value derived from LD50/LC50 value) LC50 Inhalation - Mouse - male and female - 4 h – 6.022 mg/l - vapour (OECD Test Guideline 403) Acute toxicity estimate Dermal - 1500 mg/kg (Expert judgement) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Causes serious eye irritation. (OECD Test Guideline 405) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Respiratory or skin sensitization	Buehler Test - Guinea pig Result: negative (OECD Test Guideline 406)
Germ cell mutagenicity	Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Result: negative Remarks: (ECHA) Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: US-EPA Result: negative Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Result: Positive results were obtained in some in vitro tests. Remarks: (National Toxicology Program) Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: Metabolic activation Result: negative Remarks: Sister chromatid exchange Test system: Saccharomyces cerevisiae Metabolic activation: without metabolic activation Result: positive Remarks: Cytogenetic analysis (ECHA) Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Micronucleus test Species: Mouse Application Route: Intraperitoneal Method: OECD Test Guideline 474

	Result: negative
Carcinogenicity	No evidence of carcinogenicity in animal studies.
Reproductive toxicity	Animal testing did not show any effects on fertility.
Specific target organ toxicity - single exposure	The substance or mixture is not classified as specific target organ toxicant, single exposure
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
Additional Information	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. 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 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 1640 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	No data available
Toxicity to algae	static test NOEC - Phaeodactylum tricornutum - 400 mg/l - 72 h (ISO 10253) static test ErC50 - Phaeodactylum tricornutum - 9696 mg/l - 72 h (ISO 10253)
Toxicity to bacteria	No data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	No data available
Toxicity to fish (Chronic toxicity)	flow-through test NOEC - Oryzias latipes - 102 mg/l - 21 d (OECD Test Guideline 204)
Persistence and degradability	Biodegradability Result: 70 % - Readily biodegradable. (OECD Test Guideline 310)
Bioaccumulation	No bioaccumulation is to be expected (log Pow <= 4).
Mobility in soil	Not expected to adsorb on soil.
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.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other adverse effects	Avoid release to the environment. Stability in water: DT50 - > 9.999 d pH 7 at 25 °C Remarks: (calculated)Hydrolyses slowly.

SECTION 13: Disposal considerations

Waste treatment methods No data available

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	1648	ACETONITRILE	3	II	no
IMDG	1648	ACETONITRILE	3	II	no
IATA	1648	Acetonitrile	3	II	no

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

National legislation Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances	P5c	FLAMMABLE LIQUIDS

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

The information in this SDS 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. The user must be determined suitability of this information for his application.