

MATERIAL SAFETY DATA SHEET
4-PENTENENITRILE 98%

Section 1 - Chemical Product and Company Identification

MSDS Name:	4-PENTENENITRILE 98%
Catalog Numbers:	9.145
Synonyms:	1-Cyano-3-butene, Allylacetonitrile
Company Identification:	Tau-Chem, Ltd. Nobelova 34, P.O. Box 29 836 05 Bratislava, Slovak Republic Phone: +421 2 44 452 252 Fax: +421 2 44 457 645
Relevant identified uses of substance or mixture and uses advised against	
Identified uses	Laboratory chemicals, Manufacture of substances
POISON CENTER:	National Toxicological Information Centre Limbová 5, 833 05 Bratislava,
Emergency Numbers Slovakia:	Phone: +421 2 54 774 166 Fax: +421 2 54 774 605

Section 2 - Hazards Identification

Classification of the substance or mixture

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


Acute Toxicity, Inhalation (Category 4)
 Acute Toxicity, Dermal (Category 4)
 Acute Toxicity, Oral (Category 4)
 Flammable liquid (Category 3)

According to European Directive 67/548/EEC as amended

Harmful by inhalation, contact with skin and if swallowed.

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

Label elements

Pictogram	
Signal word	Warning
Hazard statement(s)	
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H226	Flammable liquid and vapor.
Precautionary statement(s)	
P280	Wear protective gloves/protective clothing.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all

P301+P312 contaminated clothing. Rinse skin with water/shower.
 IF SWALLOWED: Call a POISON CENTER or doctor/physician 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.

Hazard symbol(s)

According to European Directive 67/548/EEC as amended



Xn Harmful.
 F Flammable liquid.
 R-phrases(s)
 R10 Flammable.
 R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

S-phrases(s)
 S23 Do not breathe gas/fumes/vapor/spray.
 S24/25 Avoid contact with skin and eyes.
 S36/37 Wear suitable protective clothing and eye/face protection.
 Other hazards None.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
592-51-8	4-PENTENENITRILE	98	209-762-0

Classification Acute Tox. 4;
 H302, H312;H332, H226
 F; Xn, R10, R20/21/22

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4 – 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. Consult a physician.

In case eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for fire-fighters:	Wear self contained apparatus breathing apparatus for fire fighting if necessary.

Section 6 – Accidental Release Measures

Personal precautions:	Use personal protective equipment. Avoid breathing dust. Ensure adequate ventilation.
Environmental precautions:	Do not let product enter drains.
Methods and materials for containment and cleaning up	Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Keep in suitable, closed containers for disposal.

Section 7 – Handling and Storage

Precautions for safe handling:	Avoid contact with skin and eyes. Avoid breathing dust. Avoid dust formation. Ensure adequate ventilation.
Conditions for safe storage:	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section 8 – Exposure Controls, Personal Protection

Personal protective equipment:	
Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hand protection	The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.
Eye protection:	Face shield and safety glasses.
Skin and body protection:	Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9 – Physical and Chemical Properties

Appearance

Form:	Liquid
Color:	Clear to slightly yellowish
Safety data:	
pH	Not available
Melting Point:	Not available
Boiling Point:	147 – 148 °C at 760 mm Hg
Flash Point:	Not available
Ignition temperature:	Not available
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
Solubility in water:	Insoluble
Density:	0.825 g/cm ³
Molecular Formula:	C ₅ H ₇ N
Molecular Weight:	81.12 g/mol

Section 10 – Stability and Reactivity

Chemical Stability:	Stable under recommended storage conditions.
Conditions to Avoid:	Heat.
Materials to avoid:	Strong oxidizing agents, strong basis, strong acids.
Hazardous Decomposition Products	Hazardous decomposition products under fire conditions. – Carbon oxides, Nitrogen oxides (NO _x), Hydrogen cyanide.

Section 11 – Toxicological Information

Acute toxicity	No data available
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.
Germ cell mutagenicity	No data available
Carcinogenicity:	
IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.	
Reproductive toxicity:	No data available
Specific target organ toxicity – single exposure	Inhalation – May cause respiratory irritation.
Specific target organ toxicity – repeated exposure	No data available
Aspiration hazard	No data available
Potential health effect:	
Inhalation	Harmful if inhaled.

Ingestion Causes respiratory tract irritation.
Skin Harmful if swallowed.
Eyes Harmful if absorbed through skin. Causes skin irritation.
 Causes eye irritation

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: Data not available.

Section 12 – Ecological Information

Toxicity: No data available
Persistence and degradability No data available
Bioaccumulative potential No data available
Mobility in soil No data available
PBT and vPvB assessment No data available
Other adverse effects No data available

Section 13 – Disposal Considerations

Product Observe all federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging Dispose of as unused product.

Section 14 – Transport Information

	IATA	IMDG	RID/ADR
Shipping Name:	NITRILES, TOXIC, FLAMMABLE, N.O.S.	NITRILES, TOXIC, FLAMMABLE, N.O.S.	NITRILES, TOXIC, FLAMMABLE, N.O.S.
Hazard Class:	6.1 (3)	6.1 (3)	6.1 (3)
UN Number:	3275	3275	3275
Packing Group:	II	II	II
		EMS-No: F-E; S-D	
		Marine pollutant: No	

Section 15 – Regulatory Information

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

Section 16 – Other Information

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Acute Tox.	Acute toxicity.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H226	Flammable liquid and vapor.
F	Flammable.
Xn	Harmful.
R10	Flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.

MSDS Creation Date: 28/3/2007

Revision #1 Date: 15/07/2010

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

Disclaimer:

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.