

MATERIAL SAFETY DATA SHEET
2-FURONITRILE 99%

Section 1 - Chemical Product and Company Identification

MSDS Name:	2-FURONITRILE 99%
Catalog Numbers:	4.60
Synonyms:	2-Cyanofuran
Company Identification:	Tau-Chem, Ltd. Nobelova 34, P.O. Box 29 836 05 Bratislava, Slovak Republic Phone: +421 2 4445 2252 Fax: +421 2 4445 7645
POISON CENTER:	National Toxicological Information Centre Limbová 5, 833 05 Bratislava, Slovakia
Emergency Numbers:	Phone: +421 2 54 774 166 Fax: +421 2 54 774 605

Section 2 - Hazards Identification

Classification of the substance or mixture

According to Regulation (EC) No 1272/2008

Flammable liquids (Category 3)

Acute toxicity (Category 4)

Serious eye damage (Category 1)

According to European Directive 67/548/EEC as amended.

Flammable Liquid and vapours. Harmful by inhalation, in contact with skin and if swallowed.

Risk of serious damage to eyes.

Label elements



Signal word	Warning
Hazard statement(s)	
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
Precautionary statement(s)	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P261	Avoid breathing dust/ fume/gas/mist/vapor/spray.
P280	Wear protective gloves/eye protection/face protection.

P305+P351+P338	IF <u>IN EYES</u> : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352	IF ON SKIN: Gently wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation (to be specified).
Hazard symbol(s)	
Xn	Harmful
R-phrases(s)	
R10	Flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R41	Risk of serious damage to eyes.
S-phrases(s)	
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
Other hazards	None.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
617-90-3	2-FURONITRILE	99	210-537-4
Classification	Flam. Liq. 3; Acute Tox. 4; Eye Dam. 1 H226; H302; H312; H318; H332; Xn, R10; R20/21/22-R41		

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.
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	Use sand, alcohol-resistant foam, dry chemical or carbon dioxide.
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media: DO NOT USE WATER.
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 of vapours or mist. Ensure adequate ventilation.
Environmental precautions: Do not let product enter drains.
Methods and materials for containment and cleaning up: Absorb with liquid binding material (sand, diatomite, acid binders, universal binders, sawdust), using the appropriate protective equipment. Place into a suitable clean, dry, closed container for disposal. Ensure adequate ventilation.

Section 7 - Handling and Storage

Precautions for safe handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Avoid prolonged or repeated exposure. Keep away from sources of ignition – No smoking. Take measures to prevent the build of electrostatic charge.
Conditions for safe storage: 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. Store in a cool place.

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: Safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards as NIOSH (US) or EN 166 (EU)
Skin and body protection: Impervious 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
Colour:	Yellow - orange
Smell:	Not available
Safety data:	
pH	Not available
Melting point:	Not available
Boiling Point:	146 - 148 °C / 760 mm Hg
Flash Point:	35 °C – closed cup
Ignition temperature:	Not available
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
Solubility in water:	Slightly soluble
Density at 25°C:	1.064 g/cm ³
Refractive Index:	1.478 – 1.480
Molecular Formula:	C ₅ H ₃ NO
Molecular Weight:	93.08 g/mol

Section 10 - Stability and Reactivity

Chemical Stability:	Stabile under recommended storage conditions.
Conditions to avoid:	Heat, flames and sparks.
Materials to avoid:	Strong oxidizing agents, strong acids, strong bases, strong reducing agents.
Hazardous Decomposition Products	Hazardous decomposition products under fire conditions. – hydrogen cyanide(g), carbon monoxide, carbon dioxide, nitrogen oxides.

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	No data available
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 – Harmful to mucous membranes and respiratory system.
Specific target organ toxicity – repeated exposure	No data available
Aspiration hazard	No data available
Potential health effect:	

Inhalation	Harmful if inhaled. May cause respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin.
Eyes	Causes eye burns.

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: No data 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.
Contaminated packaging	Dispose of as unused product.

Section 14 - Transport Information

	IATA	IMDG	RID/ADR
Shipping Name:	FLAMMABLE, LIQUID, N.O.S.	FLAMMABLE, LIQUID, N.O.S.	FLAMMABLE, LIQUID, N.O.S.
Hazard Class:	3	3	3
UN Number:	1993	1993	1993
Packing Group:	III	III	III
		EMS-No: F-E, S-E	
		Marine pollutant: No	

Section 15 - Regulatory Information

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

Section 16 - Other Information

Flam Liq.	Flammable liquid.
Acute Tox.	Acute toxicity.
Eye Dam.	Serious eye damage.
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H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
Xn	Harmful.
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R41	Risk of serious damage to eyes.

MSDS Creation Date: 12/4/2007

Revision #1:16/12/2010

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.