

MATERIAL SAFETY DATA SHEET
3-FURONITRILE 97%

Section 1 - Chemical Product and Company Identification

MSDS Name: 3-FURONITRILE 97%
Catalog Numbers: 4.66
Synonyms: 3-Furancarbonitrile, 3-Cyanofuran
 Relevant identified uses of substance or mixture and uses advised against
 Identified uses Laboratory chemicals, Manufacture of substances

Company Identification: Tau-Chem, Ltd.
 Nobelova 34, P.O. Box 29
 836 05 Bratislava, Slovak Republic
 Phone: +421 2 44 452 252 Fax: +421 244 457 645

POISON CENTER: National Toxicological Information Centre
 Limbová 5, 833 05 Bratislava,

Emergency Numbers Slovakia: Phone: +42 2 54 774 166 Fax: +42 2 54 774 605

Section 2 - Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable solids (Category 2)
 Acute toxicity, Oral (Category 4)
 Acute toxicity, Inhalation (Category 4)
 Acute toxicity, Dermal (Category 4)
 Skin irritation, (Category 2)
 Serious eye damage (Category 1)
 Specific target organ toxicity – single exposure (Category 3)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Risk of serious damage to eyes. Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes.

Label elements

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



Pictogram	
Signal word	Danger
Hazard statement(s)	
H228	Flammable solid
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.

H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
Precautionary statement(s)	
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261	Avoid breathing dust/foam/mist/spray.
P280	Wear protective gloves/protective clothing.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container to in accordance with local/regional/national/international regulation.

Hazard symbol(s)

According to European Directive 67/548/EEC as amended



Hazard symbol(s)

R-phrase(s)

R11

Highly flammable.

R21/22/23

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

R37/38

Irritating to respiratory system and skin.

R41

Risk of serious damage to eyes.

S-phrase(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#
30078-65-0	3-FURONITRILE	97	213-452-0

Classification Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; H228; H302; H312; H315; H318; H332; H335
F; Xn, R11-R21/22/23 - R37/38- 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. 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. Depending on the intensity and duration of exposure, effects may vary from mild irritation to severe destruction of tissue.

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. Depending on the intensity and duration of exposure, effects may vary from mild irritant, prolonged or repeated exposure can cause: Damage to the eyes.
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.
Further information:	Use water spray to cool unopened containers.

Section 6 – Accidental Release Measures

Personal precautions:	Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up	Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

Section 7 – Handling and Storage

Precautions for safe handling:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition -No smoking. Take measures to prevent the build up of electrostatic charge.
Conditions for safe storage:	Store in cool place. Keep container tightly closed in a dry and well-ventilated 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:	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:	Solid
Color:	Colourless to white (darkens on storage)

Safety data:

pH	Not available
Melting Point:	28 - 32 °C
Boiling Point:	151 °C at 1.013 hPa
Flash Point:	48.9 °C - closed cup
Ignition temperature:	Not available
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
Solubility in water:	Not available
Vapour density:	3,21 - (Air = 1.0)
Relative Density:	1,073 g/cm ³
Partition coefficient: n-octanol/water	log Pow: 0,85
Refractive Index:	Not available
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. Extremes of temperature and direct sunlight.
Materials to avoid:	Strong oxidizing agents.
Hazardous Decomposition Products	Hazardous decomposition products under fire conditions. – Carbon monoxide, carbon dioxide, nitrogen oxides.

Section 11 – Toxicological Information

Acute toxicity	LD50 Oral - rat - 395,0 mg/kg
-----------------------	-------------------------------

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. The preceding data, or interpretation of data, was determined using Quantitative Structure Activity Relationship (QSAR) modelling.
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. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. Causes skin irritation.
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: 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	Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. 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 SOLID, ORGANIC, N.O.S.	FLAMMABLE SOLID, ORGANIC, N.O.S.	FLAMMABLE SOLID, ORGANIC, N.O.S.
Hazard Class:	4.1	4.1	4.1
UN Number:	1325	1325	1325
Packing Group:	III	III	III
		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-phrases(s) mentioned in Section 3

Acute Tox.	Acute toxicity.
Skin Irrit.	Skin irritation.
Eye Dam.	Eye damage.
STOT SE	Specific target organ toxicity – single exposure.
H228	Flammable solid
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
F	Flammable.
Xn	Harmful.
R11	Highly flammable.
R21/22/23	Harmful by inhalation, in contact with skin and if swallowed.
R37/38	Irritating to respiratory system and skin.
R41	Risk of serious damage to eyes.
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.

MSDS Creation Date: 12/2/2009

Revision #1 Date : 04/05/2011

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.