

MATERIAL SAFETY DATA SHEET
4-FLUOROBENZYL ISOCYANATE 98%

Section 1 - Chemical Product and Company Identification

MSDS Name:	4-FLUOROBENZYL ISOCYANATE 98%
Catalog Numbers:	11.103
Synonyms:	1-fluoro-4-(isocyanatomethyl)benzene
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: +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

Acute toxicity, Inhalation (Category 4)
 Acute toxicity, Dermal (Category 4)
 Acute toxicity, Oral (Category 4)
 Skin irritation, (Category 2)
 Eye irritation, (Category 2)
 Specific target organ toxicity – single exposure (Category 3)

Classification according to Regulation (EC) No 1272/2008

Harmful by inhalation, in contact with skin and if swallowed.
 Irritating to eyes, respiratory system and skin.

Labeling 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.

H315


Causes skin irritation.

H319

Causes serious eyes irritation.

H332	Harmful if inhaled.
H335	May cause respiratory irritation.
Precautionary statement(s)	
P261	Avoid breathing dust/ fume/gas/mist/vapor/spray.
P280	Wear protective gloves/protective clothing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352	IF ON <u>SKIN</u> : Wash with plenty of soap and water.
P332+P313	If <u>skin irritation</u> occurs: Get medical advice/ attention.

According to European Directive 67/548/EEC as amended

Hazard symbol(s)	
Xn	Harmful.
R-phrase(s)	
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.
S-phrase(s)	
S26	In case of contact with eyes rinse immediately with plenty of water and seek for medical advice.
S36/37/39	Wear suitable protective clothing, glove and eye/face protection.
Other hazards	Lachrymator.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
132740-43-3	4-FLUOROBENZYL ISOCYANATE	98	-

Classification Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H302, H312, H315, H319, H332, H335, Xn, R20/21/22 - R36/37/38

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 vapour, mist or gas. Ensure adequate ventilation.

Environmental precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7 - Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition –No smoking. Take measures to prevent to built up of electrostatic charge.

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. Recommended storage temperature: -20°C

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: Colourless

Safety data:

pH Not available
Melting Point: Not available
Boiling Point: 47 °C/ 0.10 mm
Flash Point: 93°C – closed cup
Ignition temperature: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Solubility in water: Not available
Refractive Index: 1.5040- 1.5060 at 20°C
Density: 1.186 g/cm³ at 25°C
Molecular Formula: C₈H₆FNO
Molecular Weight: 151.15 g/mol

Section 10 – Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions.
Conditions to Avoid: Avoid moisture.
Materials to avoid: Strong oxidizing agents.
Hazardous Decomposition Products: Hazardous decomposition products under fire conditions.
– Carbon oxides, Nitrogen oxides (NO_x), Hydrogen fluoride.

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 – No data available

repeated exposure**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 irritation**Signs and Symptoms of Exposure**

Burning sensation, Cough, Wheezing, Laryngitis, Shortness of breath, Headache, Nausea, Vomiting. 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 This combustible material may be burned in a chemical incinerator equipped with an afterburner and a scrubber. 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:	ISOCYANATE, TOXIC, N.O.S.	ISOCYANATE, TOXIC, N.O.S.	ISOCYANATE, TOXIC, N.O.S.
Hazard Class:	6.1	6.1	6.1
UN Number:	2206	2206	2206
Packing Group:	III	III	III
		EMS-No: F-A; S-A 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.
Eye Irrit.	Eye irritation.
Skin Irrit.	Skin Irritation.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eyes irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
Xn	Harmful.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.

MSDS Creation Date: 18/12/2007

Revision #1: 17/06/2010

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.