

MATERIAL SAFETY DATA SHEET
TRICHLOROACETYL ISOCYANATE 97%

Section 1 - Chemical Product and Company Identification

MSDS Name:	TRICHLOROACETYL ISOCYANATE 97%
Catalog Numbers:	9.148
Synonyms:	
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

Classification according to Regulation (EC) No 1272/2008


Acute toxicity, Oral (Category 3)
 Acute toxicity, Dermal (Category 3)
 Respiratory sensitization (Category 1)
 Skin corrosion (Category 1B)

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

Reacts violently with water. Toxic by inhalation and in contact with skin. Causes burns. May cause sensitization by inhalation.

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

Label elements

Pictogram	
Signal word	Danger
Hazard statement(s)	
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Precautionary statement(s)	

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
Supplemental Hazard information (EU)
EUH014 Reacts violently with water.
P410 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

Hazard symbol(s)

According to European Directive 67/548/EEC as amended



T Toxic
C Corrosive.

R-phrases(s)

R14 Reacts violently with water.
R23/24 Toxic by inhalation and in contact with skin.
R34 Causes burns.
R42 May cause sensitization by inhalation.

S-phrases(s)

S23 Do not breathe gas/fumes/vapor/spray
S26 In case of contact with eyes rinse immediately with plenty of water and seek for medical advice.
S36/37/38 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label, where possible)

Other hazards Lachrymator.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
3019-71-4	TRICHLOROACETYL ISOCYANATE	97	221-165-7

Classification Acute Tox. 3; Resp. Sens. 1; Skin Corr. 1B; Eye Dam. 1
H311;H314;H331;H334; EUH014
C, R14-R23/25-R34-R42

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:	Take off contaminated clothing and shoes immediately. 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.
Most important symptoms and effects, both acute and delayed	Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

Section 5 - Fire Fighting Measures

Suitable extinguishing media:	Dry powder, Carbon dioxide (CO ₂) Do not use water extinguishers.
Special protective equipment for fire-fighters:	Wear self contained apparatus breathing apparatus for fire fighting if necessary.

Section 6 - Accidental Release Measures

Personal precautions:	Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
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:	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). Do not flush with water. 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 vapour or mist. 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. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Never allow product to get in contact with water during storage. Recommended storage temperature: 2 - 8 °C Store under inert gas. Hydrolyses readily.

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).
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Eye protection:	Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Body protection:	Complete suit protecting against chemicals, Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
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 to slightly yellow
Odour:	Not available

Safety data:

pH	Not available
Melting Point:	Not available
Boiling Point:	80 - 85 °C / 20 mm Hg
Flash Point:	66 °C – closed cup
Ignition temperature:	Not available
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
Solubility in water:	Decomposes
Specific density:	1.590 g/cm ³
Refractive Index:	1.4798 – 1.4820
Molecular Formula:	C ₃ Cl ₃ NO ₂
Molecular Weight:	188.40 g/mol

Section 10 - Stability and Reactivity

Chemical Stability:	Stabile under recommended storage conditions.
Possibility of hazardous reactions	Reacts violently with water.
Conditions to Avoid:	Heat, flames and sparks. Exposure to moisture.
Materials to avoid:	Acids, Strong oxidizing agents

Hazardous Decomposition Products Hazardous decomposition products under fire conditions
– Carbon oxides, hydrogen chloride (g), hydrogen cyanide(g), nitrogen oxides.

Section 11 - Toxicological Information

Acute toxicity No data available
Skin corrosion/irritation Corrosive effects.
Serious eye damage/eye irritation No data available
Respiratory or skin sensitization May cause allergic respiratory reaction.
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 – Cause respiratory irritation.
Specific target organ toxicity – repeated exposure No data available
Aspiration hazard No data available
Potential health effect:
Inhalation Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion May be harmful if swallowed. Causes burns.
Skin Toxic if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema. 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 This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed

Contaminated packaging professional waste disposal service to dispose of this material.
Dispose of as unused product.

Section 14 - Transport Information

	IATA	IMDG	RID/ADR
Shipping Name:	ISOCYANATES, TOXIC, N.O.S.	ISOCYANATES, TOXIC, N.O.S.	ISOCYANATES, TOXIC, N.O.S.
Hazard Class:	6.1	6.1	6.1
UN Number:	2206	2206	2206
Packing Group:	III	III	III
		Marine Pollutant: No	
		EMS No: F-A; S-B	

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.
Resp. sens.	Respiratory sensitization.
Skin Corr.	Skin corrosion.
Eye Dam.	Serious eye damage.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
T	Toxic.
C	Corrosive.
R14	Reacts violently with water.
R23/24	Toxic by inhalation and in contact with skin.
R34	Causes burns.
R42	May cause sensitization by inhalation.

MSDS Creation Date: 27/11/2007

Revision #1: 09/11/2011

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.