

SAFETY DATA SHEET  
ETHYL AZODICARBOXYLATE 97%

**Section 1 - Chemical Product and Company Identification**

**1.1 Product identifiers**

Product name: ETHYL AZODICARBOXYLATE 97%  
CAS-No. 1972-28-7  
EINECS-No. 217-821-7  
INDEX-No.  
Catalog Numbers: 99.77  
**Synonyms:** DIETHYL AZODIFORMATE, Diazenedicarboxylic acid,  
Ethyl (NE)-N-ethoxycarbonyliminocarbamate, DEAD

**1.2 Relevant identified uses of substance or mixture and uses advised against**

Identified uses Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company: TAU-CHEM, Ltd.  
Nobelova 34, P.O. Box 29  
836 05 Bratislava, Slovak Republic  
Telephone +421 2 44 452 252  
Fax +421 2 44 457 645

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

**1.4 Emergency telephone:** +421 2 54 774 166

**Section 2 - Hazards Identification**

**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

According to Regulation (EC) No 1272/2008

Acute Toxicity, Oral (Category 4)

Skin irritation, (Category 2)



Eye irritation,(Category 2)

Specific target organ toxicity – single exposure (Category 3)

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

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

**2.2 Label elements****Labeling according to Regulation (EC) No 1272/2008 [CLP]**

Pictogram	
Signal word	Warning
Hazard statement(s)	
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Precautionary statement(s)	
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.
Hazard symbol(s)	
<b>According to European Directive 67/548/EEC as amended</b>	
Hazard symbol(s)	
Xn	Harmful.
R-phrases(s)	
R5	Heating may cause an explosion.
R21/22	Harmful in contact with skin and if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.
S-phrases(s)	
S15	Keep away from heat.
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.
S47	
<b>2.3 Other hazards</b>	None.

### Section 3 - Composition, Information on Ingredients

#### 3.1 Substances

#### 3.2 Mixtures

CAS#	Chemical Name:	%	EINECS#
1972-28-7	DIETHYL AZODICARBOXYLATE	97	217-821-7
<b>Formula</b>	C <sub>6</sub> H <sub>10</sub> N <sub>2</sub> O <sub>4</sub>		
<b>Molecular weight</b>	174.16 g/mol		

## Section 4 - First Aid Measures

### 4.1 Description of 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.

### 4.2 Most important symptoms and effects, both acute and delayed

No data available

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media

#### Suitable extinguishing media:

Use carbon dioxide, alcohol-resistant foam, dry chemical or water jet.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides.

### 5.3 Advice for firefighters

Wear self-contained apparatus breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available.

## Section 6 - Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe area.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 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.

### 6.4 Reference to other sections

For disposal see section 13.

## Section 7 - Handling and Storage

### 7.1 Precautions for safe handling:

Avoid exposure – obtain special instructions before use. Avoid inhalation or vapor or mist. Normal measures for preventive fire protection.

### **7.2 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: 2-8 °C. Light sensitive. Shock sensitive.

### **7.3 Specific end uses**

No data available

## **Section 8 - Exposure Controls, Personal Protection**

### **8.1 Control parameters**

#### **Component with workplace control parameters**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

General industrial hygiene practice

#### **Personal protective equipment**

##### **Eyeface protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

##### **Skin and 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

##### **Body protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

##### **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)

## **Section 9 - Physical and Chemical Properties**

### **9.1 Information on basic physical and chemical properties**

- |               |                                       |
|---------------|---------------------------------------|
| a) Appearance | Form: liquid<br>Colour: Orange to red |
| b) Odour      | No data available                     |

c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling point range:	106 °C / 13 mm Hg
g) Flash Point:	113 °C – closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	1.110 g/cm <sup>3</sup>
n) Water solubility	Not miscible or difficult to mix.
o) Partition coefficient: n-octanol/water	No data available
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosives properties	No data available
t) Oxidizing properties	No data available

## 9.2 Other safety information

No data available

## Section 10 - Stability and Reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reaction

May explode if heated under confinement. May be shock sensitive. Light sensitive.

### 10.4 Conditions to Avoid

Heat and shock.

### 10.5 Incompatible materials

Strong acids, strong bases, strong oxidizing agents, strong reducing agents.

### 10.6 Hazardous Decomposition Products

Other decomposition products – no data available

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

#### Skin corrosion/irritation

Irritant for skin and mucous membranes.

**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 – May cause respiratory irritation.  
**Specific target organ toxicity – repeated exposure** No data available  
**Aspiration hazard** No data available  
**Potential health effect:**  
**Inhalation** May be harmful if inhaled.  
Causes respiratory tract irritation.  
**Ingestion** May be harmful if swallowed.  
**Skin** May be harmful if absorbed through skin.  
**Eyes** 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: No data available

## Section 12 – Ecological Information

**12.1 Toxicity** No data available  
**12.2 Persistence and degradability** No data available  
**12.3 Bioaccumulative potential** No data available  
**12.4 Mobility in soil** No data available  
**12.5 PBT and vPvB assessment** No data available  
**12.6 Other adverse effects** No data available

## Section 13 - Disposal Considerations

**13.1 Waste treatment methods**

**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

**14.1 UN number**

ADR/RID: 2810

IMDG: 2810

IATA: 2810

**14.2 UN proper shipping name**

ADR/RID: TOXIC LIQUID, ORGANIC, N.O.S.

IMDG: TOXIC LIQUID, ORGANIC, N.O.S.

IATA: TOXIC LIQUID, ORGANIC, N.O.S.

**14.3 Transport hazard class**

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

**14.4 Packaging group**

ADR/RID: III

IMDG: III

IATA: III

**14.5 Environmental hazards**

ADR/RID: no

IMDG: Marine pollutant: no

**14.6 Special precautions for user**

No data available

## Section 15 - Regulatory Information

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

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No data available

**15.6 Chemical Safety Assessment**

No data available

## Section 16 - Other Information

**SDS version:** 3

**Creation Date:** 06/02/2012

**Further information**

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.