

# SAFETY DATA SHEET

Version 8.2  
Revision Date 07/29/2021  
Print Date 02/11/2022

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Triethylamine  
Product Number : 73487  
Brand : Sigma-Aldrich  
Index-No. : 612-004-00-5  
CAS-No. : 121-44-8

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

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

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES  
Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

### 1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-  
527-3887 CHEMTREC (International) 24  
Hours/day; 7 Days/week

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 3), H331  
Acute toxicity, Dermal (Category 3), H311  
Skin corrosion (Category 1A), H314  
Serious eye damage (Category 1), H318  
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335  
Short-term (acute) aquatic hazard (Category 2), H401

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor.  
H302 Harmful if swallowed.  
H311 + H331 Toxic in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H401 Toxic to aquatic life.

Precautionary statement(s)

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Formula :  $C_6H_{15}N$   
Molecular weight : 101.19 g/mol

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CAS-No. : 121-44-8  
EC-No. : 204-469-4  
Index-No. : 612-004-00-5

Component	Classification	Concentration
<b>triethylamine</b>	Flam. Liq. 2; Acute Tox. 4; Acute Tox. 3; Skin Corr. 1A; Eye Dam. 1; STOT SE 3; Aquatic Acute 2; H225, H302, H331, H311, H314, H318, H335, H401 Concentration limits: >= 1 %: STOT SE 3, H335;	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

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#### **SECTION 4: First aid measures**

##### **4.1 Description of first-aid measures**

No data available

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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#### **SECTION 5: Firefighting measures**

##### **5.1 Extinguishing media**

###### **Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>) Foam Dry powder

###### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

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

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Combustible.

##### **5.3 Advice for firefighters**

No data available

##### **5.4 Further information**

No data available

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

For personal protection see section 8.

**6.2 Environmental precautions**

No data available

**6.3 Methods and materials for containment and cleaning up**

No data available

**6.4 Reference to other sections**

For disposal see section 13.

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

No data available

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with workplace control parameters**

Component	CAS-No.	Value	Control parameters	Basis
triethylamine	121-44-8	TWA	0.5 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Not classifiable as a human carcinogen Danger of cutaneous absorption		
		STEL	1 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen Danger of cutaneous absorption		
		TWA	25 ppm 100 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	1 ppm 4.1 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

## 8.2 Exposure controls

### Personal protective equipment

#### Respiratory protection

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Control of environmental exposure

Prevent product from entering drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid Color: colorless
b) Odor	amine-like
c) Odor Threshold	No data available
d) pH	12.7 at 100 g/l at 15 °C (59 °F)
e) Melting point/freezing point	Melting point/range: -115 - -114.7 °C (-175 - -174.5 °F)
f) Initial boiling point and boiling range	89.3 °C 192.7 °F
g) Flash point	-11 °C (12 °F) - c.c.
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 9.3 %(V) Lower explosion limit: 1.2 %(V)
k) Vapor pressure	72 hPa at 20 °C (68 °F)
l) Vapor density	3.48
m) Density	0.72 g/cm <sup>3</sup> at 25 °C (77 °F)
Relative density	No data available
n) Water solubility	112.4 g/l at 20 °C (68 °F) - soluble
o) Partition coefficient: n-octanol/water	log Pow: 1.45 - Bioaccumulation is not expected.
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

## 9.2 Other safety information

Relative vapor density 3.48

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

Exothermic reaction with:  
anhydrides

Halogenated hydrocarbon  
organic nitro compounds

Risk of explosion with:  
nitrogen dioxide

Acids

Risk of ignition or formation of inflammable gases or vapours with:

Oxidizing agents

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines!

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

rubber, various plastics, various metals

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 730 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - 3.63 mg/l

(OECD Test Guideline 403)

LD50 Dermal - Rabbit - male - 580 mg/kg

(OECD Test Guideline 402)

Remarks: (ECHA)

#### Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.

(OECD Test Guideline 405)

Risk of corneal clouding. Causes serious eye damage.

### **Respiratory or skin sensitization**

No data available

### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test

Species: Rat

Cell type: Bone marrow

Application Route: inhalation (vapor)

Result: negative

### **Carcinogenicity**

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

### **Reproductive toxicity**

No data available

### **Specific target organ toxicity - single exposure**

May cause respiratory irritation.

### **Specific target organ toxicity - repeated exposure**

No data available

### **Aspiration hazard**

No data available

## **11.2 Additional Information**

RTECS: YE0175000

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, Vomiting

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Central nervous system - Irregularities - Based on Human Evidence

Central nervous system - Irregularities - Based on Human Evidence

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish	LC50 - <i>Oryzias latipes</i> (Orange-red killifish) - 24 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	semi-static test LC50 - <i>Ceriodaphnia dubia</i> (water flea) - 17 mg/l - 48 h (US-EPA)
Toxicity to algae	EC50 - <i>Pseudokirchneriella subcapitata</i> (green algae) - 8 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - <i>Pseudomonas putida</i> - 95 mg/l - 17 h (DIN 38421 TEIL 8)

### 12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 29 d Result: 80.3 % - Readily biodegradable. (OECD Test Guideline 301B)
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### 12.3 Bioaccumulative potential

Bioaccumulation	<i>Cyprinus carpio</i> (Carp) - 42 d at 25 °C - 0.5 mg/l(triethylamine)  Bioconcentration factor (BCF): < 0.5 (OECD Test Guideline 305C)
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Remarks: Does not bioaccumulate.

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

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## SECTION 14: Transport information

### DOT (US)

UN number: 1296 Class: 3 (8) Packing group: II  
Proper shipping name: Triethylamine  
Reportable Quantity (RQ): 5000 lbs  
Poison Inhalation Hazard: No

### IMDG

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UN number: 1296 Class: 3 (8)  
Proper shipping name: TRIETHYLAMINE

Packing group: II

EMS-No: F-E, S-C

**IATA**

UN number: 1296 Class: 3 (8)  
Proper shipping name: Triethylamine

Packing group: II

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**SECTION 15: Regulatory information**

**SARA 302 Components**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
triethylamine	121-44-8	2007-03-01

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

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**SECTION 16: Other information**

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

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