

## SAFETY DATA SHEET

Version 5.1  
 Revision Date 08/17/2014  
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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Butyl isocyanatoacetate	
Product Number	:	482889	
Brand	:	Aldrich	
Product Use	:	For laboratory research purposes.	
Supplier	:	Sigma-Aldrich Canada Co. 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA	Manufacturer : Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA
Telephone	:	+1 9058299500	
Fax	:	+1 9058299292	
Emergency Phone # (For both supplier and manufacturer)	:	+1-703-527-3887 (CHEMTREC)	
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956	

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

#### Other hazards which do not result in classification

Lachrymator.

#### WHMIS Classification

D1A	Very Toxic Material Causing Immediate and Serious Toxic Effects	Highly Toxic
D2B	Toxic Material Causing Other Toxic Effects	Moderate skin irritant Moderate eye irritant

#### GHS Classification

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

#### GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H302 + H312	Harmful if swallowed or in contact with skin
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ 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.

**HMIS Classification**

**Health hazard:** 2  
**Flammability:** 1  
**Physical hazards:** 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** May be harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula :  $C_7H_{11}NO_3$   
Molecular weight : 157.17 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Butyl isocyanatoacetate</b>			
17046-22-9	241-114-2	-	<=100%

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**4. FIRST AID MEASURES**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**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 of 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.

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**5. FIREFIGHTING MEASURES**

**Conditions of flammability**

Not flammable or combustible.

**Suitable extinguishing media**

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

**Special protective equipment for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)

**Explosion data - sensitivity to mechanical impact**

No data available

**Explosion data - sensitivity to static discharge**

No data available

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**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.

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**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.  
Normal measures for preventive fire protection.

**Conditions for safe storage**

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

Moisture sensitive. Handle and store under inert gas.

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**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**

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.

**Eye 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 body protection**

Complete suit protecting against chemicals, 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.

**Specific engineering controls**

Use mechanical exhaust or laboratory fumehood to avoid exposure.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form	liquid
Colour	colourless

**Safety data**

pH	No data available
Melting point/freezing point	No data available
Boiling point	213 °C (415 °F) - lit.

Flash point	99 °C (210 °F) - closed cup
Ignition temperature	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Density	1.06 g/cm <sup>3</sup> at 25 °C (77 °F)
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Relative vapour density	No data available
Odour	No data available
Odour Threshold	No data available
Evaporation rate	No data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Avoid moisture.

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

Other decomposition products - No data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD<sub>50</sub>

No data available

#### Inhalation LC<sub>50</sub>

#### Dermal LD<sub>50</sub>

#### Other information on acute toxicity

No data available

### Skin corrosion/irritation

No data available

### Serious eye damage/eye irritation

No data available

### Respiratory or skin sensitisation

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 present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### **Reproductive toxicity**

No data available

### **Teratogenicity**

No data available

### **Specific target organ toxicity - single exposure (Globally Harmonized System)**

Inhalation - May cause respiratory irritation.

### **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

No data available

### **Aspiration hazard**

No data available

### **Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	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.

### **Synergistic effects**

No data available

### **Additional Information**

RTECS: Not available

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## **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

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## **13. DISPOSAL CONSIDERATIONS**

### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

UN number: 1693 Class: 6.1 Packing group: II  
Proper shipping name: Tear gas substances, liquid, n.o.s. (Butyl isocyanatoacetate)  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN number: 1693 Class: 6.1 Packing group: II EMS-No: F-A, S-A  
Proper shipping name: TEAR GAS SUBSTANCE, LIQUID, N.O.S. (Butyl isocyanatoacetate)  
Marine pollutant: No

**IATA**

UN number: 1693 Class: 6.1 Packing group: II  
Proper shipping name: Tear gas substance, liquid, n.o.s. (Butyl isocyanatoacetate)  
IATA Passenger: Not permitted for transport

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**15. REGULATORY INFORMATION****WHMIS Classification**

D1A	Very Toxic Material Causing Immediate and Serious Toxic Effects	Highly Toxic
D2B	Toxic Material Causing Other Toxic Effects	Moderate skin irritant Moderate eye irritant

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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**16. OTHER INFORMATION****Further information**

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