

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Imidazole  
Product Number : I2399  
Brand : Sigma-Aldrich  
Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # : (314) 776-6555

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 1,3-Diaza-2,4-cyclopentadiene  
Glyoxaline  
Formula : C<sub>3</sub>H<sub>4</sub>N<sub>2</sub>  
Molecular Weight : 68.08 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Imidazole</b>			
288-32-4	206-019-2	-	-

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Toxic by ingestion  
Corrosive

#### HMIS Classification

Health Hazard: 3  
Flammability: 0  
Physical hazards: 0

#### NFPA Rating

Health Hazard: 3  
Fire : 0  
Reactivity Hazard: 0

#### Potential Health Effects

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the

**Skin**  
**Eyes**  
**Ingestion**

mucous membranes and upper respiratory tract.  
May be harmful if absorbed through skin. Causes skin burns.  
Causes eye burns.  
Toxic if swallowed. Causes burns.

#### 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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

##### Flammable properties

Flash point 145 °C (293 °F) - closed cup

Ignition temperature 480 °C (896 °F)

##### Suitable extinguishing media

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

##### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

##### Environmental precautions

Do not let product enter drains.

##### Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

#### 7. HANDLING AND STORAGE

##### Handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

##### Storage

Keep container tightly closed in a dry and well-ventilated place.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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.

#### Eye protection

Safety glasses

#### Skin and body protection

Choose 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	crystalline
Colour	white

### Safety data

pH	9.5 - 11 at 6.8 g/l at 25 °C (77 °F)
Melting point	89 - 91 °C (192 - 196 °F)
Boiling point	256 °C (493 °F) at 1,013 hPa (760 mmHg)
Flash point	145 °C (293 °F) - closed cup
Ignition temperature	480 °C (896 °F)
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	0.003 hPa (0.002 mmHg) at 20 °C (68 °F)
Density	1.030 g/cm <sup>3</sup>
Water solubility	6.8 g/l at 20 °C (68 °F) - completely soluble

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

acids, Acid anhydrides, Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Hydrogen cyanide (hydrocyanic acid), Ammonia

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 220 mg/kg

### Irritation and corrosion

Skin - rabbit - Corrosive

### Sensitisation

no data available

### Chronic exposure

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.

NTP: No component 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 identified as a carcinogen or potential carcinogen by OSHA.

### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns.
<b>Ingestion</b>	Toxic if swallowed. Causes burns.

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

Biodegradability

### Ecotoxicity effects

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia - 341.5 mg/l - 48 h

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### DOT (US)

UN-Number: 2923 Class: 8 (6.1)

Packing group: III

Proper shipping name: Corrosive solids, toxic, n.o.s. (Imidazole)

**IMDG**

UN-Number: 2923 Class: 8 (6.1) Packing group: III EMS-No: F-A, S-B  
Proper shipping name: CORROSIVE SOLID, TOXIC, N.O.S. (Imidazole)  
Marine pollutant: No

**IATA**

UN-Number: 2923 Class: 8 (6.1) Packing group: III  
Proper shipping name: Corrosive solid, toxic n.o.s. (Imidazole)

**15. REGULATORY INFORMATION**

**OSHA Hazards**

Toxic by ingestion, Corrosive

**TSCA Status**

On TSCA Inventory

**DSL Status**

All components of this product are on the Canadian DSL list.

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

No Components Listed

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Imidazole	288-32-4	

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Imidazole	288-32-4	

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

**16. OTHER INFORMATION**

**Further information**

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