

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Iodoacetic acid

Product Number : I4386

Brand : Sigma-Aldrich

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Toxic by ingestion, Skin sensitiser, Corrosive

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

Vesicant.

##### GHS Classification

Acute toxicity, Oral (Category 3)  
Skin corrosion (Category 1A)  
Serious eye damage (Category 1)  
Skin sensitization (Category 1)

##### GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H301 : Toxic if swallowed.  
H314 : Causes severe skin burns and eye damage.  
H317 : May cause an allergic skin reaction.

Precautionary statement(s)

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.

##### 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 mucous membranes and upper respiratory tract.  
**Skin** May be harmful if absorbed through skin. Causes skin burns.  
**Eyes** Causes eye burns. Causes severe eye burns.  
**Ingestion** Toxic if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula :  $C_2H_3IO_2$   
Molecular Weight : 185.95 g/mol

Component	Concentration
<b>Iodoacetic acid</b>	
CAS-No. 64-69-7	-
EC-No. 200-590-1	-
Index-No. 607-068-00-6	-

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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**

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

**In case of eye contact**

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

**If swallowed**

Do NOT induce vomiting. 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 fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen iodide

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**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**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

Pick up and arrange disposal without creating dust. Sweep up and shovel. 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 formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

### Conditions for safe storage

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

Recommended storage temperature: -20 °C

Keep in a dry place.

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## 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. 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

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	powder
Colour	no data available

### Safety data

pH	1.4 at 50 g/l at 20 °C (68 °F)
Melting point/freezing point	Melting point/range: 77 - 79 °C (171 - 174 °F)
Boiling point	208 °C (406 °F) at 1,013 hPa (760 mmHg)
Flash point	no data available
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available

Upper explosion limit	no data available
Vapour pressure	8.56 hPa (6.42 mmHg)
Density	4.600 g/cm <sup>3</sup>
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

no data available

### Materials to avoid

Strong bases, Strong reducing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen iodide  
Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

no data available

#### Inhalation LC50

no data available

#### Dermal LD50

no data available

#### Other information on acute toxicity

LD50 Intraperitoneal - rat - 75 mg/kg

LD50 Subcutaneous - rat - 60 mg/kg

Remarks: Behavioral:Fluid intake. Behavioral:Rigidity (includes catalepsy). Lungs, Thorax, or Respiration:Dyspnea.

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

### Respiratory or skin sensitization

May cause allergic skin reaction.

### Germ cell mutagenicity

Genotoxicity in vitro - Hamster - fibroblast  
Cytogenetic analysis

Genotoxicity in vitro - mouse - Ascites tumor

DNA inhibition

Genotoxicity in vitro - Human - HeLa cell  
DNA inhibition

### **Carcinogenicity**

Carcinogenicity - mouse - Skin

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other: Tumors.  
Tumorigenic: Tumors at site or application.

Carcinogenicity - mouse - Subcutaneous

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site or application.

Carcinogenicity - mouse - Skin

Tumorigenic: Neoplastic by RTECS criteria. Skin and Appendages: Other: Tumors. Tumorigenic: Tumors at site or application.

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.

### **Reproductive toxicity**

Reproductive toxicity - mouse - Oral

Paternal Effects: Other effects on male. Maternal Effects: Other effects. Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

no data available

### **Teratogenicity**

Developmental Toxicity - mouse - Intramuscular

Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

Developmental Toxicity - mouse - Intraperitoneal

Specific Developmental Abnormalities: Musculoskeletal system.

no data available

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

no data available

### **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. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Ingestion</b>	Toxic if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns. Causes severe 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, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Symptoms may be delayed., 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: AI3500000

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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. 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.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

UN number: 2923 Class: 8 (6.1) Packing group: I  
Proper shipping name: Corrosive solids, toxic, n.o.s. (Iodoacetic acid)  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

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

**IATA**

UN number: 2923 Class: 8 (6.1) Packing group: I  
Proper shipping name: Corrosive solid, toxic, n.o.s. (Iodoacetic acid)

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**15. REGULATORY INFORMATION**

**OSHA Hazards**

Toxic by ingestion, Skin sensitiser, Corrosive

**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 are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

Iodoacetic acid

CAS-No.  
64-69-7

Revision Date

**New Jersey Right To Know Components**

Iodoacetic acid

CAS-No.  
64-69-7

Revision Date

**California Prop. 65 Components**

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

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

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