

# SAFETY DATA SHEET

Version 6.6  
Revision Date 08/06/2024  
Print Date 08/07/2024

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

### 1.1 Product identifiers

Product name : Ifosfamide

Product Number : I4909  
Brand : Sigma  
CAS-No. : 3778-73-2

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

### 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)

Acute toxicity, Oral (Category 3), H301  
Eye irritation (Category 2A), H319  
Germ cell mutagenicity (Category 1B), H340  
Carcinogenicity (Category 1B), H350

Reproductive toxicity (Category 1B), H360

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 Statements

H301	Toxic if swallowed.
H319	Causes serious eye irritation.
H340	May cause genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.

Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
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

Caution: Physiologically highly active, therapeutically usable substance. The substance must be handled with the care required for hazardous materials.

---

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms	: Ifex N,3-Bis(2-chloroethyl)tetrahydro-2H-1,3,2-oxazaphosphorin-2-amine-2-oxide
Formula	: C <sub>7</sub> H <sub>15</sub> Cl <sub>2</sub> N <sub>2</sub> O <sub>2</sub> P
Molecular weight	: 261.09 g/mol
CAS-No.	: 3778-73-2
EC-No.	: 223-237-3

Sigma - I4909

Page 2 of 9

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada

**MILLIPORE  
SIGMA**

Component	Classification	Concentration
<b>(±)-Ifosfamide</b>		
	Acute Tox. 3; Eye Irrit. 2A; Muta. 1B; Carc. 1B; Repr. 1B; H301, H319, H340, H350, H360	<= 100 %

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

---

#### **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

---

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

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

No data available

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

Carbon oxides  
Nitrogen oxides (NOx)  
Oxides of phosphorus  
Hydrogen chloride gas  
Combustible.

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

No data available

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

No data available

---

#### **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.

---

## 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

---

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

No data available

---

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |   |   |
|---|---|
| a) Appearance                                   | Form: solid<br>Color: white                     |
| b) Odor   | No data available                               |
| c) Odor Threshold                               | No data available                               |
| d) pH   | 4.0 - 7.0                                       |
| e) Melting point/freezing point                 | Melting point/ range: 39 - 42 °C (102 - 108 °F) |
| f) Initial boiling point and boiling range      | No data available                               |
| g) Flash point                                  | ( )Not applicable                               |
| h) Evaporation rate                             | No data available                               |
| i) Flammability (solid, gas)                    | No data available                               |
| j) Upper/lower flammability or explosive limits | No data available                               |

- |  |   |
|--|---|
| k) Vapor pressure                            | No data available                                 |
| l) Vapor density                             | No data available                                 |
| m) Density                                   | No data available                                 |
| Relative density                             | No data available                                 |
| n) Water solubility                          | No data available                                 |
| o) Partition coefficient:<br>n-octanol/water | log Pow: 0.835 - Bioaccumulation is not expected. |
| p) Autoignition<br>temperature               | No data available                                 |
| q) Decomposition<br>temperature              | No data available                                 |
| r) Viscosity                                 | No data available                                 |
| s) Explosive properties                      | No data available                                 |
| t) Oxidizing properties                      | none  |

## 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 reactions

Violent reactions possible with:

Acids

Alkali metals

Oxidizing agents

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 143 mg/kg

Remarks: Blood:Normocytic anemia.

Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

(RTECS)

Inhalation: No data available

Dermal: No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

May cause genetic defects.

#### Carcinogenicity

Presumed to have carcinogenic potential for humans

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

May damage the unborn child.

May damage fertility.

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

### 11.2 Additional Information

RTECS: RP6050000

Blurred vision, Headache, Gastrointestinal disturbance, Kidney injury may occur.

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

---

## 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 Results of PBT and vPvB assessment

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

### 12.6 Endocrine disrupting properties

No data available

### 12.7 Other adverse effects

No data available

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

---

## SECTION 14: Transport information

### DOT (US)

UN number: 2811 Class: 6.1 Packing group: III  
Proper shipping name: Toxic solids, organic, n.o.s. ((±)-Ifosfamide)  
Reportable Quantity (RQ):  
Poison Inhalation Hazard: No

### IMDG

UN number: 2811 Class: 6.1 Packing group: III EMS-No: F-A, S-A  
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. ((±)-Ifosfamide)

### IATA

UN number: 2811 Class: 6.1 Packing group: III  
Proper shipping name: Toxic solid, organic, n.o.s. ((±)-Ifosfamide)

---

**SECTION 15: Regulatory information****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

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

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**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.

**US State Regulations****Massachusetts Right To Know**

(±)-Ifosfamide 3778-73-2

**Pennsylvania Right To Know**

(±)-Ifosfamide 3778-73-2

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California Prop. 65**

WARNING: This product can expose you to chemicals including (±)-Ifosfamide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**The ingredients of this product are reported in the following inventories:**

TSCA : Product contains substance(s) not listed on TSCA inventory.

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.



---

**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).

Version: 6.6

Revision Date: 08/06/2024

Print Date: 08/07/2024