

**SAFETY DATA SHEET**

Creation Date 03-Mar-2011

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Revision Number 3

**1. Identification**

**Product Name** Isoprene monoxide

**Cat No. :** L19768

**CAS-No** 1838-94-4  
**Synonyms** Isoprene monoxide

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**

Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
**Email:** tech@alfa.com  
www.alfa.com

**Emergency Telephone Number**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.  
After normal business hours, call Carechem 24 at (866) 928-0789.

**2. Hazard(s) identification****Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                                  |            |
|--------------------------------------------------|------------|
| Flammable liquids                                | Category 2 |
| Skin Corrosion/Irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |

**Label Elements****Signal Word**

Danger

**Hazard Statements**

Highly flammable liquid and vapor  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Keep cool

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell

**Skin**

If skin irritation occurs: Get medical advice/attention  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component               | CAS-No    | Weight % |
|-------------------------|-----------|----------|
| 2-Methyl-2-vinyloxirane | 1838-94-4 | 95       |

### 4. First-aid measures

**General Advice**

If symptoms persist, call a physician.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

|                                            |                                                                                                                                              |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>                          | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.                                 |
| <b>Ingestion</b>                           | Clean mouth with water and drink afterwards plenty of water.                                                                                 |
| <b>Most important symptoms and effects</b> | Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting |
| <b>Notes to Physician</b>                  | Treat symptomatically                                                                                                                        |

## 5. Fire-fighting measures

|                                         |                                                                                                                                         |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>     | Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers. |
| <b>Unsuitable Extinguishing Media</b>   | No information available                                                                                                                |
| <b>Flash Point</b>                      | -8 °C / 17.6 °F                                                                                                                         |
| <b>Method -</b>                         | No information available                                                                                                                |
| <b>Autoignition Temperature</b>         | No information available                                                                                                                |
| <b>Explosion Limits</b>                 |                                                                                                                                         |
| <b>Upper</b>                            | No data available                                                                                                                       |
| <b>Lower</b>                            | No data available                                                                                                                       |
| <b>Sensitivity to Mechanical Impact</b> | No information available                                                                                                                |
| <b>Sensitivity to Static Discharge</b>  | No information available                                                                                                                |

### Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

**Health**  
2

**Flammability**  
3

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

|                                             |                                                                                                                                                                               |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>                 | Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.            |
| <b>Environmental Precautions</b>            | Should not be released into the environment. See Section 12 for additional Ecological Information.                                                                            |
| <b>Methods for Containment and Clean Up</b> | Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. |

## 7. Handling and storage

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges. |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat, sparks and flame. Keep refrigerated.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures** Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment.

### Personal Protective Equipment

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|                                               |                                 |
|-----------------------------------------------|---------------------------------|
| <b>Physical State</b>                         | Liquid                          |
| <b>Appearance</b>                             | Colorless                       |
| <b>Odor</b>                                   | No information available        |
| <b>Odor Threshold</b>                         | No information available        |
| <b>pH</b>                                     | No information available        |
| <b>Melting Point/Range</b>                    | No data available               |
| <b>Boiling Point/Range</b>                    | 80 - 81 °C / 176 - 177.8 °F     |
| <b>Flash Point</b>                            | -8 °C / 17.6 °F                 |
| <b>Evaporation Rate</b>                       | No information available        |
| <b>Flammability (solid,gas)</b>               | Not applicable                  |
| <b>Flammability or explosive limits</b>       |                                 |
| <b>Upper</b>                                  | No data available               |
| <b>Lower</b>                                  | No data available               |
| <b>Vapor Pressure</b>                         | No information available        |
| <b>Vapor Density</b>                          | No information available        |
| <b>Density</b>                                | 0.857g/cm <sup>3</sup> @ 25°C   |
| <b>Specific Gravity</b>                       | No information available        |
| <b>Solubility</b>                             | No information available        |
| <b>Partition coefficient; n-octanol/water</b> | No data available               |
| <b>Autoignition Temperature</b>               | No information available        |
| <b>Decomposition Temperature</b>              | No information available        |
| <b>Viscosity</b>                              | No information available        |
| <b>Molecular Formula</b>                      | C <sub>5</sub> H <sub>8</sub> O |
| <b>Molecular Weight</b>                       | 84.12                           |

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under recommended storage conditions.

|                                         |                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Conditions to Avoid</b>              | Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents                                                                               |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )                                               |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                                                              |
| <b>Hazardous Reactions</b>              | None under normal processing.                                                                         |

## 11. Toxicological information

### Acute Toxicity

**Product Information** See actual entry in RTECS for complete information.

**Component Information**

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component                | CAS-No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|--------------------------|-----------|------------|------------|------------|------------|------------|
| 2-Methyl-2-vinyl-oxirane | 1838-94-4 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system  
**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

**Persistence and Degradability** Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its volatility.

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

UN-No UN1993  
 Proper Shipping Name Flammable liquid, n.o.s.  
 Technical Name 2-Methyl-2-vinyloxirane  
 Hazard Class 3  
 Packing Group II

#### TDG

UN-No UN1993  
 Proper Shipping Name Flammable liquid, n.o.s.  
 Hazard Class 3  
 Packing Group II

#### IATA

UN-No UN1993  
 Proper Shipping Name Flammable liquid, n.o.s.  
 Hazard Class 3  
 Packing Group II

#### IMDG/IMO

UN-No UN1993  
 Proper Shipping Name Flammable liquid, n.o.s.  
 Hazard Class 3  
 Packing Group II

### 15. Regulatory information

#### United States of America Inventory

| Component               | CAS-No    | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|-------------------------|-----------|------|-----------------------------------------------|-----------------------------|
| 2-Methyl-2-vinyloxirane | 1838-94-4 | -    | -                                             | -                           |

#### Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

#### International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component               | CAS-No    | DSL | NDL | EINECS | PICCS | ENCS | AICS | IECSC | KECL |
|-------------------------|-----------|-----|-----|--------|-------|------|------|-------|------|
| 2-Methyl-2-vinyloxirane | 1838-94-4 | -   | -   | -      | -     | -    | -    | -     | -    |

#### U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

|                                                                       |                                                             |
|-----------------------------------------------------------------------|-------------------------------------------------------------|
| <b>OSHA</b> - Occupational Safety and Health Administration           | Not applicable                                              |
| <b>CERCLA</b>                                                         | Not applicable                                              |
| <b>California Proposition 65</b>                                      | This product does not contain any Proposition 65 chemicals. |
| <b>U.S. State Right-to-Know Regulations</b>                           | Not applicable                                              |
| <b>U.S. Department of Transportation</b><br>Reportable Quantity (RQ): | N                                                           |
| DOT Marine Pollutant                                                  | N                                                           |
| DOT Severe Marine Pollutant                                           | N                                                           |
| <b>U.S. Department of Homeland Security</b>                           | This product does not contain any DHS chemicals.            |
| <b><u>Other International Regulations</u></b>                         |                                                             |
| <b>Mexico - Grade</b>                                                 | No information available                                    |

## 16. Other information

|                         |                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------|
| <b>Prepared By</b>      | Health, Safety and Environmental Department<br>Email: tech@alfa.com<br>www.alfa.com |
| <b>Creation Date</b>    | 03-Mar-2011                                                                         |
| <b>Revision Date</b>    | 14-Feb-2020                                                                         |
| <b>Print Date</b>       | 14-Feb-2020                                                                         |
| <b>Revision Summary</b> | SDS authoring systems update, replaces ChemGes SDS No. 1838-94-4.                   |

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**