

## SAFETY DATA SHEET

Version 6.1  
Revision Date 05/04/2019  
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Dimethyl sulfoxide- $^{13}\text{C}_2$

Product Number : 485519  
Brand : Aldrich  
CAS-No. : 136321-15-8

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

Identified uses : Laboratory chemicals, Synthesis of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Inc.  
3050 Spruce Street  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

**1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 4), H227

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

**2.2 GHS Label elements, including precautionary statements**

Pictogram : none  
Signal word : Warning  
Hazard statement(s)  
H227 : Combustible liquid.  
Precautionary statement(s)  
P210 : Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.

|             |                                                                                       |
|-------------|---------------------------------------------------------------------------------------|
| P370 + P378 | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. |
| P403 + P235 | Store in a well-ventilated place. Keep cool.                                          |
| P501        | Dispose of contents/ container to an approved waste disposal plant.                   |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                  |                                                                        |
|------------------|------------------------------------------------------------------------|
| Synonyms         | : 13C Labeled dimethyl sulfoxide<br>DMSO-13C2<br>Methyl sulfoxide-13C2 |
| Formula          | : $^{13}\text{C}_2\text{H}_6\text{OS}$                                 |
| Molecular weight | : 80.10 g/mol                                                          |
| CAS-No.          | : 136321-15-8                                                          |

| Component                      | Classification     | Concentration |
|--------------------------------|--------------------|---------------|
| <b>Dimethyl sulfoxide-13C2</b> |                    |               |
|                                | Flam. Liq. 4; H227 | <= 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

#### 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

Flush eyes with water as a precaution.

#### If swallowed

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

### 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

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### **Suitable extinguishing media**

Small (incipient) fires must be extinguished with alcohol resistant foam, dry chemical powder or carbon dioxide. Large amounts of water are ineffective. Cool containers with large amounts of water.

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

Carbon oxides, Sulphur oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, mist or gas. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

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

Store under inert gas. hygroscopic

Storage class (TRGS 510): 10: Combustible liquids

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Components with workplace control parameters

| Component               | CAS-No.     | Value | Control parameters | Basis                                               |
|-------------------------|-------------|-------|--------------------|-----------------------------------------------------|
| Dimethyl sulfoxide-13C2 | 136321-15-8 | TWA   | 250 ppm            | USA. Workplace Environmental Exposure Levels (WEEL) |

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin 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.

##### Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### 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).

##### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                                 |                                               |
|---------------------------------|-----------------------------------------------|
| a) Appearance                   | Form: liquid                                  |
| b) Odour                        | No data available                             |
| c) Odour Threshold              | No data available                             |
| d) pH                           | No data available                             |
| e) Melting point/freezing point | Melting point/range: 18.4 °C (65.1 °F) - lit. |

|    |                                              |                                                                      |
|----|----------------------------------------------|----------------------------------------------------------------------|
| f) | Initial boiling point and boiling range      | 189 °C 372 °F - lit.                                                 |
| g) | Flash point                                  | 85 °C (185 °F) - closed cup                                          |
| h) | Evaporation rate                             | No data available                                                    |
| i) | Flammability (solid, gas)                    | No data available                                                    |
| j) | Upper/lower flammability or explosive limits | No data available                                                    |
| k) | Vapour pressure                              | No data available                                                    |
| l) | Vapour density                               | No data available                                                    |
| m) | Relative density                             | 1.129 g/mL at 25 °C (77 °F) 1.129 g/cm <sup>3</sup> at 25 °C (77 °F) |
| n) | Water solubility                             | No data available                                                    |
| o) | Partition coefficient: n-octanol/water       | No data available                                                    |
| p) | Auto-ignition temperature                    | No data available                                                    |
| q) | Decomposition temperature                    | No data available                                                    |
| r) | Viscosity                                    | No data available                                                    |
| s) | Explosive properties                         | No data available                                                    |
| t) | Oxidizing properties                         | No data available                                                    |

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

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

Other decomposition products - No data available

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

#### 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.

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 on OSHA's list of regulated carcinogens.

#### Reproductive toxicity

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

#### Additional Information

RTECS: Not available

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

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

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## 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 Other adverse effects**

No data available

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## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods**

#### **Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### **Contaminated packaging**

Dispose of as unused product.

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## **SECTION 14: Transport information**

### **DOT (US)**

NA-Number: 1993 Class: NONE

Packing group: III

Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfoxide-13C2)

Poison Inhalation Hazard: No

### **IMDG**

Not dangerous goods

### **IATA**

Not dangerous goods

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## **SECTION 15: Regulatory information**

### **SARA 302 Components**

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

### **SARA 313 Components**

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**

Fire Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

Dimethyl sulfoxide-13C2

CAS-No.

136321-15-8

Revision Date

2007-03-01

**New Jersey Right To Know Components**

Dimethyl sulfoxide-13C2

CAS-No.

136321-15-8

Revision Date

2007-03-01

**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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**SECTION 16: Other information****Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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