SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Methyl sulfoxide-d6
Cat No.: 321290000; 321290010; 321290100; 321290500
Synonyms: Dimethyl-d6 sulfoxide
CAS-No: 2206-27-1
EC-No: 218-617-0
Molecular Formula: C2 D6 O S

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

Recommended Use: Laboratory chemicals
Uses advised against: No Information available

1.3. Details of the supplier of the safety data sheet

Company: Acros Organics BVBA
Janssen Pharmaceuticaal 3a
2440 Geel, Belgium
E-mail address: begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11
Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC Tel. No. US: 001-800-424-9300 / Europe: 001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards
Based on available data, the classification criteria are not met

Health hazards
Based on available data, the classification criteria are not met

Environmental hazards
Based on available data, the classification criteria are not met

Classification according to EU Directives 67/548/EEC or 1999/45/EC
R-phrase(s): None

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

2.2. Label elements

Signal Word: None
Hazard Statements

Precautionary Statements

2.3. Other hazards

No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
<th>CLP Classification - Regulation (EC) No 1272/2008</th>
<th>DSD Classification - 67/548/EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane-d3, sulfinylbis-</td>
<td>2206-27-1</td>
<td>EEC No. 218-617-0</td>
<td>&gt;95</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice
If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.

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

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Ingestion
Do not induce vomiting. Obtain medical attention.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Protection of First-aiders
No special precautions required.

4.2. Most important symptoms and effects, both acute and delayed

Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

Extinguishing media which must not be used for safety reasons
No information available.

5.2. Special hazards arising from the substance or mixture
Combustible material. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors.

**Hazardous Combustion Products**
Carbon monoxide (CO), Carbon dioxide (CO₂), Sulfur oxides, Sulfides, Formaldehyde.

### 5.3. Advice for firefighters

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

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation.

#### 6.2. Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

#### 6.3. Methods and material for containment and cleaning up

Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

---

**SECTION 7: HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep under nitrogen.

#### 7.3. Specific end use(s)

Use in laboratories

---

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1. Control parameters

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

**Biological limit values**
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.
Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS70 General methods for sampling airborne gases and vapours

Derived No Effect Level (DNEL)  
No information available.

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Acute effects (local)</th>
<th>Acute effects (systemic)</th>
<th>Chronic effects (local)</th>
<th>Chronic effects (systemic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predicted No Effect Concentration (PNEC)  
No information available.

8.2. Exposure controls

Engineering Measures
None under normal use conditions. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye Protection  
Safety glasses with side-shields (European standard - EN 166)

Hand Protection  
Protective gloves

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.

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

Respiratory Protection  
No protective equipment is needed under normal use conditions.

Large scale/emergency use  
Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type:  
Particle filter.

Small scale/Laboratory use  
Maintain adequate ventilation

Hygiene Measures  
When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

Environmental exposure controls  
Prevent product from entering drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties
### SAFETY DATA SHEET

**Methyl sulfoxide-d6**

**Revision Date**: 07-Jan-2014

---

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available.</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C2 D6 O S</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>84.18</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>20.2°C / 68.4°F</td>
</tr>
<tr>
<td>Softening Point</td>
<td>No data available</td>
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<tr>
<td>Boiling Point/Range</td>
<td>190°C / 374°F</td>
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<tr>
<td>Flash Point</td>
<td>88°C / 190.4°F</td>
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<tr>
<td><strong>Method</strong></td>
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<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available.</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>Lower 1.8 Vol%</td>
</tr>
<tr>
<td></td>
<td>Upper 63 Vol%</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>2.5 mbar @ 20°C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity / Density</td>
<td>1.190</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>soluble</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available.</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>270°C / 518°F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 190°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>2.4 mPa.s @t 20 °C</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No information available.</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No information available.</td>
</tr>
<tr>
<td>9.2. Other information</td>
<td></td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C2 D6 O S</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>84.18</td>
</tr>
</tbody>
</table>

---

### SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity**

None known, based on information available.

**10.2. Chemical stability**

Hygroscopic.

**10.3. Possibility of hazardous reactions**

- **Hazardous Polymerization**: Hazardous polymerization does not occur.
- **Hazardous Reactions**: Thermal decomposition can take place above 189°C / 372°F.

**10.4. Conditions to avoid**

Incompatible products, Excess heat, Exposure to moist air or water, Keep away from open flames, hot surfaces and sources of ignition.

**10.5. Incompatible materials**


**10.6. Hazardous decomposition products**

Carbon monoxide (CO), Carbon dioxide (CO2), Sulfur oxides, Sulfides, Formaldehyde.
SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

See actual entry in RTECS for complete information.

(a) acute toxicity;
   Oral
      Based on available data, the classification criteria are not met
   Dermal
      Based on available data, the classification criteria are not met
   Inhalation
      Based on available data, the classification criteria are not met

(b) skin corrosion/irritation;
      Based on available data, the classification criteria are not met

(c) serious eye damage/irritation;
      Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;
   Respiratory
      Based on available data, the classification criteria are not met
   Skin
      Based on available data, the classification criteria are not met

(e) germ cell mutagenicity;
      Based on available data, the classification criteria are not met

   Not mutagenic in AMES Test

(f) carcinogenicity;
      Based on available data, the classification criteria are not met

   There are no known carcinogenic chemicals in this product

(g) reproductive toxicity;
      Based on available data, the classification criteria are not met

(h) STOT-single exposure;
      Based on available data, the classification criteria are not met

(i) STOT-repeated exposure;
      Based on available data, the classification criteria are not met

   Target Organs
      Skin, Liver, Kidney, spleen.

(j) aspiration hazard;
      Based on available data, the classification criteria are not met

Other Adverse Effects

Symptoms / effects, both acute and delayed

The toxicological properties have not been fully investigated.

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants. Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Fish</th>
<th>Water Flea</th>
<th>Freshwater Algae</th>
<th>Microtox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane-d3, sulfanylbis-</td>
<td>Onchorhynchus mykiss: LC50: 38500 mg/L/96H</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Persistence</th>
<th>Degradation in sewage treatment plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradation 90% (28d)</td>
<td>Soluble in water. Persistence is unlikely, based on information available. Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

Bioaccumulation is unlikely
12.4. Mobility in soil

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

12.5. Results of PBT and vPvB assessment

No data available for assessment

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion Potential

This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Contaminated Packaging

Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

European Waste Catalogue (EWC)

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific

Other Information

Do not dispose of waste into sewer.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

ADR

Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

IATA

Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

No hazards identified

14.6. Special precautions for user

No special precautions required

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

X = listed
National Regulations

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment
Take note of Dir 94/33/EC on the protection of young people at work
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3
Not applicable

Legend

<table>
<thead>
<tr>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>CHINA</th>
<th>AICS</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane-d3, sulfinylbis-</td>
<td>218-617-0</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key literature references and sources for data
Suppliers safety data sheet,
Chemadvisor - LOLI,
Merck index,
RTECS

Training Advice
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Creation Date 23-Jan-2009
Revision Date 07-Jan-2014
Revision Summary Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
Disclaimer
The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet