1. Identification

Product identifier used on the label

**Butyl Diglyme**

**Recommended use of the chemical and restriction on use**

Recommended use*: Chemical

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller’s published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller’s sales agreement.

Details of the supplier of the safety data sheet

Company: BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA
Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: No data available.

2. Hazards Identification


**Classification of the product**

Aquatic Acute 3 Hazardous to the aquatic environment - acute

**Label elements**

Hazard Statement:
H402 Harmful to aquatic life.

Precautionary Statements (Prevention):
P273 Avoid release to the environment.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified
If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients


<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Weight %</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>112-73-2</td>
<td>&gt;= 99.1 - &lt;= 99.8%</td>
<td>Butane, 1,1'-[oxybis(2,1-ethanediyoxy)]bis-</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing. If you feel unwell, seek medical advice (show the label where possible)

If inhaled:
Keep patient calm, remove to fresh air. If difficulties occur: Obtain medical attention.

If on skin:
Wash thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open. If irritation develops, seek medical attention.

If swallowed:
Rinse mouth and then drink plenty of water. Induce vomiting only if the patient is conscious, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Most important symptoms and effects, both acute and delayed
Symptoms: No significant symptoms are expected due to the non-classification of the product.

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Symptomatic treatment (decontamination, vital functions).
5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, carbon dioxide, dry powder, water spray

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
carbon oxides
The substances/groups of substances mentioned can be released in case of fire. Under certain conditions in case of fire other hazardous combustion products may be generated.

Advice for fire-fighters
Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Cool endangered containers with water-spray. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Impact Sensitivity:
Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Use personal protective clothing. Avoid all sources of ignition: heat, sparks, open flame.

Environmental precautions
Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
For small amounts: Contain with absorbent material (e.g. sand, silica gel, acid binder, general purpose binder, sawdust).
For large amounts: Pump off product.
To clean the floor and all objects contaminated by this material, use plenty of water. Collect waste in suitable containers, which can be labeled and sealed. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling
Use only in well-ventilated areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:
The product is combustible. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. No smoking.
Conditions for safe storage, including any incompatibilities
Segregate from oxidants.

Further information on storage conditions: Keep container tightly closed and in a cool place. Protect from air.

Storage stability:
Storage temperature: < 55 °C
From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) respirator as necessary. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:
Wear chemical resistant protective gloves, Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields.

Body protection:
No body protection required if used for intended purpose and satisfying generally accepted industrial hygiene rules.

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Eye wash fountains and safety showers must be easily accessible.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>ether-like</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>not determined</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>pH value</td>
<td>6.5 - 7.5 (20 °C)</td>
</tr>
<tr>
<td></td>
<td>Literature data.</td>
</tr>
<tr>
<td>Melting point</td>
<td>-60.2 °C (1,013 hPa)</td>
</tr>
<tr>
<td>Boiling point</td>
<td>256 °C (1,013 hPa)</td>
</tr>
<tr>
<td>Flash point</td>
<td>117 °C</td>
</tr>
<tr>
<td>Flammability</td>
<td>Product is combustible.</td>
</tr>
</tbody>
</table>
Lower explosion limit: For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.

Upper explosion limit: For liquids not relevant for classification and labelling.

Autoignition: 190 °C
Literature data.

Vapour pressure: < 0.01 hPa
( 20 °C)

Density:
0.88 g/cm³
( 20 °C)
0.853 g/cm³
( 55 °C)

Relative density:
0.89
( 20 °C)
Literature data.

Partitioning coefficient n-octanol/water (log Pow):
1.92 (measured)
( 25 °C)

Self-ignition
Based on its structural properties the product is not classified as self-igniting.

Thermal decomposition:
260 °C (DTA)
Exothermic reaction above the indicated temperature.

Viscosity, dynamic:
2.4 mPa.s
( 20 °C)

Viscosity, kinematic:
2.11 mm²/s
( 20 °C)

Particle size: The substance / product is marketed or used in a non solid or granular form.

Solubility in water:
3 g/l
( 20 °C)

Molar mass:
218.34 g/mol

Evaporation rate: Value can be approximated from Henry's Law Constant or vapor pressure.

10. Stability and Reactivity

Reactivity
Vapours may form explosive mixture with air.

Corrosion to metals:
Corrosive effects to metal are not anticipated.

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.

Formation of flammable gases:
Remarks: Forms no flammable gases in the presence of water.

Chemical stability
Stable under normal conditions.

Possibility of hazardous reactions
Evolution of peroxides.
Conditions to avoid
No special precautions other than good housekeeping of chemicals.

Incompatible materials
oxidizing agents, air, acids, alkalies

Hazardous decomposition products
Decomposition products:
Hazardous decomposition products: carbon monoxide, carbon dioxide, No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
260 °C (DTA)
Exothermic reaction above the indicated temperature.

11. Toxicological information

Primary routes of exposure
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Of low toxicity after single ingestion. Of low toxicity after short-term skin contact.

Oral
Type of value: LD50
Species: rat
Value: 3,900 mg/kg

Dermal
Type of value: LD50
Species: rabbit
Value: 3,567 mg/kg

Assessment other acute effects
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion
Assessment of irritating effects: Not irritating to eyes and skin.

Skin
Species: rabbit
Result: non-irritant
Method: OECD Guideline 404

Eye
Species: rabbit
Result: non-irritant
Method: OECD Guideline 405

Sensitization
Assessment of sensitization: No data available.

Aspiration Hazard
No aspiration hazard expected.

**Chronic Toxicity/Effects**

Repeated dose toxicity
Assessment of repeated dose toxicity: No reliable data was available concerning repeated dose toxicity.

Genetic toxicity
Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in a test with mammals.

Carcinogenicity
Assessment of carcinogenicity: No data was available concerning carcinogenic activity.

Reproductive toxicity
Assessment of reproduction toxicity: No data available.

Teratogenicity
Assessment of teratogenicity: No reliable data was available concerning teratogenicity.

**Symptoms of Exposure**

No significant symptoms are expected due to the non-classification of the product.

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**12. Ecological Information**

**Toxicity**

Aquatic toxicity
Assessment of aquatic toxicity: Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish
LC0 (48 h) 160 mg/l, Leuciscus idus (DIN 38412 Part 15)
Literature data.

Aquatic invertebrates
EC50 (48 h) 42.5 mg/l, Daphnia magna
Literature data.

LC50 (96 h) 101 mg/l, Chaetogammarus marinus
Literature data. Nominal concentration.

Aquatic plants
EC50 (72 h) 41.3 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201)
Literature data.
No observed effect concentration (72 h) 10 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201)
Literature data.

Chronic toxicity to fish
No data available regarding toxicity to fish.

Chronic toxicity to aquatic invertebrates
No data available regarding toxicity to daphnids.

Assessment of terrestrial toxicity
No data available concerning terrestrial toxicity.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
OECD Guideline 209 activated sludge, domestic/EC50: 769 mg/l
Literature data.

Persistency and degradability

Assessment biodegradation and elimination (H2O)
Biodegradable.

Elimination information

> 70 % (30 d) (Static test)
Literature data.

Information on Stability in Water (Hydrolysis)
According to structural properties, hydrolysis is not expected/probable.

Bioaccumulative potential

Assessment bioaccumulation potential
No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Mobility in soil

Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

13. Disposal considerations

Waste disposal of substance:
Incinerate in suitable incineration plant, observing local authority regulations.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
15. Regulatory Information

Federal Regulations

Registration status: 
Chemical TSCA, US released; restriction on use / listed

listed on TSCA-Inventory with S-flag
TSCA § 5 final Significant New Use Restriction (SNUR)
40 CFR 721.10229

100 LBS

State regulations

<table>
<thead>
<tr>
<th>State RTK</th>
<th>CAS Number</th>
<th>Chemical name</th>
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<tbody>
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<td>Butane, 1,1'-(oxybis(2,1-ethanediyoxy))bis-</td>
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</tr>
</tbody>
</table>

NFPA Hazard codes:
Health : 1  Fire: 1  Reactivity: 0  Special:

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/06/23

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END OF DATA SHEET