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

1.1. Product identifier

Product form : Substance
Physical state : Liquid
Substance name : DI-n-BUTYLDIACETOXYTIN, tech-95
Product code : SND3160
Formula : C12H24O4Sn
Synonyms : DIBUTYLINDIACETATE; DIBUTYLDIACETOXYSTANNANE; DIBUTYL Tin DIACETATE
Chemical family : ORGANOTIN

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acute toxicity (oral), Category 3 : H301
Skin corrosion/irritation, Category 1C : H314
Serious eye damage/eye irritation, Category 1 : H318

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms (CLP) : GHS05 GHS06

Signal word (CLP) : Danger
Hazard statements (CLP) : H301 - Toxic if swallowed.
H314 - Causes severe skin burns and eye damage.
DI-n-BUTYLDIACETOXYTIN, tech-95
Safety Data Sheet

Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P260 - Do not breathe vapours.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances
Substance type : Mono-constituent
Name : DI-n-BUTYLDIACETOXYTIN, tech-95
CAS-No. : 1067-33-0
EC-No. : 213-928-8

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di-n-butyldiacetoxytin</td>
<td>(CAS-No.) 1067-33-0</td>
<td>95 - 100%</td>
<td>Acute Tox. 3 (Oral), H301 Skin Corr. 1C, H314 Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of water/…. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects : Causes severe skin burns and eye damage.
Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
Symptoms/effects after skin contact : Causes (severe) skin burns.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed
Note to physician: Application of corticosteroid creams has been effective in treating severe skin irritation. If blisters develop, they may require abrasion to promote healing.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media : Do not use straight streams.

5.2. Special hazards arising from the substance or mixture
Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters
Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.
SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Protective equipment\: Wear protective equipment as described in Section 8.
Emergency procedures\: Evacuate unnecessary personnel.
6.1.2. For emergency responders
Protective equipment\: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
For containment\: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up\: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling\: Avoid all eye and skin contact and do not breathe vapour and mist. Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures\: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions\: Keep container tightly closed. Store locked up.
Storage area\: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

<table>
<thead>
<tr>
<th>Di-n-butyl-diacytostin (1067-33-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
</tr>
<tr>
<td>USA OSHA</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
Handle in an enclosing hood with exhaust ventilation.

Personal protective equipment:
Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:
Neoprene or nitrile rubber gloves

Eye protection:
Chemical goggles or face shield. Contact lenses should not be worn

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.
**SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>351.01 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Pale yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.4773</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
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</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>-10 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>142 - 145 °C @ 10 mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>143 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>1.3 mm Hg @ 35°C</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>12.1</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.32</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water. Reacts slowly with water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>14 cSt</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 9.2. Other information

No additional information available

**SECTION 10: Stability and reactivity**

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Reacts with moisture in air and water, slowly releasing acetic acid and dibutyltin oxide. Direct sunlight causes slow degradation to an inorganic tin salt.

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials


### 10.6. Hazardous decomposition products


**SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Di-n-BUTYLDIACETOXYTIN, tech-95 (1067-33-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE CLP (oral)</td>
</tr>
</tbody>
</table>

**Di-n-butylidiacetoxytin (1067-33-0)**

| LD50 oral rat                               | 109.7 mg/kg |
| ATE CLP (oral)                              | 109.7 mg/kg bodyweight |

Skin corrosion/irritation: Causes severe skin burns and eye damage.
DI-n-BUTYLDIACETOXYTIN, tech-95
Safety Data Sheet

Serious eye damage/irritation: Causes serious eye damage.
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: Not classified
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified
Symptoms/effects after inhalation: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact: Causes (severe) skin burns.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity
Acute aquatic toxicity: Not classified
Chronic aquatic toxicity: Not classified

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Sewage disposal recommendations: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN- No. (ADR): 2922
UN- No. (IMDG): 2922
UN- No. (IATA): 2922
UN- No. (ADN): 2922
UN- No. (RID): 2922

14.2. UN proper shipping name
Proper Shipping Name (ADR): CORROSIVE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (IMDG): CORROSIVE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (IATA): Corrosive liquid, toxic, n.o.s.
Proper Shipping Name (ADN): CORROSIVE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (RID): CORROSIVE LIQUID, TOXIC, N.O.S.
Transport document description (ADR): UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (DI-n-BUTYLDIACETOXYTIN), 8 (6.1), III, (E)
Transport document description (IMDG): UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (DI-n-BUTYLDIACETOXYTIN), 8 (6.1), III
Transport document description (IATA): UN 2922 Corrosive liquid, toxic, n.o.s. (DI-n-BUTYLDIACETOXYTIN), 8 (6.1), III
Transport document description (ADN): UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (DI-n-BUTYLDIACETOXYTIN), 8 (6.1), III
### DI-n-BUTYLDIACETOXYTIN, tech-95

**Safety Data Sheet**

**Transport document description (RID):**

<table>
<thead>
<tr>
<th>RID</th>
<th>Description</th>
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<tbody>
<tr>
<td>UN 2922</td>
<td>CORROSIVE LIQUID, TOXIC, N.O.S. (DI-n-BUTYLDIACETOXYTIN), 8 (6.1), III</td>
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</table>

#### 14.3. Transport hazard class(es)

**ADR**

<table>
<thead>
<tr>
<th>Class</th>
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<tbody>
<tr>
<td>8 (6.1)</td>
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</table>

**Danger labels (ADR):**

- 8, 6.1

**IMDG**

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
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**Danger labels (IMDG):**

- 8, 6.1

**IATA**

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
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</table>

**Hazard labels (IATA):**

- 8, 6.1

**ADN**

<table>
<thead>
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<th>Class</th>
<th>Description</th>
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</thead>
<tbody>
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</tbody>
</table>

**Danger labels (ADN):**

- 8, 6.1

**RID**

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 (6.1)</td>
<td></td>
</tr>
</tbody>
</table>

**Danger labels (RID):**

- 8, 6.1

#### 14.4. Packing group

<table>
<thead>
<tr>
<th>Packing group (ADR)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packing group (IMDG)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packing group (IATA)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packing group (ADN)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packing group (RID)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td></td>
</tr>
</tbody>
</table>

#### 14.5. Environmental hazards

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous for the environment</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>No</td>
</tr>
</tbody>
</table>
14.6. Special precautions for user

- **Overland transport**
  - Classification code (ADR) : CT1
  - Special provisions (ADR) : 274
  - Limited quantities (ADR) : 5 l
  - Excepted quantities (ADR) : E1
  - Packing instructions (ADR) : P001, IBC03, R001
  - Mixed packing provisions (ADR) : MP19
  - Portable tank and bulk container instructions (ADR) : T7
  - Portable tank and bulk container special provisions (ADR) : TP1, TP28
  - Tank code (ADR) : L4BN
  - Vehicle for tank carriage : AT
  - Transport category (ADR) : 3
  - Special provisions for carriage - Packages (ADR) : V12
  - Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28
  - Hazard identification number (Kemler No.) : 86
  - Orange plates :
    - Tunnel restriction code (ADR) : E
    - EAC code : 2X
    - APP code : B

- **Transport by sea**
  - Special provisions (IMDG) : 223, 274
  - Limited quantities (IMDG) : 5 L
  - Excepted quantities (IMDG) : E1
  - Packing instructions (IMDG) : P001
  - IBC packing instructions (IMDG) : IBC03
  - Tank instructions (IMDG) : T7
  - Tank special provisions (IMDG) : TP1, TP28
  - EmS-No. (Fire) : F-A
  - EmS-No. (Spillage) : S-B
  - Stowage category (IMDG) : B
  - Stowage and handling (IMDG) : SW2
  - Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes. Toxic if swallowed, by skin contact or by inhalation.

- **Air transport**
  - PCA Excepted quantities (IATA) : E1
  - PCA Limited quantities (IATA) : Y841
  - PCA limited quantity max net quantity (IATA) : 1L
  - PCA packing instructions (IATA) : 852
  - PCA max net quantity (IATA) : 5L
  - CAO packing instructions (IATA) : 856
  - CAO max net quantity (IATA) : 60L
  - Special provisions (IATA) : A3
  - ERG code (IATA) : 8P

- **Inland waterway transport**
  - Classification code (ADN) : CT1
  - Special provisions (ADN) : 274, 802
  - Limited quantities (ADN) : 5 L
DI-n-BUTYLDIACETOXYTIN, tech-95
Safety Data Sheet

**SECTION 14: Physical and Chemical properties**

- Description
  - Brown liquid
  - Odor: Pleasant, fruity

**SECTION 15: Regulatory information**

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

15.1.2. National regulations

**Germany**

Reference to AwSV: Water hazard class (WGK) 3, Highly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 2011)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

**Netherlands**

SZW-lijst van kankerverwekkende stoffen: The substance is not listed

SZW-lijst van mutagene stoffen: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling: The substance is not listed

**Denmark**

Danish National Regulations: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available
Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information
Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Acute Tox. 3 (Oral)</th>
<th>Acute toxicity (oral), Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1C</td>
<td>Skin corrosion/irritation, Category 1C</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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