

**DIBUTYLTIN DIISOCTYLMALEATE****Safety Data Sheet SND2930**

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Version: 1.2

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

|                 |   |
|-----------------|---|
| Product form    | : Substance   |
| Physical state  | : Liquid  |
| Trade name      | : DIBUTYLTIN DIISOCTYLMALEATE                       |
| Product code    | : SND2930   |
| Formula         | : C <sub>32</sub> H <sub>56</sub> O <sub>8</sub> Sn |
| Synonyms        | : DI-n-BUTYLTIN DIISOCTYLMALEATE                    |
| 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](mailto:info@gelest.com) - [www.gelest.com](http://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](mailto:info@gelestde.com) - [www.gelest.com](http://www.gelest.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 4                  | H302 |
| Skin corrosion/irritation, Category 2              | H315 |
| Serious eye damage/eye irritation, Category 2      | H319 |
| Germ cell mutagenicity, Category 2                 | H341 |
| Reproductive toxicity, Category 1B                 | H360 |
| Full text of H- and EUH-statements: see section 16 |      |

**Adverse physicochemical, human health and environmental effects**

No additional information available

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### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- : H302 - Harmful if swallowed.  
H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
H341 - Suspected of causing genetic defects.  
H360 - May damage fertility or the unborn child.
- : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type

Name

CAS-No.

EC-No.

- : Multi-constituent
- : DI-n-BUTYLBIS(2-ETHYLHEXYLMALEATE)TIN, tech-95
- : 25168-21-2
- : 246-701-7

| Name  | Product identifier                         | %    | Classification according to Regulation (EC) No. 1272/2008 [CLP]   |
|---|--|------|---|
| 2-Butenoic acid, 4,4'-[(dibutylstannylene)bis(oxy)]bis[4-oxo-, diisooctyl ester, (Z,Z)- | (CAS-No.) 25168-21-2<br>(EC-No.) 246-701-7 | > 90 | Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Muta. 2, H341<br>Repr. 1B, H360FD |
| Other Organotins  |  | < 10 | Not classified  |

Full text of H- and EUH-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

First-aid measures after inhalation

First-aid measures after skin contact

- : 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. IF exposed or concerned: Get medical advice/attention.
- : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
- : Wash with plenty of water/.... Wash contaminated clothing before reuse. Get medical advice/attention.

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|                                      |  |
|--------------------------------------|--|
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Immediately flush eyes thoroughly with water for at least 15 minutes. Get medical advice/attention. Remove contact lenses, if present and easy to do. Continue rinsing. |
| First-aid measures after ingestion   | : Never give anything by mouth to an unconscious person. Get medical advice/attention. Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.  |

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

|                                     |   |
|-------------------------------------|---|
| Symptoms/effects                    | : Suspected of causing genetic defects (dermal). May damage fertility or the unborn child (dermal). |
| Symptoms/effects after skin contact | : Causes skin irritation.   |
| Symptoms/effects after eye contact  | : Causes serious eye irritation.  |
| Symptoms/effects after ingestion    | : 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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Water spray. Foam. Carbon dioxide. Dry chemical. |
| 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.  |
| 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

|                      |                                   |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

#### 6.1.2. For emergency responders

|                      |  |
|----------------------|--|
| Protective equipment | : Equip cleanup crew with proper 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 Section 8. Exposure controls and personal protection.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling.

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

- Storage conditions : Keep container tightly closed.
- 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

##### 8.1.1 National occupational exposure and biological limit values

###### Other Organotins

###### USA - ACGIH - Occupational Exposure Limits

|               |                              |
|---------------|------------------------------|
| ACGIH OEL TWA | 0.1 mg/m <sup>3</sup> as tin |
|---------------|------------------------------|

##### 8.1.2. Recommended monitoring procedures

No additional information available

##### 8.1.3. Air contaminants formed

No additional information available

##### 8.1.4. DNEL and PNEC

No additional information available

##### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

###### Appropriate engineering controls:

Provide local exhaust or general room ventilation.

##### 8.2.2. Personal protection equipment

###### 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.

###### 8.2.2.1. Eye and face protection

###### Eye protection:

Chemical goggles. Contact lenses should not be worn

###### 8.2.2.2. Skin protection

###### Skin and body protection:

Wear suitable protective clothing

###### Hand protection:

Neoprene or nitrile rubber gloves

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### 8.2.2.3. Respiratory protection

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

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

|   |   |
|---|---|
| Physical state                                  | : Liquid                                  |
| Appearance                                      | : Pale yellow or light brown oily liquid. |
| Molecular mass                                  | : 687.46 g/mol                            |
| Colour  | : No data available                       |
| Odour   | : characteristic.                         |
| Odour threshold                                 | : No data available                       |
| Refractive index                                | : No data available                       |
| pH  | : No data available                       |
| Relative evaporation rate (butylacetate=1)      | : No data available                       |
| Melting point                                   | : No data available                       |
| Freezing point                                  | : -25 °C                                  |
| Boiling point                                   | : No data available                       |
| Flash point                                     | : 123 °C                                  |
| Auto-ignition temperature                       | : No data available                       |
| Decomposition temperature                       | : No data available                       |
| Flammability (solid, gas)                       | : No data available                       |
| Vapour pressure                                 | : No data available                       |
| Relative vapour density at 20°C                 | : No data available                       |
| Relative density                                | : 1.145                                   |
| Solubility                                      | : Insoluble, reacts slowly.               |
| Partition coefficient n-octanol/water (Log Pow) | : No data available                       |
| Partition coefficient n-octanol/water (Log Kow) | : No data available                       |
| Viscosity, kinematic                            | : No data available                       |
| Viscosity, dynamic                              | : No data available                       |
| Explosive properties                            | : No data available                       |
| Oxidising properties                            | : No data available                       |
| Explosive limits                                | : No data available                       |

### 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 in sealed containers. Direct sunlight causes degradation to an inorganic tin salt.

### 10.3. Possibility of hazardous reactions

Reacts with moisture in air and water, slowly releasing butanol and dibutyltin oxide.

### 10.4. Conditions to avoid

Direct sunlight. Heat. Open flame. Sparks.

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### 10.5. Incompatible materials

Bases. Reducing agents. Moisture. Water.

### 10.6. Hazardous decomposition products

Organic acid vapors. n-Butanol. Tin oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

#### DIBUTYLTIN DIISOCTYLMALEATE (25168-21-2)

|                |                       |
|----------------|-----------------------|
| ATE CLP (oral) | 1690 mg/kg bodyweight |
|----------------|-----------------------|

#### 2-Butenoic acid, 4,4'-[(dibutylstannylene)bis(oxy)]bis[4-oxo-, diisooctyl ester, (Z,Z)- (25168-21-2)

|               |            |
|---------------|------------|
| LD50 oral rat | 1690 mg/kg |
|---------------|------------|

|                |                       |
|----------------|-----------------------|
| ATE CLP (oral) | 1690 mg/kg bodyweight |
|----------------|-----------------------|

|   |  |
|---|--|
| Skin corrosion/irritation                           | : Causes skin irritation.  |
| Serious eye damage/irritation                       | : Causes serious eye irritation.   |
| Respiratory or skin sensitisation                   | : Not classified   |
| Germ cell mutagenicity                              | : Suspected of causing genetic defects.  |
| Carcinogenicity                                     | : Not classified   |
| Reproductive toxicity                               | : May damage fertility or the unborn child.  |
| STOT-single exposure                                | : Not classified   |
| STOT-repeated exposure                              | : Not classified   |
| Aspiration hazard                                   | : Not classified   |
| Potential adverse human health effects and symptoms | : Harmful if swallowed.  |
| Symptoms/effects after skin contact                 | : Causes skin irritation.  |
| Symptoms/effects after eye contact                  | : Causes serious eye irritation.   |
| Symptoms/effects after ingestion                    | : Swallowing a small quantity of this material will result in serious health hazard. |

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : 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

No additional information available

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

|  |   |
|--|---|
| 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

In accordance with ADR / IMDG / IATA / ADN / RID

#### 14.1 UN number

|               |                  |
|---------------|------------------|
| UN-No. (ADR)  | : Not applicable |
| UN-No. (IMDG) | : Not applicable |
| UN-No. (IATA) | : Not applicable |
| UN-No. (ADN)  | : Not applicable |
| UN-No. (RID)  | : Not applicable |

#### 14.2. UN proper shipping name

|                             |                  |
|-----------------------------|------------------|
| Proper Shipping Name (ADR)  | : Not applicable |
| Proper Shipping Name (IMDG) | : Not applicable |
| Proper Shipping Name (IATA) | : Not applicable |
| Proper Shipping Name (ADN)  | : Not applicable |
| Proper Shipping Name (RID)  | : Not applicable |

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

|                                  |                  |
|----------------------------------|------------------|
| <b>ADR</b>                       |                  |
| Transport hazard class(es) (ADR) | : Not applicable |

|                                   |                  |
|-----------------------------------|------------------|
| <b>IMDG</b>                       |                  |
| Transport hazard class(es) (IMDG) | : Not applicable |

|                                   |                  |
|-----------------------------------|------------------|
| <b>IATA</b>                       |                  |
| Transport hazard class(es) (IATA) | : Not applicable |

|                                  |                  |
|----------------------------------|------------------|
| <b>ADN</b>                       |                  |
| Transport hazard class(es) (ADN) | : Not applicable |

|                                  |                  |
|----------------------------------|------------------|
| <b>RID</b>                       |                  |
| Transport hazard class(es) (RID) | : Not applicable |

#### 14.4. Packing group

|                      |                  |
|----------------------|------------------|
| Packing group (ADR)  | : Not applicable |
| Packing group (IMDG) | : Not applicable |
| Packing group (IATA) | : Not applicable |
| Packing group (ADN)  | : Not applicable |
| Packing group (RID)  | : Not applicable |

#### 14.5. Environmental hazards

|                               |  |
|-------------------------------|--|
| Dangerous for the environment | : No                                     |
| Marine pollutant              | : No                                     |
| Other information             | : No supplementary information available |

#### 14.6. Special precautions for user

##### Overland transport

No data available

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### Transport by sea

No data available

### Air transport

No data available

### Inland waterway transport

No data available

### Rail transport

No data available

## 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

###### EU restriction list (REACH Annex XVII)

|                             |   |
|-----------------------------|---|
| 20. Organostannic compounds | 2-Butenoic acid, 4,4'-[(dibutylstannylene)bis(oxy)]bis[4-oxo-, diisooctyl ester, (Z,Z)- ; Other Organotin |
|-----------------------------|---|

##### POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

##### REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Listed on the PIC list (Regulation EU 649/2012): diisooctyl 4,4'-[(dibutylstannylene)bis(oxy)]bis[4-oxoisocrotonate]

##### Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

##### VOC Directive (2004/42)

VOC content : No additional information available

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

##### Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 2011).  
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed  
SZW-lijst van mutagene stoffen : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

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SZW-lijst van reprotoxische stoffen – : The substance is not listed  
Vruchtbaarheid  
SZW-lijst van reprotoxische 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  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

### Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

## 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

### Abbreviations and acronyms:

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:

|                     |  |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4                  |
| Eye Irrit. 2        | Serious eye damage/eye irritation, Category 2      |
| H302                | Harmful if swallowed.                              |
| H315                | Causes skin irritation.                            |
| H319                | Causes serious eye irritation.                     |
| H341                | Suspected of causing genetic defects.              |
| H360                | May damage fertility or the unborn child.          |
| H360FD              | May damage fertility. May damage the unborn child. |
| Muta. 2             | Germ cell mutagenicity, Category 2                 |
| Repr. 1B            | Reproductive toxicity, Category 1B                 |
| Skin Irrit. 2       | Skin corrosion/irritation, Category 2              |

SDS EU (REACH Annex II) - Custom v22 Test

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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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