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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>: Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>: Solid</td>
</tr>
<tr>
<td>Substance name</td>
<td>: DI-n-BUTYL(MALEATE)TIN</td>
</tr>
<tr>
<td>Product code</td>
<td>: SND3320</td>
</tr>
<tr>
<td>Formula</td>
<td>: (C12H20O4Sn)n</td>
</tr>
<tr>
<td>Synonyms</td>
<td>: DI-n-BUTYL Tin MALEATE</td>
</tr>
<tr>
<td></td>
<td>: DIBUTYL(MALEOYLDIOXY)TIN</td>
</tr>
<tr>
<td></td>
<td>: DIBUTYLSTANNYLENE MALEATE</td>
</tr>
<tr>
<td></td>
<td>: DI-N-BUTYL-1,3,2-DIOXASTANNEPIN-4,7-DIONE</td>
</tr>
<tr>
<td>Chemical family</td>
<td>: ORGANOTIN</td>
</tr>
</tbody>
</table>

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 4 : H302
- Acute toxicity (dermal), Category 2 : H310
- Acute toxicity (inhalation: dust, mist) Category 2 : H330
- Skin corrosion/irritation, Category 2 : H315
- Serious eye damage/eye irritation, Category 2 : H319
- Reproductive toxicity, Category 1B : H360
- Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation : H335
- Specific target organ toxicity — Repeated exposure, Category 1 : H372
- Hazardous to the aquatic environment — Acute Hazard, Category 1 : H400
- Hazardous to the aquatic environment — Chronic Hazard, Category 1 : H410

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available
DI-n-BUTYL(MALEATE)TIN
Safety Data Sheet

2.2. Label elements

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

Hazard pictograms (CLP):

- GHS06
- GHS08
- GHS09

Signal word (CLP): Danger

Hazard statements (CLP):
- H302 - Harmful if swallowed.
- H310+H330 - Fatal in contact with skin or if inhaled
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H335 - May cause respiratory irritation.
- H360 - May damage fertility or the unborn child.
- H372 - Causes damage to organs (immune system) through prolonged or repeated exposure.
- H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP):
- P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P260 - Do not breathe dust.
- P264 - Wash hands thoroughly after handling.
- P271 - Use only outdoors or in a well-ventilated area.
- P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Mono-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>DI-n-BUTYL(MALEATE)TIN</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>78-04-6</td>
</tr>
<tr>
<td>EC-No.</td>
<td>201-077-5</td>
</tr>
</tbody>
</table>

<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-butyl(maleate)tin</td>
<td>(CAS-No.) 78-04-6 (EC-No.) 201-077-5</td>
<td>95 - 100</td>
<td>Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360Df STOT SE 3, H335 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</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. Immediately call a POISON CENTER/doctor.

First-aid measures after skin contact: Wash with plenty of water/…. Immediately call a POISON CENTER/doctor.

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 medical advice/attention.

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.
# DI-n-BUTYL(MALEATE)TIN

## Safety Data Sheet

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

**Symptoms/effects:**
- Causes damage to organs through prolonged or repeated exposure. May damage fertility or the unborn child.

**Symptoms/effects after inhalation:**
- Fatal if inhaled. May cause respiratory irritation.

**Symptoms/effects after skin contact:**
- Fatal in contact with skin. Causes skin irritation. Organotins may be absorbed through the skin.

**Symptoms/effects after eye contact:**
- Causes serious eye irritation.

**Symptoms/effects after ingestion:**
- Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

**Chronic symptoms:**
- Exposure to dust or fumes of inorganic tin compounds is known to cause a benign pneumoniosis. (stannosis).

### 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:**

**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 contact with skin and eyes. Do not breathe dust.

## 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

- Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product 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:**
- Collect spillage. 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:**
- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Do not breathe dust. Avoid dust formation. Use only outdoors or in a well-ventilated area.

**Hygiene measures:**
- Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

**Storage conditions:**
- Keep container tightly closed. Store locked up.

**Incompatible materials:**
- Oxidizing agent.

**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
**Di-n-Butyl(maleate)Tin**

Safety Data Sheet

**Section 8: 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. 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 dust and mist (orange 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>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>346.98 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>White to off-white</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.502</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>103 - 105 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 200 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>204 °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>&lt; 25 mm Hg @ 170°C</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.32</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>&lt; 0.3 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water, Organic solvent: Soluble: benzene, organic esters</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>No data available</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**
No additional information available

10.4. **Conditions to avoid**
No additional information available

10.5. **Incompatible materials**
Oxidizing agent.

10.6. **Hazardous decomposition products**
Organic acid vapors. Tin oxides.

**SECTION 11: Toxicological information**

11.1. **Information on toxicological effects**

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Harmful if swallowed. Fatal in contact with skin. Fatal if inhaled.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Di-n-BUTYL(MALEATE)TIN (78-04-6)</strong></td>
<td></td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>500 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (dermal)</td>
<td>200 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (dust,mist)</td>
<td>0.05 mg/l/4h</td>
</tr>
<tr>
<td><strong>Di-n-butyl(maleate)tin (78-04-6)</strong></td>
<td></td>
</tr>
<tr>
<td>LD50 oral mouse</td>
<td>470 mg/kg LDLo; RTECS Number: JH4735000</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>200 mg/kg LDLo</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>313 mg/m³ (Exposure time: 4 h)</td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>500 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (dermal)</td>
<td>200 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (gases)</td>
<td>100 ppmv/4h</td>
</tr>
<tr>
<td>ATE CLP (vapours)</td>
<td>0.5 mg/l/4h</td>
</tr>
<tr>
<td>ATE CLP (dust,mist)</td>
<td>0.05 mg/l/4h</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>None of the components in this product at concentrations &gt;0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reproductive toxicity</th>
<th>May damage fertility or the unborn child.</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOT-single exposure</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Causes damage to organs (immune system) through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>Fatal if inhaled. May cause respiratory irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>Fatal in contact with skin. Causes skin irritation. Organotins may be absorbed through the skin.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after ingestion</td>
<td>Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.</td>
</tr>
<tr>
<td>Chronic symptoms</td>
<td>Exposure to dust or fumes of inorganic tin compounds is known to cause a benign pneumoniosis. (stannosis).</td>
</tr>
<tr>
<td>Reason for classification</td>
<td>Expert judgment</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological information**

12.1. **Toxicity**

| Ecology - general | Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. |
| Acute aquatic toxicity | Very toxic to aquatic life. |
| Chronic aquatic toxicity | Very toxic to aquatic life with long lasting effects. |
### Di-n-BUTYL(MALEATE)TIN

#### Safety Data Sheet

**LC50 fish 1**

| > 5.7 mg/l (Exposure time: 96 h · Species: Brachydanio rerio) |

---

#### 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

| UN-No. (ADR) | 3146 |
| UN-No. (IMDG) | 3146 |
| UN-No. (IATA) | 3146 |
| UN-No. (ADN) | 3146 |
| UN-No. (RID) | 3146 |

#### 14.2. UN proper shipping name

- **Proper Shipping Name (ADR)**: ORGANOTIN COMPOUND, SOLID, N.O.S.
- **Proper Shipping Name (IMDG)**: ORGANOTIN COMPOUND, SOLID, N.O.S.
- **Proper Shipping Name (IATA)**: Organotin compound, solid, n.o.s.
- **Proper Shipping Name (ADN)**: ORGANOTIN COMPOUND, SOLID, N.O.S.
- **Proper Shipping Name (RID)**: ORGANOTIN COMPOUND, SOLID, N.O.S.
- **Transport document description (ADR)**: UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (DI-n-BUTYL(MALEATE)TIN), 6.1, II, (D/E), ENVIRONMENTALLY HAZARDOUS
- **Transport document description (IMDG)**: UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (DI-n-BUTYL(MALEATE)TIN), 6.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
- **Transport document description (IATA)**: UN 3146 Organotin compound, solid, n.o.s. (DI-n-BUTYL(MALEATE)TIN), 6.1, II, ENVIRONMENTALLY HAZARDOUS
- **Transport document description (ADN)**: UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (DI-n-BUTYL(MALEATE)TIN), 6.1, II, ENVIRONMENTALLY HAZARDOUS
- **Transport document description (RID)**: UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (DI-n-BUTYL(MALEATE)TIN), 6.1, II, ENVIRONMENTALLY HAZARDOUS

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

**ADR**

- **Transport hazard class(es) (ADR)**: 6.1
- **Danger labels (ADR)**: 6.1

---

**IMDG**
## Transport hazard class(es) (IMDG)
- Class: 6.1
- Danger labels: 6.1

### IATA
- Transport hazard class(es) (IATA): 6.1
- Hazard labels (IATA): 6.1

### ADN
- Transport hazard class(es) (ADN): 6.1
- Danger labels (ADN): 6.1

### RID
- Transport hazard class(es) (RID): 6.1
- Danger labels (RID): 6.1

### 14.4. Packing group
- Packing group (ADR): II
- Packing group (IMDG): II
- Packing group (IATA): II
- Packing group (ADN): II
- Packing group (RID): II

### 14.5. Environmental hazards
- Dangerous for the environment: Yes
- Marine pollutant: Yes
- Other information: No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport
- Classification code (ADR): T3
- Special provisions (ADR): 43, 274
- Limited quantities (ADR): 500g
- Excepted quantities (ADR): E4
- Packing instructions (ADR): P002, IBC08
- Special packing provisions (ADR): B3
- Mixed packing provisions (ADR): MP10
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Portable tank and bulk container instructions (ADR) : T3
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAH, L4BH
Tank special provisions (ADR) : TU15, TE19
Vehicle for tank carriage : AT
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V11
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28
Special provisions for carriage - Operation (ADR) : S9, S19
Hazard identification number (Kemler No.) : 60
Orange plates:

Tunnel restriction code (ADR) : D/E
EAC code : 2X

- Transport by sea
Special provisions (IMDG) : 43, 274
Limited quantities (IMDG) : 500 g
Excepted quantities (IMDG) : E4
Packing instructions (IMDG) : P002
IBC packing instructions (IMDG) : IBC08
IBO special provisions (IMDG) : B2, B4
Tank instructions (IMDG) : T3
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-A
Stowage category (IMDG) : A
Stowage and handling (IMDG) : SW2
Properties and observations (IMDG) : A wide variety of toxic solids. Toxic if swallowed, by skin contact or by inhalation.

- Air transport
PCA Excepted quantities (IATA) : E4
PCA Limited quantities (IATA) : Y644
PCA limited quantity max net quantity (IATA) : 1kg
PCA packing instructions (IATA) : 669
PCA max net quantity (IATA) : 25kg
CAO packing instructions (IATA) : 676
CAO max net quantity (IATA) : 100kg
Special provisions (IATA) : A3, A4, A6
ERG code (IATA) : 6L

- Inland waterway transport
Classification code (ADN) : T3
Special provisions (ADN) : 43, 274, 802
Limited quantities (ADN) : 500 g
Excepted quantities (ADN) : E4
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 2

- Rail transport
Classification code (RID) : T3
Special provisions (RID) : 43, 274
Limited quantities (RID) : 500g
Excepted quantities (RID) : E4
DI-n-BUTYL(MALEATE)TIN
Safety Data Sheet

Packing instructions (RID) : P002, IBC08
Special packing provisions (RID) : B4
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T3
Portable tank and bulk container special provisions (RID) : TP33
Tank codes for RID tanks (RID) : SGAH, L4BH
Special provisions for RID tanks (RID) : TU15
Transport category (RID) : 2
Special provisions for carriage – Packages (RID) : W11
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28, CW31
Colis express (express parcels) (RID) : CE9
Hazard identification number (RID) : 60

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
No REACH Annex XVII restrictions
DI-n-BUTYL(MALEATE)TIN is not on the REACH Candidate List
DI-n-BUTYL(MALEATE)TIN is not on the REACH Annex XIV List
DI-n-BUTYL(MALEATE)TIN is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

% Volatiles : < 0.3 %

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
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information
Abbreviations and acronyms:
DI-n-BUTYL(MALEATE)TIN
Safety Data Sheet

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. 2 (Dermal)</th>
<th>Acute toxicity (dermal), Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 2 (Inhalation)</td>
<td>Acute toxicity (inhal.), Category 2</td>
</tr>
<tr>
<td>Acute Tox. 2 (Inhalation:dust,mist)</td>
<td>Acute toxicity (inhalation:dust,mist) Category 2</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment — Acute Hazard, Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment — Chronic Hazard, Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>Repr. 1B</td>
<td>Reproductive toxicity, Category 1B</td>
</tr>
<tr>
<td>Repr. 1B</td>
<td>Reproductive toxicity, Category 1B</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>Specific target organ toxicity — Repeated exposure, Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H310</td>
<td>Fatal in contact with skin.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H330</td>
<td>Fatal if inhaled.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H360</td>
<td>May damage fertility or the unborn child.</td>
</tr>
<tr>
<td>H360/D</td>
<td>May damage the unborn child. Suspected of damaging fertility.</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</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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