

**DIOCTYLDICHLOROTIN, tech-95****Safety Data Sheet SND4410**

Issue date: 18/12/2015

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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	: Solid
Substance name	: DIOCTYLDICHLOROTIN, tech-95
Product code	: SND4410
Formula	: C <sub>16</sub> H <sub>34</sub> Cl <sub>2</sub> Sn
Synonyms	: DIOCTYLTINDICHLORIDE; DIOCTYLDICHLOROSTANNANE
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  
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[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 3	H301
Specific target organ toxicity – Repeated exposure, Category 1	H372
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412
Full text of H- and EUH-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)



GHS06

GHS08

# DIOCTYLDICHLOROTIN, tech-95

## Safety Data Sheet

Signal word (CLP)	: Danger
Hazard statements (CLP)	: H301 - Toxic if swallowed. H372 - Causes damage to organs through prolonged or repeated exposure. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P260 - Do not breathe dust. P264 - Wash hands thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P273 - Avoid release to the environment. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER. P501 - Dispose of contents/container to licensed waste disposal facility..

### 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	: Multi-constituent
Name	: DIOCTYLDICHLOROTIN, tech-95
CAS-No.	: 3542-36-7
EC-No.	: 222-583-2

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Diocetylchlorotin	(CAS-No.) 3542-36-7 (EC-No.) 222-583-2	95 – 100	Acute Tox. 3 (Oral), H301 STOT RE 1, H372 Aquatic Chronic 3, H412
Other Organotins		0 – 5	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	: 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. Organotins may be absorbed through the skin.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: May be harmful if swallowed.

### 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.

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### 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.
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#### 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".
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#### 6.2. Environmental precautions

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	: 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.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin and eyes. Do not breathe dust. Avoid dust formation. Provide local exhaust or general room ventilation to minimize exposure to dust.
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	: Bases. Direct sunlight. Reducing agents.
Storage area	: Store in a well-ventilated place. Store away from heat.

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

No additional information available

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## Safety Data Sheet

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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

Other Organotin	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	0.1 mg/m <sup>3</sup> as tin
Diocetyldichlorotin (3542-36-7)	
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 or face shield. 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

###### 8.2.2.3. Respiratory protection

###### 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.

###### 8.2.2.4. Thermal hazards

No additional information available

##### 8.2.3. Environmental exposure controls

No additional information available

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## Safety Data Sheet

### SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Crystals.
Molecular mass	: 416.04 g/mol
Colour	: Light yellow to amber.
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	: 46 – 48 °C
Freezing point	: No data available
Boiling point	: 175 °C @ 1 mm Hg
Flash point	: 204 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: < 0.1 mm Hg @ 25°C
Relative vapour density at 20°C	: No data available
Relative density	: 1.17 @ 50°C
Solubility	: Insoluble in water. Organic solvent: Soluble: hexane, acetone
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.

#### 10.3. Possibility of hazardous reactions

Direct sunlight causes degradation to an inorganic tin salt.

#### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

#### 10.5. Incompatible materials

Bases. Direct sunlight. Reducing agents.

#### 10.6. Hazardous decomposition products

Organic acid vapors. Tin oxides.

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## Safety Data Sheet

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed.

#### DIOCTYLDICHLOROTIN, tech-95 (3542-36-7)

ATE CLP (oral)	100 mg/kg bodyweight
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#### Dioctyldichlorotin (3542-36-7)

LD50 oral rat	5500 mg/kg
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ATE CLP (oral)	100 mg/kg bodyweight
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Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

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 : Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Causes (severe) skin burns. Organotins may be absorbed through the skin.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : May be harmful if swallowed.

Reason for classification : Expert judgment

### 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) : Harmful to aquatic life with long lasting effects.

#### 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.

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## Safety Data Sheet

### SECTION 14: Transport information

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

#### 14.1 UN number

UN-No. (ADR)	: 3261
UN-No. (IMDG)	: 3261
UN-No. (IATA)	: 3261
UN-No. (ADN)	: 3261
UN-No. (RID)	: 3261

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Proper Shipping Name (IMDG)	: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Proper Shipping Name (IATA)	: Corrosive solid, acidic, organic, n.o.s.
Proper Shipping Name (ADN)	: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Proper Shipping Name (RID)	: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Transport document description (ADR)	: UN 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (DIOCTYLDICHLOROTIN), 8, III, (E)
Transport document description (IMDG)	: UN 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (DIOCTYLDICHLOROTIN), 8, III
Transport document description (IATA)	: UN 3261 Corrosive solid, acidic, organic, n.o.s. (DIOCTYLDICHLOROTIN), 8, III
Transport document description (ADN)	: UN 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (DIOCTYLDICHLOROTIN), 8, III
Transport document description (RID)	: UN 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (DIOCTYLDICHLOROTIN), 8, III

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

##### ADR

Transport hazard class(es) (ADR)	: 8
Danger labels (ADR)	: 8
	:



##### IMDG

Transport hazard class(es) (IMDG)	: 8
Danger labels (IMDG)	: 8
	:



##### IATA

Transport hazard class(es) (IATA)	: 8
Danger labels (IATA)	: 8
	:



##### ADN

Transport hazard class(es) (ADN)	: 8
Danger labels (ADN)	: 8



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### RID

Transport hazard class(es) (RID) : 8  
Danger labels (RID) : 8



### 14.4. Packing group

Packing group (ADR) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III  
Packing group (ADN) : III  
Packing group (RID) : III

### 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

Classification code (ADR) : C4  
Special provisions (ADR) : 274  
Limited quantities (ADR) : 5kg  
Excepted quantities (ADR) : E1  
Packing instructions (ADR) : P002, IBC08, LP02, R001  
Mixed packing provisions (ADR) : MP10  
Portable tank and bulk container instructions (ADR) : T1  
Portable tank and bulk container special provisions (ADR) : TP33  
Tank code (ADR) : SGAV, L4BN  
Vehicle for tank carriage : AT  
Transport category (ADR) : 3  
Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP7  
Hazard identification number (Kemler No.) : 80  
Orange plates :



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

#### Transport by sea

Special provisions (IMDG) : 223, 274  
Limited quantities (IMDG) : 5 kg  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P002, LP02  
IBC packing instructions (IMDG) : IBC08  
IBC special provisions (IMDG) : B3  
Tank instructions (IMDG) : T1  
Tank special provisions (IMDG) : TP33  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-B



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Stowage category (IMDG) : A  
Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes.

### Air transport

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y845  
PCA limited quantity max net quantity (IATA) : 5kg  
PCA packing instructions (IATA) : 860  
PCA max net quantity (IATA) : 25kg  
CAO packing instructions (IATA) : 864  
CAO max net quantity (IATA) : 100kg  
Special provisions (IATA) : A3  
ERG code (IATA) : 8L

### Inland waterway transport

Classification code (ADN) : C4  
Special provisions (ADN) : 274  
Limited quantities (ADN) : 5 kg  
Excepted quantities (ADN) : E1  
Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 0

### Rail transport

Classification code (RID) : C4  
Special provisions (RID) : 274  
Limited quantities (RID) : 5kg  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P002, IBC08, LP02, R001  
Special packing provisions (RID) : B3  
Mixed packing provisions (RID) : MP10  
Portable tank and bulk container instructions (RID) : T1  
Portable tank and bulk container special provisions (RID) : TP33  
Tank codes for RID tanks (RID) : SGAV, L4BN  
Transport category (RID) : 3  
Special provisions for carriage – Bulk (RID) : VC1, VC2, AP7  
Colis express (express parcels) (RID) : CE11  
Hazard identification number (RID) : 80

## 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	Dioctyldichlorotin ; Other Organotins
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##### 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

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### PIC Regulation (Prior Informed Consent)

Listed on the PIC list (Regulation EU 649/2012): dichlorodioctylstannane

### 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 2, Significantly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 569).

Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).

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  
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Ontwikkeling : DIOCTYLDICHLOROTIN, tech-95 is 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.

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### Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
H301	Toxic if swallowed.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1

SDS EU (REACH Annex II) - Custom v22 Test

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

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