

**DI-n-BUTYLBIS(2-ETHYLHEXANOATE)TIN, 50% in xylene**

Safety Data Sheet SND2901

Date of issue: 10/06/2016

Version: 1.0

**SECTION 1: Identification****1.1. Product identifier**

Product name	: DI-n-BUTYLBIS(2-ETHYLHEXANOATE)TIN, 50% in xylene
Product code	: SND2901
Product form	: Mixture
Physical state	: Liquid
Formula	: C <sub>24</sub> H <sub>48</sub> O <sub>4</sub> Sn
Synonyms	: DIBUTYLTINDIOCTOATE DIBUTYLTIN DI-2-ETHYLHEXANOATE STANNANE, DIBUTYLBIS[(2-ETHYL-1-OXOHEXYL)OXY]- HEXANOIC ACID, 2-ETHYL-, 1,1'-(DIBUTYLSTANNYLENE) ESTER
Chemical family	: ORGANOTIN

**1.2. Recommended use of the chemical and restrictions on use**

Recommended use	: Chemical intermediate For research and industrial use only
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**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)**1.4. Emergency telephone number**

Emergency number	: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)
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**SECTION 2: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS-US classification**

Flammable liquids Category 3	H226
Acute toxicity (oral) Category 3	H301
Skin corrosion/irritation Category 2	H315
Serious eye damage/eye irritation Category 2A	H319
Specific target organ toxicity (single exposure) Category 3	H335
Specific target organ toxicity (repeated exposure) Category 2	H373
Hazardous to the aquatic environment - Acute Hazard Category 1	H400

Full text of H statements : see section 16

**2.2. Label elements****GHS-US labeling**

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H226 - Flammable liquid and vapor  
H301 - Toxic if swallowed  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H373 - May cause damage to organs through prolonged or repeated exposure  
H400 - Very toxic to aquatic life

Precautionary statements (GHS-US)

: P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P210 - Keep away from heat, open flames, sparks. - No smoking  
P240 - Ground/Bond container and receiving equipment  
P241 - Use explosion-proof electrical equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P260 - Do not breathe vapors

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P264 - Wash hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P330 - Rinse mouth  
P301 + P310 - If swallowed: Immediately call a POISON CENTER  
P303 + P361 + P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower  
P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P304 + P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337 + P313 - If eye irritation persists: Get medical advice/attention  
P314 - Get medical advice/attention if you feel unwell  
P321 - Specific treatment (see first aid instructions on this label)  
P362 + P364 - Take off contaminated clothing and wash it before reuse  
P370 + P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish  
P391 - Collect spillage  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P403 + P235 - Keep in a cool place  
P405 - Store locked up  
P501 - Dispose of contents/container to licensed waste disposal facility

### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

No data available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Di-n-butylbis(2-ethylhexanoate)tin	(CAS No) 2781-10-4	45 - 50	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Xylene	(CAS No) 1330-20-7	45 - 50	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 STOT RE 2, H373 Aquatic Acute 1, H400

Full text of hazard classes and H-statements : see section 16

## 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 victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: Wash with plenty of soap and water. Get 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 medical advice/attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

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

Symptoms/injuries	: May cause damage to organs through prolonged or repeated exposure.
Symptoms/injuries after inhalation	: May cause respiratory irritation. May be harmful if inhaled.
Symptoms/injuries after skin contact	: Causes skin irritation. May be harmful in contact with skin.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries 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

No additional information available

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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 : Flammable liquid and vapor. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.  
Explosion hazard : May form flammable/explosive vapor-air mixture.

#### 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 vapor and mist.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Use special care to avoid static electric charges.

##### 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. Collect spillage. Use only non-sparking tools.

#### 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

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.  
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

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.  
Storage conditions : Keep container tightly closed. Keep in a cool place. Store locked up.  
Incompatible materials : Bases. Reducing agents.  
Storage area : Store in a well-ventilated place. Store away from heat.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Di-n-butylbis(2-ethylhexanoate)tin (2781-10-4)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> as tin
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> as tin
Xylene (1330-20-7)		
ACGIH	ACGIH TWA (ppm)	100 ppm
ACGIH	ACGIH STEL (ppm)	150 ppm

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### Xylene (1330-20-7)

OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	435 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

### 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. 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 organic vapor (black cartridge) respirator.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 519.34 g/mol
Color	: Straw.
Odor	: Characteristic.
Odor threshold	: No data available
Refractive index	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: < 54 - 60 °C
Boiling point	: 138 °C initial (xylene)
Flash point	: 30 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapor
Vapor pressure	: 7 mm Hg @ 21°C (xylene)
Relative vapor density at 20 °C	: No data available
Relative density	: 0.97
VOC content	: > 50 %
Solubility	: Insoluble in water. Reacts slowly with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion 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

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

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

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### 10.5. Incompatible materials

Bases. Reducing agents.

### 10.6. Hazardous decomposition products

Organic acid vapors. Tin oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed.

DI-n-BUTYLBIS(2-ETHYLHEXANOATE)TIN, 50% in xylene (2781-10-4)	
ATE US (oral)	241.379 mg/kg body weight
Di-n-butylbis(2-ethylhexanoate)tin (2781-10-4)	
LD50 oral rat	125 mg/kg 136 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE US (oral)	125.000 mg/kg body weight
Xylene (1330-20-7)	
LD50 oral rat	3500 mg/kg ; 4300 mg/kg
LD50 dermal rabbit	1700 mg/kg
LC50 inhalation rat (mg/l)	29.08 mg/l/4h
ATE US (oral)	3500.000 mg/kg body weight
ATE US (dermal)	1700.000 mg/kg body weight
ATE US (vapors)	29.080 mg/l/4h
ATE US (dust, mist)	29.080 mg/l/4h
Additional information	LCLo Inhalation man: 10,000ppm/6H

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes serious eye irritation.  
Eye Irritation - rabbit: 5 mg/24H: severe (xylene)  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen

Xylene (1330-20-7)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified  
Xylene has been found to have experimental reproductive effects  
Specific target organ toxicity (single exposure) : May cause respiratory irritation.  
Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.  
May cause damage to organs through prolonged or repeated exposure  
Aspiration hazard : Not classified  
Symptoms/injuries after inhalation : May cause respiratory irritation. May be harmful if inhaled.  
Symptoms/injuries after skin contact : Causes skin irritation. May be harmful in contact with skin.  
Symptoms/injuries after eye contact : Causes serious eye irritation.  
Symptoms/injuries after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.  
Reason for classification : Expert judgment

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Very toxic to aquatic life.

Xylene (1330-20-7)	
LC50 fish 1	13.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3.82 mg/l (Exposure time: 48 h - Species: water flea)
LC50 fish 2	2.661 - 4.093 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 2	0.6 mg/l (Exposure time: 48 h - Species: Gammarus lacustris)

### 12.2. Persistence and degradability

No additional information available

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### 12.3. Bioaccumulative potential

Xylene (1330-20-7)	
BCF fish 1	0.6 - 15
Log Pow	2.77 - 3.15

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on ozone layer : No additional information available  
Effect on the global warming : No known effects from this product.  
GWPmix comment : No known effects from this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.  
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.  
Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### 14.1. UN number

UN-No.(DOT) : 1992  
DOT NA no. : UN1992

### 14.2. UN proper shipping name

Transport document description : UN1992 Flammable liquids, toxic, n.o.s. (DI-n-BUTYLBIS(2-ETHYLHEXANOATE)TIN, 50% in xylene), 3 (6.1), III  
Proper Shipping Name (DOT) : Flammable liquids, toxic, n.o.s. (DI-n-BUTYLBIS(2-ETHYLHEXANOATE)TIN, 50% in xylene)  
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Packing group (DOT) : III - Minor Danger  
Hazard labels (DOT) : 3 - Flammable liquid  
6.1 - Poison



Dangerous for the environment : Yes  
Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Symbols : G - Identifies PSN requiring a technical name

### 14.3. Additional information

Emergency Response Guide (ERG) Number : 131  
Other information : No supplementary information available.

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel

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### Air transport

DOT Quantity Limitations Passenger aircraft/rail : 60 L  
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 220 L  
CFR 175.75)

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Di-n-butylbis(2-ethylhexanoate)tin (2781-10-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Xylene (1330-20-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Subject to reporting requirements of United States SARA Section 313

SARA Section 313 - Emission Reporting	1.0 %
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### 15.2. International regulations

#### CANADA

#### Di-n-butylbis(2-ethylhexanoate)tin (2781-10-4)

Listed on the Canadian DSL (Domestic Substances List)

#### Xylene (1330-20-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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#### EU-Regulations

#### Di-n-butylbis(2-ethylhexanoate)tin (2781-10-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Xylene (1330-20-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

#### Di-n-butylbis(2-ethylhexanoate)tin (2781-10-4)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on the Canadian IDL (Ingredient Disclosure List)

#### Xylene (1330-20-7)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Poisonous and Deleterious Substances Control Law  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)

### 15.3. US State regulations

#### Di-n-butylbis(2-ethylhexanoate)tin (2781-10-4)

U.S. - Massachusetts - Right To Know List

#### Xylene (1330-20-7)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List

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### SECTION 16: Other information

Full text of H-phrases::

H226	Flammable liquid and vapor
H301	Toxic if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life

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.

### HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F, as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Prepared by safety and environmental affairs.

Date of issue: 10/06/2016 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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