

**TETRAVINYL TIN**

## Safety Data Sheet SNT7906

Date of issue: 13/01/2015

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Version: 2.0

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

Product form	: Substance
Physical state	: Liquid
Substance name	: TETRAVINYL TIN
Product code	: SNT7906
Formula	: C <sub>8</sub> H <sub>12</sub> Sn
Synonyms	: TETRAETHENYLSTANNANE
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**

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[info@gelestde.com](mailto:info@gelestde.com) - [www.gelestde.com](http://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]**

Flammable liquids, Category 3	H226
Acute toxicity (oral), Category 3	H301
Acute toxicity (dermal), Category 3	H311
Acute toxicity (inhalation:vapour) Category 3	H331
Full text of H statements : see section 16	

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

No additional information available

**2.2. Label elements****Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS02

GHS06

Signal word (CLP) : Danger

Hazard statements (CLP) : H226 - Flammable liquid and vapour.

# TETRAVINYL TIN

## Safety Data Sheet

### Precautionary statements (CLP)

H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled  
: P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P261 - Avoid breathing vapours.  
P311 - Call a POISON CENTER.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed.  
P264 - Wash hands thoroughly after handling.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Multi-constituent  
Name : TETRAVINYL TIN  
CAS-No. : 1112-56-7  
EC-No. : 214-193-6

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tetravinyltin	(CAS-No.) 1112-56-7 (EC-No.) 214-193-6	95 - 100	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331
Other Organotins		1 - 5	Not classified

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/.... 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. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects after inhalation : Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation.

Symptoms/effects after skin contact : Toxic in contact with skin. May cause skin irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard.

Symptoms/effects after eye contact : May cause severe irritation. The onset of irritation may not occur until several hours after exposure.

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

Chronic symptoms : General signs of toxicity for tetraalkyltins include muscular weakness and paralysis leading to respiratory failure, tremors, convulsive movements, closure of eyelids and photophobia.

### 4.3. Indication of any immediate medical attention and special treatment needed

Note to physician: Application of corticosteroid creams has been effective in treating severe skin irritation. If blisters develop, they may require abrasion to promote healing.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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

# TETRAVINYL TIN

## Safety Data Sheet

### 5.2. Special hazards arising from the substance or mixture

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

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray to cool exposed surfaces. 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

- General measures : Remove ignition sources. Use special care to avoid static electric charges.

#### 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

- Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Provide good ventilation in process area to prevent formation of vapour. Containers must be properly grounded before beginning transfer. Take precautionary measures against static discharge. Use only non-sparking tools.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

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

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.
- Storage conditions : Keep container tightly closed.
- Incompatible materials : Air. Direct sunlight. 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

Other Organotin		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> as tin
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> as tin
Tetravinyltin (1112-56-7)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> as tin

### 8.2. Exposure controls

#### Appropriate engineering controls:

Provide local exhaust or general room 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.

# TETRAVINYL TIN

## Safety Data Sheet

### Hand protection:

Neoprene or nitrile rubber gloves

### Eye protection:

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

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

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

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 226.88 g/mol
Colour	: Straw.
Odour	: Mild.
Odour threshold	: No data available
Refractive index	: 1.4914
pH	: No data available
Relative evaporation rate (butylacetate=1)	: ~ 1
Melting point	: No data available
Freezing point	: < 0 °C
Boiling point	: 160 - 163 °C
Flash point	: 40 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour.
Vapour pressure	: 17 mm Hg @ 56°C
Relative vapour density at 20 °C	: > 1
Relative density	: 1.257
% Volatiles	: < 1 %
Solubility	: Insoluble in 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
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

No additional information available

### 10.4. Conditions to avoid

Air. Heat. Open flame. Sparks. Direct sunlight.

### 10.5. Incompatible materials

Oxidizing agent. Direct sunlight in air causes slow degradation to an inorganic tin salt.

# TETRAVINYL TIN

## Safety Data Sheet

### 10.6. Hazardous decomposition products

Organic acid vapors. Tin oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.

#### Tetravinyltin (1112-56-7)

ATE CLP (oral)	100 mg/kg bodyweight
ATE CLP (dermal)	300 mg/kg bodyweight
ATE CLP (vapours)	3 mg/l/4h

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	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.
Symptoms/effects after inhalation	: Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation.
Symptoms/effects after skin contact	: Toxic in contact with skin. May cause skin irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/effects after eye contact	: May cause severe irritation. The onset of irritation may not occur until several hours after exposure.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: General signs of toxicity for tetraalkyltins include muscular weakness and paralysis leading to respiratory failure, tremors, convulsive movements, closure of eyelids and photophobia.

## SECTION 12: Ecological information

### 12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

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

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging 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 vapours are flammable.

Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

## SECTION 14: Transport information

### 14.1. UN number

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

# TETRAVINYL TIN

## Safety Data Sheet

### 14.1. UN number

UN-No. (ADR)	: 2929
UN-No. (IMDG)	: 2929
UN-No. (IATA)	: 2929
UN-No. (ADN)	: 2929
UN-No. (RID)	: 2929

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.
Proper Shipping Name (IMDG)	: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.
Proper Shipping Name (IATA)	: Toxic liquid, flammable, organic, n.o.s.
Proper Shipping Name (ADN)	: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.
Proper Shipping Name (RID)	: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.
Transport document description (ADR)	: UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (TETRAVINYL TIN), 6.1 (3), II, (D/E)
Transport document description (IMDG)	: UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (TETRAVINYL TIN), 6.1 (3), II
Transport document description (IATA)	: UN 2929 Toxic liquid, flammable, organic, n.o.s. (TETRAVINYL TIN), 6.1, II
Transport document description (ADN)	: UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (TETRAVINYL TIN), 6.1 (3), II
Transport document description (RID)	: UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (TETRAVINYL TIN), 6.1 (3), II

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 6.1 (3)
Danger labels (ADR)	: 6.1, 3



#### IMDG

Transport hazard class(es) (IMDG)	: 6.1 (3)
Danger labels (IMDG)	: 6.1, 3



#### IATA

Transport hazard class(es) (IATA)	: 6.1 (3)
Hazard labels (IATA)	: 6.1, 3



#### ADN

Transport hazard class(es) (ADN)	: 6.1 (3)
Danger labels (ADN)	: 6.1, 3



#### RID

# TETRAVINYL TIN

## Safety Data Sheet

Transport hazard class(es) (RID) : 6.1 (3)  
Danger labels (RID) : 6.1, 3



### 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 : No  
Marine pollutant : No  
Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : TF1  
Special provisions (ADR) : 274  
Limited quantities (ADR) : 100ml  
Excepted quantities (ADR) : E4  
Packing instructions (ADR) : P001, IBC02  
Mixed packing provisions (ADR) : MP15  
Portable tank and bulk container instructions (ADR) : T11  
Portable tank and bulk container special provisions (ADR) : TP2, TP27  
Tank code (ADR) : L4BH  
Tank special provisions (ADR) : TU15, TE19  
Vehicle for tank carriage : FL  
Transport category (ADR) : 2  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28  
Special provisions for carriage - Operation (ADR) : S2, S9, S19  
Hazard identification number (Kemler No.) : 63  
Orange plates :



Tunnel restriction code (ADR) : D/E

#### - Transport by sea

Special provisions (IMDG) : 274  
Limited quantities (IMDG) : 100 ml  
Excepted quantities (IMDG) : E4  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
Tank instructions (IMDG) : T11  
Tank special provisions (IMDG) : TP2, TP13, TP27  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : B  
Stowage and handling (IMDG) : SW2  
Properties and observations (IMDG) : Toxic if swallowed, by skin contact or by inhalation.

# TETRAVINYL TIN

## Safety Data Sheet

### - Air transport

PCA Excepted quantities (IATA)	: E4
PCA Limited quantities (IATA)	: Y641
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 654
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 662
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A4, A137
ERG code (IATA)	: 6F

### - Inland waterway transport

Classification code (ADN)	: TF1
Special provisions (ADN)	: 274, 802
Limited quantities (ADN)	: 100 ml
Excepted quantities (ADN)	: E4
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, EX, TOX, A
Ventilation (ADN)	: VE01, VE02
Number of blue cones/lights (ADN)	: 2

### - Rail transport

Classification code (RID)	: TF1
Special provisions (RID)	: 274
Limited quantities (RID)	: 100ml
Excepted quantities (RID)	: E4
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP15
Portable tank and bulk container instructions (RID)	: T11
Portable tank and bulk container special provisions (RID)	: TP2, TP27
Tank codes for RID tanks (RID)	: L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28, CW31
Colis express (express parcels) (RID)	: CE5
Hazard identification number (RID)	: 63

### 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

TETRAVINYL TIN is not on the REACH Candidate List

TETRAVINYL TIN is not on the REACH Annex XIV List

TETRAVINYL 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.

TETRAVINYL TIN is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

% Volatiles : < 1 %

#### 15.1.2. National regulations

##### Germany



# TETRAVINYL TIN

## Safety Data Sheet

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

Class for fire hazard : Class II-1  
Store unit : 5 liter  
Classification remarks : R10 <H226;H301+H311+H331>; Emergency management guidelines for the storage of flammable liquids must be followed  
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

## 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
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Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.

SDS EU (REACH Annex II) - Custom

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