

TRI-n-BUTYLAZIDOTIN, 95%

Safety Data Sheet SNT8065

Date of issue: 28/03/2016

Version: 1.0

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

Product form	: Substance
Physical state	: Liquid
Substance name	: TRI-n-BUTYLAZIDOTIN, 95%
Product code	: SNT8065
Formula	: C ₁₂ H ₂₇ N ₃ Sn
Synonyms	: TRIBUTYL TIN AZIDE; AZIDOTRIBUTYLSTANNANE
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**

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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 (inhalation:vapour) Category 3	H331
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
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) :



GHS06

Signal word (CLP) :

: Danger

Hazard statements (CLP) :

: H302 - Harmful if swallowed.
H315 - Causes skin irritation.

TRI-n-BUTYLAZIDOTIN, 95%

Safety Data Sheet

Precautionary statements (CLP) : H319 - Causes serious eye irritation.
H331 - Toxic if inhaled.
: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

2.3. Other hazards

Other hazards not contributing to the classification : (by analogy with HCN, recommended PEL, skin: 5ppm).

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : TRI-n-BUTYLAZIDOTIN, 95%
CAS-No. : 17846-68-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tri-n-butylazidotin	(CAS-No.) 17846-68-3	95 - 100	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319

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

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. NOTE TO PHYSICIAN: If cyanosis is evident, treat for cyanide poisoning. Provide oxygen. The effects of hydrazoic acid poisoning are more readily reversed than cyanide, since azide binding to cytochromes and presumably hemoglobin appears to be reversible. Hypotension and hypertension have both been reported for compounds in this class.

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 : Toxic fumes of hydrazoic will develop when material is exposed to water.

TRI-n-BUTYLAZIDOTIN, 95%

Safety Data Sheet

5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Fumes are highly toxic. 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 vapour and mist.

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

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 Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. 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 : Acids. 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

Tri-n-butylazidotin (17846-68-3)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³ as tin
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.1 mg/m ³ as tin

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

TRI-n-BUTYLAZIDOTIN, 95%

Safety Data Sheet

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	: Liquid.
Molecular mass	: 332.06 g/mol
Colour	: Straw.
Odour	: Pungent obnoxious characteristic odor.
Odour threshold	: No data available
Refractive index	: 1.5745
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 120 °C @ 0.2 mm Hg
Flash point	: > 110 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: < 0.1 mm Hg @ 20°C
Relative vapour density at 20 °C	: No data available
Relative density	: 1.212
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 in sealed containers.

10.3. Possibility of hazardous reactions

Strong acids will liberate hydrazoic acid. Direct sunlight causes degradation to an inorganic tin salt. Can form explosive compounds on contact with monovalent heavy metals (lead, copper, silver, etc.).

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Acids. Oxidizing agent.

10.6. Hazardous decomposition products

Organic acid vapors. Hydrazoic Acid. Tin oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed. Toxic if inhaled.

TRI-n-BUTYLAZIDOTIN, 95% (17846-68-3)

ATE CLP (oral)	400 mg/kg bodyweight
ATE CLP (vapours)	3 mg/l/4h

TRI-n-BUTYLAZIDOTIN, 95%

Safety Data Sheet

Tri-n-butylazidotin (17846-68-3)

LD50 oral rat	400 mg/kg
ATE CLP (oral)	400 mg/kg bodyweight
ATE CLP (gases)	700 ppmv/4h
ATE CLP (vapours)	3 mg/l/4h
ATE CLP (dust,mist)	0.5 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
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	: HIGHLY TOXIC Individuals who are using medication to control their blood pressure should not work with or come in to contact with tri-n-butylazidotin.
Symptoms/effects after inhalation	: Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: 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.
Reason for classification	: Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: This material is acutely toxic to aquatic life if released to open waters. This material is toxic to wildlife and fish.
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.
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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

14.1. UN number

UN-No. (ADR)	: 2788
UN-No. (IMDG)	: 2788
UN-No. (IATA)	: 2788

TRI-n-BUTYLAZIDOTIN, 95%

Safety Data Sheet

UN-No. (ADN) : 2788

UN-No. (RID) : 2788

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ORGANOTIN COMPOUND, LIQUID, N.O.S.

Proper Shipping Name (IMDG) : ORGANOTIN COMPOUND, LIQUID, N.O.S.

Proper Shipping Name (IATA) : Organotin compound, liquid, n.o.s.

Proper Shipping Name (ADN) : ORGANOTIN COMPOUND, LIQUID, N.O.S.

Proper Shipping Name (RID) : ORGANOTIN COMPOUND, LIQUID, N.O.S.

Transport document description (ADR) : UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S. (TRI-n-BUTYLAZIDOTIN), 6.1, I, (C/E)

Transport document description (IMDG) : UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S. (TRI-n-BUTYLAZIDOTIN), 6.1, I, MARINE POLLUTANT

Transport document description (IATA) : UN 2788 Organotin compound, liquid, n.o.s. (TRI-n-BUTYLAZIDOTIN), 6.1, I

Transport document description (ADN) : UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S. (TRI-n-BUTYLAZIDOTIN), 6.1, I

Transport document description (RID) : UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S. (TRI-n-BUTYLAZIDOTIN), 6.1, I

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 6.1

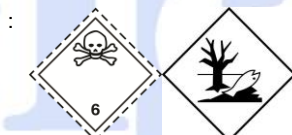
Danger labels (ADR) : 6.1



IMDG

Transport hazard class(es) (IMDG) : 6.1

Danger labels (IMDG) : 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

TRI-n-BUTYLAZIDOTIN, 95%

Safety Data Sheet



14.4. Packing group

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

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: Yes (IMDG only)
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)	: 0
Excepted quantities (ADR)	: E5
Packing instructions (ADR)	: P001
Mixed packing provisions (ADR)	: MP8, MP17
Portable tank and bulk container instructions (ADR)	: T14
Portable tank and bulk container special provisions (ADR)	: TP2, TP27
Tank code (ADR)	: L10CH
Tank special provisions (ADR)	: TU14, TU15, TE19, TE21
Vehicle for tank carriage	: AT
Transport category (ADR)	: 1
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV1, CV13, CV28
Special provisions for carriage - Operation (ADR)	: S9, S14
Hazard identification number (Kemler No.)	: 66
Orange plates	:



Tunnel restriction code (ADR)	: C/E
EAC code	: 2X
APP code	: B

- Transport by sea

Special provisions (IMDG)	: 43, 274
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E5
Packing instructions (IMDG)	: P001
Tank instructions (IMDG)	: T14
Tank special provisions (IMDG)	: TP2, TP13, TP27
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 liquids. Toxic if swallowed, by skin contact or by inhalation.

TRI-n-BUTYLAZIDOTIN, 95%

Safety Data Sheet

- Air transport

PCA Excepted quantities (IATA)	: E5
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 652
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 658
CAO max net quantity (IATA)	: 30L
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)	: 0
Excepted quantities (ADN)	: E5
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 2

- Rail transport

Classification code (RID)	: T3
Special provisions (RID)	: 43, 274
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E5
Packing instructions (RID)	: P001
Mixed packing provisions (RID)	: MP8, MP17
Portable tank and bulk container instructions (RID)	: T14
Portable tank and bulk container special provisions (RID)	: TP2, TP27
Tank codes for RID tanks (RID)	: L10CH
Special provisions for RID tanks (RID)	: TU14, TU15, TU38, TE21, TE22
Transport category (RID)	: 1
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28, CW31
Hazard identification number (RID)	: 66

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

TRI-n-BUTYLAZIDOTIN, 95% is not on the REACH Candidate List

TRI-n-BUTYLAZIDOTIN, 95% is not on the REACH Annex XIV List

TRI-n-BUTYLAZIDOTIN, 95% 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.

TRI-n-BUTYLAZIDOTIN, 95% 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

15.1.2. National regulations

Germany

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

TRI-n-BUTYLAZIDOTIN, 95%

Safety Data Sheet

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

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 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.

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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