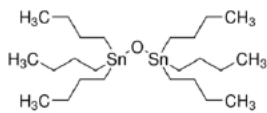


MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form	: Substance
EC no	: 200-268-0
CAS No	: 56-35-9
Product code	: 06354
Chemical structure	: 
Synonyms	: Bis(tributyltin) oxide

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 : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Labogens Fine Chem Industries
1st Floor , Above Bank of India, Guru Vihar , Rahon Road,
Ludhiana Pb. (141007)
+91 9316777775, +91 7707855700
sales@labogens.com - www.Labogens.com

1.4. Emergency telephone number

Emergency number : +91 7707855700 (9:00am - 6:00 pm)

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
Acute toxicity (dermal), Category 4	H312
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity — Repeated exposure, Category 1	H372
Hazardous to the aquatic environment — Chronic	H410

TRIBUTYLTIN OXIDE FOR SYNTHESIS

Safety Data Sheet

Hazard, Category 1

Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

T; R25

T; R48/23/25

Xn; R21

Xi; R36/38

N; R50/53

Full text of R-phrases: 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



GHS09

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H301 - Toxic if swallowed
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H372 - Causes damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP)

: P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P501 - Dispose of contents/container to ...

2.3. Other hazards

This substance/mixture meets the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : TRIBUTYLTIN OXIDE FOR SYNTHESIS

CAS No : 56-35-9

TRIBUTYL TIN OXIDE FOR SYNTHESIS

Safety Data Sheet

EC no : 200-268-0

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- | | |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice. |
| First-aid measures after skin contact | : If skin irritation occurs: Get medical advice/attention. Gently wash with plenty of soap and water. |
| First-aid measures after eye contact | : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : If you feel unwell, seek medical advice. Rinse mouth out with water. |

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

- | | |
|--------------------------------------|-------------------------------------------------------------------|
| Symptoms/injuries | : Causes damage to organs through prolonged or repeated exposure. |
| Symptoms/injuries after skin contact | : Harmful in contact with skin. Causes skin irritation. |
| Symptoms/injuries after eye contact | : Causes serious eye irritation. |
| Symptoms/injuries after ingestion | : Toxic if swallowed. |

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- | | |
|--------------------------------|-----------------------------------------------------------------------------------|
| Suitable extinguishing media | : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- | | |
|--------------------------------|------------------------------------------------------------------------|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. |
|--------------------------------|------------------------------------------------------------------------|

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- | | |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

6.1.2. For emergency responders

- | | |
|----------------------|--------------------------------------------------|
| Protective equipment | : Use personal protective equipment as required. |
| Emergency procedures | : Stop release. |

6.2. Environmental precautions

Very toxic to aquatic life with long lasting effects.

6.3. Methods and material for containment and cleaning up

- | | |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Methods for cleaning up | : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|

TRIBUTYL TIN OXIDE FOR SYNTHESIS

Safety Data Sheet

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in original container. Keep container tightly closed. Store in a dry place. Store in a well-ventilated place.
--------------------	-----------------------------------------------------------------------------------------------------------------------

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection	: protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Molecular mass	: 596.08 g/mol
Colour	: Clear Colorless.
Odour	: strong odor.
Odour threshold	: No data available
pH	: 7.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 180 °C
Flash point	: 190 °C
Auto-ignition temperature	: No data available

TRIBUTYLTIN OXIDE FOR SYNTHESIS

Safety Data Sheet

Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 2 mm Hg (at 20°C)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.17 g/cm ³
Solubility	: Water: Insoluble in water
Log Pow	: 3.2 - 3.8
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 under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Open flame.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Harmful in contact with skin.

Skin corrosion/irritation : Causes skin irritation.
pH: 7.5

Serious eye damage/irritation : Causes serious eye irritation.
pH: 7.5

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

TRIBUTYL TIN OXIDE FOR SYNTHESIS

Safety Data Sheet

Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Harmful in contact with skin. Toxic if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	: Very toxic to aquatic life with long lasting effects.
-----------------	---------------------------------------------------------

12.2. Persistence and degradability

TRIBUTYL TIN OXIDE FOR SYNTHESIS (56-35-9)

Persistence and degradability	May cause long-term adverse effects in the environment.
-------------------------------	---------------------------------------------------------

12.3. Bioaccumulative potential

TRIBUTYL TIN OXIDE FOR SYNTHESIS (56-35-9)

Log Pow	3.2 - 3.8
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

TRIBUTYL TIN OXIDE FOR SYNTHESIS (56-35-9)

This substance/mixture meets the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose of contents/container to ...
Ecology - waste materials	: Hazardous waste due to toxicity.

TRIBUTYLTIN OXIDE FOR SYNTHESIS

Safety Data Sheet

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR)	: 2788
UN-No. (IMDG)	: 2788
UN-No.(IATA)	: 2788
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., 6.1, II, (D/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S., 6.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S., 6.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S., 6.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S., 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)	: 6.1
Danger labels (IMDG)	: 6.1



IATA

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

TRIBUTYLTIN OXIDE FOR SYNTHESIS

Safety Data Sheet



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 provision (ADR) : 43, 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 : AT

Transport category (ADR) : 2

Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28

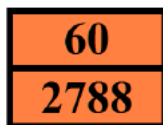
TRIBUTYLTIN OXIDE FOR SYNTHESIS

Safety Data Sheet

Special provisions for carriage - Operation : S9, S19
(ADR)

Hazard identification number (Kemler No.) : 60

Orange plates :



Tunnel restriction code (ADR) : D/E

EAC code : 2X

APP code : B

- Transport by sea

Special provision (IMDG) : 43, 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-A

EmS-No. (Spillage) : S-A

Stowage category (IMDG) : A

Stowage and handling (IMDG) : SW2

MFAG-No : 153

- 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) : 661

CAO max net quantity (IATA) : 60L

Special provision (IATA) : A3, A4, A6

ERG code (IATA) : 6L

- Inland waterway transport

Classification code (ADN) : T3

Special provisions (ADN) : 43, 274, 802

Limited quantities (ADN) : 100 ml

Excepted quantities (ADN) : E4

Equipment required (ADN) : PP, EP, TOX, A

Ventilation (ADN) : VE02

Number of blue cones/lights (ADN) : 2

- Rail transport

Classification code (RID) : T3

Special provision (RID) : 43, 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

TRIBUTYLTIN OXIDE FOR SYNTHESIS

Safety Data Sheet

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 and unloading (RID)	: CW13, CW28, CW31
Colis express (express parcels) (RID)	: CE5
Hazard identification number (RID)	: 60

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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

Bis(tributyltin)oxide (TBTO) is on the REACH Candidate List

TRIBUTYLTIN OXIDE FOR SYNTHESIS is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 3, strongly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 502)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : 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

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
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TRIBUTYLTIN OXIDE FOR SYNTHESIS

Safety Data Sheet

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
H301	Toxic if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H372	Causes damage to organs through prolonged or repeated exposure
H410	Very toxic to aquatic life with long lasting effects
R21	Harmful in contact with skin
R25	Toxic if swallowed
R36/38	Irritating to eyes and skin
R48/23/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product