Bis(tributyltin) oxide: sc-252470

MATERIAL SAFETY DATA SHEET

1 Identification of substance:

Product Name: **Bis(tributyltin) oxide**

Catalog Number: sc-252470

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

2 Hazards identification

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

GHS06 Skull and crossbones

Acute Tox. 3	H301	Toxic if swallowed.
Acute Tox. 3	H311	Toxic in contact with skin.

GHS08 Health hazard

Repr. 1B	H360	May damage fertility or the unborn child.
STOT RE 1	H372	Causes damage to the kidneys, the liver, the respiratory system, the blood tissue, the endocrine system and the immune system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.

GHS07

Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.

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

T; Toxic

R60-25-48/23/25: May impair fertility. Toxic if swallowed. Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

Xn; Harmful

R21-63: Harmful in contact with skin. Possible risk of harm to the unborn child.

Xi; Irritant

R36/38: Irritating to eyes and skin.

N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment: Not applicable
Label elements
Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS06

GHS08

Signal word Danger
Hazard statements
H301+H311 Toxic if swallowed or in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H360 May damage fertility or the unborn child.
H372 Causes damage to the kidneys, the liver, the respiratory system, the blood tissue, the endocrine system and the immune system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.
Precautionary statements
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.
P309 IF exposed or if you feel unwell:
P310 Immediately call a POISON CENTER or doctor/physician.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS classification
D1A - Very toxic material causing immediate and serious toxic effects
D2A - Very toxic material causing other toxic effects

Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

HEALTH	2
FIRE	1
REACTIVITY	1

Health (acute effects) = 2
Flammability = 1
Reactivity = 1

Other hazards
Results of PBT and vPvB assessment

PBT:	
56-35-9	Bis(tri-n-butyltin) oxide

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances
CAS# Description:
56-35-9 Bis(tri-n-butyltin) oxide
Identification number(s):
EC number: 200-268-0
Index number: 050-008-00-3

4 First aid measures

Description of first aid measures
General information
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing Do not induce vomiting; immediately call for medical help.
Information for doctor
Most important symptoms and effects, both acute and delayed
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Firefighting measures

Extinguishing media
Suitable extinguishing agents
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Metal oxide fume

Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions:
Do not allow material to be released to the environment without proper governmental permits.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Prevention of secondary hazards: No special measures required.
Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling
Precautions for safe handling
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires: No information known.

Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Store away from oxidizing agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:	
56-35-9 Bis(tri-n-butyltin) oxide (100.0%)	
PEL (USA)	0.1 mg/m³ as Sn
TLV (USA)	Short-term value: 0.2 mg/m³ Long-term value: 0.1 mg/m³ as Sn; skin
EL (Canada)	Short-term value: 0.2 mg/m³ Long-term value: 0.1 mg/m³ as Sn; Skin

Additional information: No data

Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Use suitable respirator when high concentrations are present.
Recommended filter device for short term use:
Use a respirator with organic vapor/acid gas cartidges as a backup to engineering controls.
Risk assessment should be performed to determine if air-purifying respirators are appropiate.
Only use equipment tested and approved under appropiate government standards such as NIOSH (USA) or CEN (EU).
Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality.
Quality will vary from manufacturer to manufacturer.

Material of gloves
Neoprene
Butyl rubber, BR
Nitrile rubber, NBR
Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Liquid
Formula:	C24H54OSn2
Weight:	596.10
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	-45°C (-49 °F)
Boiling point/Boiling range:	179-180°C (354-356 °F) (2mm)
Sublimation temperature / start:	Not determined
Flash point:	168°C (334 °F)
Flammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure at 25°C (77 °F):	0.000005 hPa
Density at 20°C (68 °F):	1.172 g/cm³ (9.78 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water at 20°C (68 °F):	0.07 g/l
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic at 20°C (68 °F):	9 mPas
kinematic:	Not determined.
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No information known.
Chemical stability Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions Reacts with strong oxidizing agents
Incompatible materials: Oxidizing agents
Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Metal oxide fume

11 Toxicological information

Information on toxicological effects
Acute toxicity:
Harmful in contact with skin.
Fatal if swallowed.
Danger through skin absorption.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification:		
Oral	LD50	87 mg/kg (rat)
Dermal	LD50	163 mg/kg (mouse)

Skin irritation or corrosion: Causes skin irritation.
Eye irritation or corrosion: Causes serious eye irritation.
Sensitization: No sensitizing effects known.
Germ cell mutagenicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.
Carcinogenicity:
EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.
EPA-CBD: Carginogenic potential cannot be determined.
ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product.

Reproductive toxicity:
May damage fertility or the unborn child.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

Specific target organ system toxicity - repeated exposure:
Causes damage to the kidneys, the liver, the respiratory system, the blood tissue, the endocrine system and the immune system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.

Specific target organ system toxicity - single exposure: *No effects known.*

Aspiration hazard: *No effects known.*

Subacute to chronic toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.

Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information

Toxicity

Aquatic toxicity: *No further relevant information available.*

Persistence and degradability *No further relevant information available.*

Behavior in environmental systems:

Bioaccumulative potential *No further relevant information available.*

Mobility in soil *No further relevant information available.*

Ecotoxical effects:

Remark: *Very toxic for aquatic organisms*

Additional ecological information:

General notes:
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Do not allow material to be released to the environment without proper governmental permits.
May cause long lasting harmful effects to aquatic life.
Very toxic for aquatic organisms

Results of PBT and vPvB assessment

PBT:	
56-35-9	*Bis(tri-n-butyltin) oxide*

vPvB: *Not applicable.*

Other adverse effects *No further relevant information available.*

13 Disposal considerations

Waste treatment methods

Recommendation *Consult state, local or national regulations to ensure proper disposal.*

Uncleaned packagings:

Recommendation: *Disposal must be made according to official regulations.*

14 Transport information

UN-Number	
DOT, ADR, IMDG, IATA	*UN2788*
UN proper shipping name	
DOT	*ORGANOTIN COMPOUND, LIQUID, N.O.S.*
ADR	*2788 ORGANOTIN COMPOUND, LIQUID, N.O.S.*
IMDG	*ORGANOTIN COMPOUND, LIQUID, N.O.S. (Bis(tributyltin) oxide), MARINE POLLUTANT*
IATA	*ORGANOTIN COMPOUND, LIQUID, N.O.S. (Bis(tributyltin) oxide)*
Transport hazard class(es)	
DOT	

Class	*6.1 Toxic substances.*
Label	*6.1*

ADR	
	
Class	6.1 (T3) Toxic substances
Label	6.1
IMDG	
	
Class	6.1 Toxic substances.
Label	6.1
IATA	
	
Class	6.1 Toxic substances.
Label	6.1
Packing group	
DOT, ADR, IMDG, IATA	III
Environmental hazards:	Environmentally hazardous substance, liquid; Marine Pollutant
Marine pollutant (IMDG):	Yes (P) Symbol (fish and tree)
Special precautions for user	Warning: Toxic substances
Danger code (Kemler):	60
EMS Number:	F-A,S-A
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Marine Pollutant (DOT):	Yes (PP)
Remarks:	Special marking with the symbol (fish and tree).
UN "Model Regulation":	UN2788, ORGANOTIN COMPOUND, LIQUID, N.O.S., 6.1, III

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).
This product contains a product listed by the European Chemicals Agency (ECHA) as a Substance of Very High Concern (SVHC). Information concerning SVHC can be found in Annex XIV of the REACH regulation.
Information about limitation of use:
For use only by technically qualified individuals.
This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.
Other regulations, limitations and prohibitive regulations
EINICS (European Inventory of Existing Commercial Chemical Substances) Substance is listed.
ELINCS (European List of Notified Chemical Substances) Substance is not listed.
Substances of very high concern (SVHC) according to REACH, Article 57
This product contains a product listed by the European Chemicals Agency (ECHA) as a Substance of Very High Concern (SVHC). Information concerning SVHC can be found in Annex XIV for the REACH Regulation.
REACH - Pre-registered substances Substance is listed.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information:

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

6/20/2013