1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Chemical Name	DIBUTYL TIN OXIDE
CAS NO.	818-08-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

1. Dibutyltin oxide can be used as the catalyst in organic reaction.
2. it is used in select high temperature transesterification reactions for the production of alkyd resins and powder coating resins.

Details of the supplier of the safety data sheet

COMPANY

POLYMER ADD PTE LTD
77 A, Boat Quay
049865
Singapore
Telephone : +6563272490
Email - contact@polymeradd.sg

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Human Health	Acute toxicity, Oral (Category 3), H301 Skin irritation (Category 2), H315 Serious eye damage (Category 1), H318 Skin sensitisation (Category 1), H317 Germ cell mutagenicity (Category 2), H341 Reproductive toxicity (Category 1B), H360 Specific target organ toxicity - single exposure (Category 1), thymus gland, H370 Specific target organ toxicity - repeated exposure, Oral (Category 1), thymus gland, H372
Environment	Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

	Signal word	Danger
	H301	Toxic if swallowed.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction
	H318	Causes serious eye damage
	H341	Suspected of causing genetic defects.
	H360	May damage fertility or the unborn child.
	H370	Causes damage to organs (thymus gland).
	H372	Causes damage to organs (thymus gland) through prolonged or repeated exposure if swallowed.
	H411	Toxic to aquatic life with long lasting effects
	P201	Obtain special instructions before use.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/ eye protection/ face protection.
	P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
	P302 + P352	IF ON SKIN: Wash with plenty of water.
	P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses.
	According to European Directive 67/548/EEC as amended	none
2.3	Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Component

Chemical Name	Dibutyltin oxide
CAS NO	818-08-6
EC Number	212-449-1
Molecular Formula	C8H18OSn
Molecular Weight	248.94
Concentration	<= 100 %

4 FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician.
Show this safety data sheet to the doctor in attendance.

If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

5 FIREFIGHTING MEASURES

5.1 **Extinguishing media**

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
5.2 **Special hazards arising from the substance or mixture**	Carbon oxides, Tin/tin oxides
5.3 **Advice for firefighters**	Wear self-contained breathing apparatus for firefighting if necessary.
5.4 **Further information**	No data available

6 ACCIDENTAL RELEASE MEASURES

6.1 **Personal precautions protective equipment and emergency procedures**

Wear respiratory protection.
Avoid dust formation.
Avoid breathing vapours, mist or gas.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Avoid breathing dust.
For personal protection see section 8.

6.2 **Environmental precautions**

Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.
Discharge into the environment must be avoided.

6.3 **Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.

6.4 **Reference to other sections**

For disposal see section 13.

7 HANDLING AND STORAGE

7.1 **Precautions for safe handling**

Avoid contact with skin and eyes.
Avoid formation of dust and aerosols.
Avoid exposure - obtain special instructions before use.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 **Information about protection against explosions and fires**

No data available

7.3 **Conditions for safe storage including any incompatibilities**

Store in cool place.
Keep container tightly closed in a dry and well-ventilated place.

7.4 **Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 **Control parameters**

Appropriate engineering controls

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves.
Gloves must be inspected prior to use.
Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact

with this product.
Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Wash and dry hands.
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.
If the respirator is the sole means of protection, use a full-face supplied air respirator.
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.
Discharge into the environment must be avoided.

9 PHYSICAL AND CHEMICAL PROPERTIES

a)Appearance	white powder
b)Odour	No data available
c)Odour Threshold	No data available
d)pH (% solution in water)	No data available
e)Melting point/freezing point	>= 300 °C
f)Initial boiling point and boiling range	161,9 °C
g)Flash point	No data available
h)Evaporation rate	No data available
i)Flammability (solid or gas)	The product is not flammable. - Flammability (solids)
j)Upper/lower flammability or explosive limits	No data available
k)Vapour pressure	No data available
l)Vapour density	No data available
m)Relative density	1.580 g/cm3

	n)Water solubility	No data available
	o)Partition coefficient: n-octanol/water	log Pow: 5.33
	p)Autoignition temperature	143 - 153 °C
	q)Decomposition temperature	> 161,9 °C -
	r)Viscosity	No data available
	s)Explosive properties	No data available
	t)Oxidizing properties	No data available
9.2	**Other safety information**	
	Bulk Density	No data available

10 STABILITY AND REACTIVITY

10.1	Reactivity	No data available
10.2	Chemical stability	Stable under recommended storage conditions.
10.3	Possibility of hazardous reactions	No data available
10.4	Conditions to avoid	No data available
10.5	Incompatible materials	Strong oxidizing agents
10.6	Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Tin/tin oxides Other decomposition products - No data available In the event of fire: see section 5

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD50 Oral - Rat - male and female - 172 mg/kg
Acute dermal toxicity	LD50 Dermal - Rat - male and female - > 2.000 mg/kg
Skin corrosion/irritation	Skin - Rabbit Result: Irritating to skin. - 4 h (OECD Test Guideline 404)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Corrosive (OECD Test Guideline 405)
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	In vitro tests showed mutagenic effects Ames test S. typhimurium Result: negative
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as

	probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity	Presumed human reproductive toxicant
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
RTECS	Not available

Signs And Symptoms of Exposure

Cough, Shortness of breath, Headache, Nausea, Vomiting

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 2 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to Algae/Aquatic plants	EC50 - Desmodesmus subspicatus (green algae) - >= 1,6 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to microorganisms	Respiration inhibition EC50 - Sludge Treatment - > 1.000 mg/l - 3 h (OECD Test Guideline 209)

12.2 **Persistence and degradability**

Biodegradation

aerobic - Exposure time 28 d Result: 0 % - Not readily biodegradable.

12.3	Bio accumulative potential	No data available
12.4	Mobility in soil	No data available
12.5	Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6	Other adverse effects	Toxic to aquatic life with long lasting effects.

13 DISPOSAL CONSIDERATIONS

13.1 **Waste treatment methods**

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped

with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14 TRANSPORT INFORMATION

14.1 UN number

ADR/RID	IMDG	IATA
3146	3146	3146

14.2 UN proper shipping name

ADR/RID	IMDG	IATA
ORGANOTIN COMPOUND, SOLID, N.O.S. (Dibutyltin oxide)	ORGANOTIN COMPOUND, SOLID, N.O.S. (Dibutyltin oxide)	Organotin compound, solid, n.o.s. (Dibutyltin oxide)

14.3 Transport hazard class(es)

ADR/RID	IMDG	IATA
6.1	6.1	6.1

14.4 Packaging group

ADR/RID	IMDG	IATA
III	III	III

14.5 Environmental hazards

ADR/RID	IMDG Marine pollutant	IATA
no	yes	no

14.6 Special precautions for user — No data available

15 REGULATORY INFORMATION

15.1 Safety health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16 OTHER INFORMATION

H301	Toxic if swallowed.
H315	Causes skin irritation
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H341	Suspected of causing genetic defects.
H360	May damage fertility or the unborn child.

H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure if swallowed.
H411	Toxic to aquatic life with long lasting effects.
Month of Creation	July 2020.
Month of Revision	July 2023.