



**HUZHOU XINAOTE PHARMACEUTICAL & CHEMICAL CO., LTD.**

**MATERIAL SAFETY DATA SHEET**

**METHYL TIN MERCAPTIDE**

Date of issue: 1.03.2012 Date printed: 2.03.2012

**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING**

**1.1 Name of the substance or preparation**

Chemical name : Methyltin Mercaptide (tin content:19%)

1.2 Use of the substance or preparation industrial

Polymer additive

**1.3 Company identification**

Huzhou Xinaote Pharmaceutical & Chemical Co., Ltd.

Manufacturer/distributor: M

Linghu Industrial Area, Huzhou, Zhejiang, P.R.China.

Tel: +86 (572) 2123995 Fax:+86 (572)2128608

**Information about the Safety Data Sheet**

Tel: +86-(572)3755758

Fax: +86-(572)3755766

Email:[xat@xatchem.com](mailto:xat@xatchem.com)

**1.4 Emergency telephone:+86 572 6988928**

**2. HAZARDS IDENTIFICATION**

**Main hazards and effects:**

Harmful in contact with skin and if swallowed. May cause sensitization by skin contact.

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

May cause harm to the unborn child.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

**INGREDIENT/CAS# % BY Ratio**

Component	CAS No.	Ratio%
Bis(2-ethylhexylthioglycolate)dimethyltin	57583-35-4	80
Tris(2-ethylhexylthioglycolate)methyltin	57583-34-3	20

#### **4. FIRST AID MEASURES**

##### **4.1 Swallowing**

Give medical activated charcoal 10 g in 100 ml water at 20 minute intervals (5 x). In case of spontaneous vomiting ensure that vomiting can drain freely to avoid risk of suffocation.

Drink water in small sips. (Diluting effect) Do not induce vomiting.

In case of unconsciousness or convulsion no oral administration., obtain medical attention immediately.

##### **4.2 Inhalation**

Remove to fresh air. In case of irritation of respiratory system or mucous membranes or if feeling unwell or after prolonged exposure get medical attention.

##### **4.3 Notes to physician**

Refer to our brochure "Organo-tin compounds - advice on toxicology and safe handling".

#### **5. FIRE-FIGHTING MEASURES**

##### **5.1 Special fire fighting procedures**

Do not release chemically contaminated water into drains, soil or surface water.

##### **5.2 Special protective equipment for firefighters**

Wear self-contained breathing apparatus.

##### **5.3 Unusual fire and explosion hazards**

In case of a fire aside from the major combustion products carbon dioxide and carbon monoxide other harmful gases and vapors may be formed.

#### **6. ACCIDENTAL RELEASE MEASURES**

##### **6.1 Personal precautions**

Do not breath vapors/aerosols. Eliminate sources of ignition. Avoid contact with skin and eyes.

##### **6.2 Environmental precautions**

Prevent from entering sewer system, surface water or soil. Disposal: see section 13

##### **6.3 Methods for cleaning up**

Large quantities: Pick spilled product with liquid absorbing material and pump off.

Small quantities: Soak up with liquid absorbing material (sand etc.) and dispose of as instructed.

#### **7. HANDLING AND STORAGE HANDLING**

##### **7.1 Advice on safe handling**

Avoid formation of vapors/aerosols.

Keep away from sources of ignition - No smoking.

Use only in well ventilated areas.

On occurring of vapors/aerosols take technical measures for effective exhaust.

##### **7.2 Other precautions**

The material is combustible and can form ignitable, explosive air/vapor mixtures. Take precautionary measures against static discharges.

##### **7.3 Storage requirements**

Keep container tightly closed in a cool, well-ventilated place.

##### **7.5 Further information on storage**

Avoid contact with oxidizing agents or strong acids/bases.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION EXPOSURE LIMITS

8.1 Exposure limits are listed below, if they exist

Components	Regulation	Type of listing	Value
Bis(2-ethylhexylthioglycolate)dimethyltin	ACGIH	TWA	0.1 mg/m <sup>3</sup>
	ACGIH	STEL	0.2 mg/m <sup>3</sup>
		SKIN_DES	
	OSHA_TRANS	PEL	0.1 mg/m <sup>3</sup>
	Z1A	TWA	
	Z1A	SKIN_FINAL	
	NIOSH/GUIDE	REL	0.1 mg/m <sup>3</sup>
	NIOSH/GUIDE	SKIN_DES	

Components	Regulation	Type of listing	Value
Tris(2-ethylhexylthioglycolate)methyltin	ACGIH	TWA	0.1 mg/m <sup>3</sup>
	ACGIH	STEL	0.2 mg/m <sup>3</sup>
		SKIN_DES	
	OSHA_TRANS	PEL	0.1 mg/m <sup>3</sup>
	Z1A	TWA	
	Z1A	SKIN_FINAL	
	NIOSH/GUIDE	REL	0.1 mg/m <sup>3</sup>
	NIOSH/GUIDE	SKIN_DES	

### 8.2 Exposure controls

**8.2.1 Engineering measures:** Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75m/sec.) at the point of dust or mist evolution.

**8.2.2 Protective measures:** Wash thoroughly after handling. Shower or bathe at the end of working. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### 8.3 Individual protection measures

**8.3.1 Eye/face protection:** Chemical resistant goggles must be worn. Eye protection worn must be compatible with respiratory protection system employed.

**8.3.2 Skin protection & Hand protection:** Chemical-resistant gloves should be worn whenever this material is handled. Glove permeation data does not exist for this material. The following glove(s) should be used for splash protection only: Neoprene gloves. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

**8.3.3 Other protection:** Wear as appropriate: impervious clothing , Chemical resistant apron

**8.3.4 Respiratory protection:** A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Up to 10 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Up to 50 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) full-face piece, air-purifying respirator, OR full-face piece, airline respirator in the pressure demand mode. Above 50 times the exposure limit or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-face piece, airline respirator in the pressure demand mode with emergency escape provision. Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Appearance

Physical state: Liquid

Color : Pale yellow

Odor : Slight alkanol

### 9.2 Other properties

Boiling point : > 250 °C at 1.013 hPa

Not distillable at normal conditions

Melting point : Not determined

Flash point : 115 °C

Method: Pensky-Martens closed cup ASTM D 93

Thermal decomposition : > 200 °C

Density : 1,16 g/cm<sup>3</sup>

Vapor pressure : < 1,0 hPa

Vapor density (air=1) : Not determined

Evaporation rate (Butyl Acetate=1) : < 1

Percent volatiles : Negligible

Solubility in water : Negligible

## 10. STABILITY AND REACTIVITY

**10.1 Hazardous reactions:** None known. Stable

**10.2 Materials to avoid:** Avoid contact with the following: Acids

**10.3 Polymerization:** Product will not undergo polymerization.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Acute Oral Toxicity

Component: Bis(2-ethylhexylthioglycolate)dimethyltin

**Acute oral toxicity:** LD50 rat 1,150 mg/kg OECD Test Guideline 401

Component: Tris(2-ethylhexylthioglycolate)methyltin

**Acute oral toxicity:** LD50 rat 880 mg/kg OECD Test Guideline 401

Component: Ethylhexyl thioglycolate

**Acute oral toxicity:** LD50 rat male 303 mg/kg

Component: Ethylhexyl thioglycolate

**Acute oral toxicity:** LD50 rat female 334 mg/kg

### 11.2 Acute inhalation toxicity

Component: Tris(2-ethylhexylthioglycolate)methyltin

**Acute inhalation toxicity:** LC50 rat 1 h 240 mg/laerosol

Component: Ethylhexyl thioglycolate

**Acute inhalation toxicity:** LC50 rat 6 h 0.51 mg/l

### 11.3 Acute dermal toxicity

Component: Bis(2-ethylhexylthioglycolate)dimethyltin

**Acute dermal toxicity:** LD50 rabbit > 1,050 mg/kg OECD Test Guideline 402

Component: Tris(2-ethylhexylthioglycolate)methyltin

**Acute dermal toxicity:** LD50 rabbit 1,000 - 2,150 mg/kg

Component: Ethylhexyl thioglycolate

**Acute dermal toxicity:** LD50 rat > 2,000 mg/kg OECD Test Guideline 402

### 11.4 Skin irritation

Component: Bis(2-ethylhexylthioglycolate)dimethyltin

**Skin irritation:** rabbit OECD Test Guideline 404 4 h slight irritation

Component: Tris(2-ethylhexylthioglycolate)methyltin

**Skin irritation:** abbit OECD Test Guideline 404 4 h slight irritation

Component: Ethylhexyl thioglycolate

**Skin irritation:** rabbit OECD Test Guideline 404 slight irritation

#### 11.5 Eye irritation:

Component: Bis(2-ethylhexylthioglycolate)dimethyltin

**Eye irritation:** rabbit OECD Test Guideline 405 non-irritating

Component: Ethylhexyl thioglycolate

**Eye irritation:** rabbit OECD Test Guideline 405 non-irritating

#### 11.6 Sensitisation:

Component: Bis(2-ethylhexylthioglycolate)dimethyltin

**Sensitisation:** guineapig MaurerOptimization Causes sensitization.

Component: Tris(2-ethylhexylthioglycolate)methyltin

**Sensitisation:** Skin sensitiser

Toxicity data for a compositionally similar material.

Component: Ethylhexyl thioglycolate

**Sensitisation:** guineapig OECD Test Guideline 406 Causes sensitization.

Component: Bis(2-ethylhexylthioglycolate)dimethyltin

#### 11.7 Teratogenicity

Developmental effects were seen in laboratory animals only at dose levels that were maternally toxic. Data is based on substance from simulated gastric hydrolysis of component(s) of this product.

Component: Tris(2-ethylhexylthioglycolate)methyltin

**Sub chronic toxicity** Oral rat

NOEL : 150 mg/kg

#### Brain -thymus effects

Data is based on substance from simulated gastric hydrolysis of component(s) of this product.

Component: Tris(2-ethylhexylthioglycolate)methyltin

#### **Sub chronic toxicity** Kidney effects

Data is based on substance from simulated gastric hydrolysis of component(s) of this product.

Component: Tris(2-ethylhexylthioglycolate)methyltin

Developmental effects were seen in laboratory animals only at dose levels that were maternally toxic. Data is based on substance from simulated gastric hydrolysis of component(s) of this product.

Component: Tris(2-ethylhexylthioglycolate)methyltin

#### **Mutagenicity**

In vivo micronucleus assay (mouse): Positive Data is based on substance from simulated gastric hydrolysis of component(s) of this product.

In vitro tests did not show mutagenic effects

Component: Ethylhexyl thioglycolate

#### **Reproductive toxicity**

Adverse effects on the female reproductive system have been reported in laboratory animals following repeated exposure.

Component: Ethylhexyl thioglycolate

#### **Teratogenicity**

Developmental effects were seen in laboratory animals only at dose levels that were maternally toxic.

## **12. ECOLOGICAL INFORMATION**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### **12.1 Bis(2-ethylhexylthioglycolate) dimethyltin**

#### **Elimination information (persistence and degradability)**

**Biodegradability** Not readily biodegraded.

**Ecotoxicity effects**

<b>Toxicity to fish</b>	static test LC50 Fathead minnow ( <i>Pimephales promelas</i> ) 96 h	1,000 mg/l
<b>Toxicity to algae</b>	EC50 Algae ( <i>Selenastrum capricornutum</i> ) 72 h	270 mg/l
<b>Toxicity to aquatic invertebrates</b>	static test EC50 <i>Daphnia magna</i> (Water flea) 48 h	17 mg/l

**12.2 Tris(2-ethylhexylthioglycolate)methyl tin**

**Elimination information (persistence and degradability)**

<b>Biodegradability</b>	Readily biodegradable
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**Ecotoxicity effects**

<b>Toxicity to fish</b>	semi-static test LC50 Zebra fish ( <i>Danio/Brachydanio rerio</i> ) 96 h	>6 mg/l
<b>Toxicity to algae</b>	EC50 Algae ( <i>Scenedesmus subspicatus</i> ) 72 h	>1.84 mg/l

**12.3 Ethylhexyl thioglycolate**

**Elimination information (persistence and degradability)**

<b>Biodegradability</b>	Not readily biodegraded.
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**Ecotoxicity effects**

<b>Toxicity to fish</b>	LC50 <i>Leuciscus idus</i> (Golden orfe) 48 h	9 mg/l
<b>Toxicity to algae</b>	Growth rate EC50 <i>Pseudokirchneriella subcapita</i> 72 h	0.91 mg/l
<b>Toxicity to aquatic invertebrates</b>	EC50 <i>Daphnia magna</i> 48 h	0.38 mg/l

**13. DISPOSAL CONSIDERATIONS**

**Environmental precautions:** CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

**Disposal**

**Waste Classification:** When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).



Refer to all federal, state and local regulations prior to disposition of container and unused contents by reuse, recycle, or disposal. For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

**Contaminated packaging:** Improper disposal or reuse of this container may be dangerous and illegal. Can be landfilled or incinerated, when in compliance with local regulations. Refer to applicable federal, state, and local regulations.

## 14. TRANSPORT INFORMATION

### ADR/RID

Not classified as a dangerous good.

### IMDG

This product is not regulated by  
IMDG.

### ICAO

This product is not regulated by  
ICAO.

## 15. REGULATORY INFORMATION

### EC classification

Labelling according to EC-Directive 88/379/EEC, and amendments and adaptations:

Danger symbol(s): Xn

Risk phrases : R22 Harmful if swallowed.

R43 May cause sensitization by skin contact.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R52 Harmful to aquatic organisms.

R53 May cause long-term adverse effects in the aquatic  
Environment.

Safety phrases : S24 Avoid contact with skin.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S61 Avoid release to the environment. Refer to special  
instructions/Safety data Sheets. Contains :

Methyltin tris(2-ethylhexyl mercaptoacetate):

Dimethyltin bis(2-ethylhexyl mercaptoacetate)

### Chemical Inventory

Australia : The ingredients of this product are on the AICS inventory.

Canada : The ingredients of this product are on the DSL.

Europe : The ingredients of this product are on the EINECS inventory.

Japan : The ingredients of this product are on the ENCS inventory.

United States : The ingredients of this product are on the TSCA inventory.

## 16. OTHER INFORMATION

### Further information

The opinions expressed herein are those of qualified experts within Huzhou Xinaote Pharmaceutical & Chemical Co., Ltd.. We believe that the information contained herein is current as of the date of this Material Safety Data

Sheet. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of Huzhou Xinaote Pharmaceutical & Chemical Co., Ltd., it is the user's obligation to determine the conditions of safe use of the products.