



**X-AB/5 A**

Version 1.0

Revision Date 09.07.2015

**1. Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Trade name : **X-AB/5 A**  
Other means of Identification : **Liquid Tin Compound**

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

Use of the Substance/Mixture : Manufacture of plastics products  
Polymer additive  
Stabilizer  
Restrictions on Use : None known

**1.3 Details of the supplier of the safety data sheet**

Company : Baerlocher Production USA LLC  
5890 Highland Ridge Drive  
Cincinnati, OH 45232  
Telephone : Day 330-602-1528, 330-602-1531 or -1530  
: Night 513-207-1620 or 513-604-2327  
E-mail address : Hotline.PS@baerlocher.com  
Responsible/issuing person : Product Safety Department

**1.4 Emergency telephone number (0 - 24 h)**

Tel.: 800-424-9300 USA or 703-527-3887

**2. Hazards identification**

**2.1 Classification of the substance or mixture**

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Acute toxicity, Category 4	H312: Harmful in contact with skin.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, Category 2	H341: Suspected of causing genetic defects.
Reproductive toxicity, Category 1B	H360FD: May damage fertility. May damage the unborn child.
Specific target organ toxicity - single exposure, Category 1	H370: Causes damage to organs.
Specific target organ toxicity - repeated exposure, Category 1	H372: Causes damage to organs through prolonged or repeated exposure.
Acute aquatic toxicity, Category 1	H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects.
Toxic	R48/25: Toxic: danger of serious damage to health by prolonged exposure if swallowed.



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Toxic to Reproduction Category 2	R23: Toxic by inhalation.
Harmful	R60: May impair fertility.
Mutagenic Category 3	R61: May cause harm to the unborn child.
Sensitising	R21/22: Harmful in contact with skin and if swallowed.
Irritant	R68: Possible risk of irreversible effects.
Dangerous for the environment	R43: May cause sensitisation by skin contact.
	R36/38: Irritating to eyes and skin.
	R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H341 Suspected of causing genetic defects. H360FD May damage fertility. May damage the unborn child. H370 Causes damage to organs. H372 Causes damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	<b>Prevention:</b> P201 Obtain special instructions before use. P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P273 Avoid release to the environment. P280 Wear eye protection/ face protection. P281 Use personal protective equipment as required. <b>Response:</b> P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.

2.3 Other hazards

The product is combustible.  
May produce an allergic reaction.



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### 3. Composition/information on ingredients

#### 3.2 Mixtures

Chemical nature : Preparation containing mono and dibutyltin thioester.

#### Hazardous components

Chemical Name	CAS-No.	Concentration [%]
Monobutyltin-tris(2-ethylhexylthioglycolate)	26864-37-9	>= 20*
Dibutyltin bis(ethylhexylthioglycolate)	10584-98-2	>= 20*

\*Trade Secret – The specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

### 4. First aid measures

#### 4.1 Description of first aid measures

General advice : Remove and wash contaminated clothing before re-use.

If inhaled : Move to fresh air.

In case of skin contact : Wash off with soap and plenty of water.  
Take off contaminated clothing and shoes immediately.

In case of eye contact : Rinse with plenty of water.

If swallowed : Consult a doctor and show this safety datasheet.

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

Symptoms : No information available.

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

Treatment : Treat symptomatically.

### 5. Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media : Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Sand



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Unsuitable extinguishing media : High volume water jet

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during firefighting : Smoke and fumes, toxic.

**5.3 Advice for firefighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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**6. Accidental release measures**

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

Personal precautions : Remove all sources of ignition.  
Ensure adequate ventilation.  
Avoid contact with skin and eyes.  
Use personal protective equipment.

**6.2 Environmental precautions**

Environmental precautions : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.

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

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For personal protection see section 8.

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**7. Handling and storage**

**7.1 Precautions for safe handling**

Advice on safe handling : Take precautionary measures against static discharges.  
Keep away from sources of ignition - No smoking.  
Provide sufficient air exchange and/or exhaust in work rooms.

**7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : Store at room temperature in the original container.  
Keep container tightly closed in a dry and well-ventilated place.

Further information on storage conditions : Handle in accordance with good industrial hygiene and safety practice.



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German storage class : 6.1C Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

**7.3 Specific end use(s)**

: Consult the technical guidelines for the use of this substance/mixture.

**8. Exposure controls/personal protection**

**8.1 Control parameters**

Substance	CAS No.	Regulatory Limits		Recommended Limits		
		OSHA PEL		Cal/OSHA PEL	NIOSH REL	ACGIH TLV
		ppm	mg/m <sup>3</sup>	8-hour TWA (ST) STEL (C) Ceiling	Up to 10-hour TWA (ST) STEL (C) Ceiling	8-hour TWA (ST) STEL (C) Ceiling
Tin, organic compounds (as Sn)	7440-31-5		0.1 Sn (vacated)  0.1 Sn (vacated) S*	0.1 mg/m <sup>3</sup>  (ST) 0.2 mg/m <sup>3</sup>	IDLH: 25 mg/m <sup>3</sup> Sn  0.1 mg/m <sup>3</sup> except Cyhexatin Sn	0.1 mg/m <sup>3</sup> Sn  (ST) 0.2 mg/m <sup>3</sup> Sn

**8.2 Exposure controls**

**Engineering measures**

Local exhaust

**Personal protective equipment**

- Respiratory protection : In case of insufficient ventilation: Protective mask with A2 Filter.
- Hand protection : protective gloves acc. to EN 374, e.g. neoprene, thickness: min. 0,7 mm
- Eye protection : Safety glasses
- Skin and body protection : Long sleeved clothing  
Rubber apron



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Hygiene measures : When using do not eat or drink.  
Do not smoke.  
Wash hands before breaks and at the end of workday.  
Shower or bathe at the end of working.  
Keep working clothes separately.

Protective measures : antistatic shoes

**Environmental exposure controls**

General advice : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.

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**9. Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Appearance : liquid

Colour : yellowish

Odour : characteristic

pH : no data available

Boiling point/boiling range : > 300 °C

Flash point : > 100 °C

Lower explosion limit : no data available

Upper explosion limit : no data available

Vapour pressure : no data available

Density : > 1,0 g/cm<sup>3</sup>

Water solubility : slightly soluble

Partition coefficient: n-octanol/water : no data available

Auto-ignition temperature : no data available

Ignition temperature : no data available

Viscosity, dynamic : no data available

Viscosity, kinematic : no data available

Odor Threshold : No data available

Melting/Freezing Point : No data available

Evaporation Rate : No data available

Flammability : No data available

Vapor Density : No data available



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Decomposition Temperature : No data available

**9.2 Other information**

No data available

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**10. Stability and reactivity**

**10.1 Reactivity**

Stable at normal ambient temperature and pressure.

**10.2 Chemical stability**

No decomposition if stored normally.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : Contact with mineral acids can release hydrogen sulphide.

**10.4 Conditions to avoid**

Conditions to avoid : Sources of ignition

**10.5 Incompatible materials**

Materials to avoid : Strong oxidizing agents

**10.6 Hazardous decomposition products**

Hazardous decomposition products : No decomposition if used as directed.

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**11. Toxicological information**

**11.1 Information on toxicological effects**

**Product**

Acute oral toxicity : Acute toxicity estimate: 661,38 mg/kg, Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 1,98 mg/l, 4 h, dust/mist, Calculation method

Acute dermal toxicity : Acute toxicity estimate: 1.636 mg/kg, Calculation method

**Components:**

**Monobutyltin-tris(2-ethylhexylthioglycolate) :**

Acute oral toxicity : LD50: 1.520 mg/kg, mouse(male and female)

**Dibutyltin bis(ethylhexylthioglycolate) :**

Acute oral toxicity : LD50: 396 mg/kg, rat, OECD Test Guideline 401, GLP: no

Acute inhalation toxicity : LC50: 0,941 mg/l, 4 h, rat, dust/mist, OECD Test Guideline



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	403
Acute dermal toxicity	: LD50: 777 mg/kg, rat, OECD Test Guideline 402 : LD50: > 1.000 mg/kg, rat, OECD Test Guideline 402, GLP: yes
Skin corrosion/irritation	: Skin corrosion: Human Skin Model Test, Result: not irritating, EPISKIN Human Skin Model Test, 0,25 h, GLP: yes : Skin corrosion: Human Skin Model Test, Result: No corrosion, OECD Test Guideline 431, 1 - 4 h, GLP: yes : rat, Result: Severe skin irritation, OECD Test Guideline 402, 24 h, GLP: yes
Serious eye damage/eye irritation	: rabbit, Result: irritating, OECD Test Guideline 405, GLP: no
Respiratory or skin sensitisation	: Skin sensitisation : Maximisation Test, guinea pig, Result: Sensitising, OECD Test Guideline 406, GLP: yes : Respiratory sensitisation, Not classified due to lack of data.
Germ cell mutagenicity	
Genotoxicity in vitro	: Mutagenicity (Salmonella typhimurium - reverse mutation assay), Bacteria, Result: negative, OECD Test Guideline 471 : Read-across (Analogy) : In vitro gene mutation study in mammalian cells, V79, Result: negative, OECD Test Guideline 476, GLP: yes : Read-across (Analogy) : Mutagenicity (in vitro mammalian cytogenetic test), Human lymphocytes, Result: positive, OECD Test Guideline 473, GLP: yes
Genotoxicity in vivo	: Read-across (Analogy) : In vivo micronucleus test, mouse, Oral, OECD Test Guideline 474, GLP: yes, Result: positive
Carcinogenicity	: Not classified due to lack of data.
Reproductive toxicity	: Read-across (Analogy) : Screening for reproductive/developmental toxicity, rat, Oral, OECD Test Guideline 421, GLP: yes
Teratogenicity	: Read-across (Analogy) : rat, Exposure time: 10 d, Test period: 20 d, Oral, OECD Test Guideline 414, GLP: yes
STOT - single exposure	: Exposure routes: Inhalation, Ingestion, Skin contact Target Organs: thymus Assessment: Causes damage to organs.





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- STOT - repeated exposure : rat, Oral, standardised international/national methodology, Causes damage to organs through prolonged or repeated exposure., thymus  
: Remarks: Classification, Labelling according to EC Directives, Regulation (EC) No 1272/2008, Annex VI, Table 3.1, Category 1
- Aspiration toxicity : Not classified due to lack of data.
- Further information : CMR effects, Carcinogenicity, Mutagenicity, Hazard assessment, Category 1A, Category 1B, Based on available data, the classification criteria are not met.  
: Classification, Reproductive toxicity, Category 1B  
: Likely route of exposure, Inhalation, Ingestion, Skin contact

### 11.2 Carcinogenicity

Contains no known or suspected carcinogens listed by IARC, NTP or OSHA at or above reportable quantities.

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## 12. Ecological information

### 12.1 Toxicity

#### Components:

#### **Monobutyltin-tris(2-ethylhexylthioglycolate) :**

#### **Ecotoxicology Assessment**

- Chronic aquatic toxicity : Read-across (Analogy)  
: May cause long lasting harmful effects to aquatic life.

#### **Dibutyltin bis(ethylhexylthioglycolate) :**

- Toxicity to fish : LC50: > 11,4 mg/l, 96 h, Danio rerio (zebra fish), static test, OECD Test Guideline 203, GLP: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50: > 1,4 mg/l, 48 h, Daphnia magna (Water flea), static test, OECD Test Guideline 202, GLP: yes
- Toxicity to algae : NOEC: 0,646 mg/l, 72 h, Desmodesmus subspicatus (green algae), Growth inhibition, OECD Test Guideline 201, GLP: yes
- Toxicity to bacteria : EC50: > 1.000 mg/l, 3 h, activated sludge, Respiration inhibition, OECD Test Guideline 209, GLP: yes



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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 10 %, 21 d, Daphnia magna (Water flea), semi-static test, OECD Test Guideline 211, GLP: yes, Value referred to the Water accumulated fraction (WAF).

**12.2 Persistence and degradability**

**Components:**

**Monobutyltin-tris(2-ethylhexylthioglycolate) :**

Biodegradability : no data available

**Dibutyltin bis(ethylhexylthioglycolate) :**

Biodegradability : aerobic, Result: Inherently biodegradable., Exposure time: 76 d, activated sludge, OECD Test Guideline 301, GLP: yes

**12.3 Bioaccumulative potential**

**Components:**

**Monobutyltin-tris(2-ethylhexylthioglycolate) :**

Bioaccumulation : no data available

**Dibutyltin bis(ethylhexylthioglycolate) :**

Bioaccumulation : Bioaccumulative potential slightly

**12.4 Mobility in soil**

**Components:**

**Monobutyltin-tris(2-ethylhexylthioglycolate) :**

Mobility : no data available

**Dibutyltin bis(ethylhexylthioglycolate) :**

Mobility : Predicted distribution to environmental compartments, Soil, Sediment

**12.5 Results of PBT and vPvB assessment**

**Components:**

**Monobutyltin-tris(2-ethylhexylthioglycolate) :**

Assessment : Based on available data, the classification criteria are not met.

**Dibutyltin bis(ethylhexylthioglycolate) :**

Assessment : Based on available data, the classification criteria are not met.

**12.6 Other adverse effects**

**Monobutyltin-tris(2-ethylhexylthioglycolate) :**

Further information : No information available.

**Dibutyltin bis(ethylhexylthioglycolate) :**

Further information : No information available.

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**13. Disposal considerations**

**13.1 Waste treatment methods**



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Product : Dispose of contents/container in accordance with local/regional/national/international/regulations.

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**14. Transport information**

**14.1 UN number**

**DOT** : Not dangerous goods in containers < 119 gallons (non-bulk), per 49 CFR 171.4 (c).  
For bulk containers only : 3082

**IMDG** : 3082

**IATA** : 3082

**14.2 Proper shipping name**

**DOT** : Not dangerous goods in containers < 119 gallons (non-bulk), per 49 CFR 171.4 (c).  
For bulk containers only :  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (organotin compound, solution)

**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (organotin compound, solution)

**IATA** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (organotin compound, solution)

**14.3 Transport hazard class**

**DOT** : Not dangerous goods in containers < 119 gallons (non-bulk), per 49 CFR 171.4 (c).  
For bulk containers only : 9

**IMDG** : 9

**IATA** : 9

**14.4 Packing group**

**DOT** Not dangerous goods in containers < 119 gallons (non-bulk), per 49 CFR 171.4 (c).

For bulk containers only :

Packaging group : III

Classification Code : M6

Hazard Identification Number : 90

Labels : 9

Tunnel restriction code : (E)

**IMDG**

Packaging group : III

Labels : 9

EmS Number : F-A, S-F

**IATA**

Packing instruction (cargo aircraft) : 964

Packaging group : III

Labels : 9



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**14.5 Environmental hazards**

**DOT**

Environmentally Hazardous : yes

**IMDG**

Marine Pollutant : yes

**IATA**

Environmentally Hazardous : yes

**14.6 Special precautions for user**

See this safety data sheet chapter 6. - 8.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Remarks : No transport according to Annex II of MARPOL 73/78 and the IBC Code

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**15. Regulatory information**

**Section 313 Supplier Notification (USA)**

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

Component	CAS/313 Category Code	Wt (%)
Not applicable		

**National Legislation:**

**Registration Status:**

EINECS	: listed
TSCA	: listed
DSL	: listed
AICS	: listed
ENCS	: Not listed
ECL	: listed
PICCS	: listed
CHINA	: listed



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**16. Other information**

**Date of Preparation or last change: 09.07.2015**

**HMIS Rating (USA)**

Health : 2  
Flammability : 1  
Reactivity : 1  
Personal Protection : G

**Full text of R-phrases**

R21/22 Harmful in contact with skin and if swallowed.  
R22 Harmful if swallowed.  
R23 Toxic by inhalation.  
R36/38 Irritating to eyes and skin.  
R43 May cause sensitisation by skin contact.  
R48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.  
R50 Very toxic to aquatic organisms.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R53 May cause long-term adverse effects in the aquatic environment.  
R60 May impair fertility.  
R61 May cause harm to the unborn child.  
R68 Possible risk of irreversible effects.

**Full text of H-Statements**

H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H331 Toxic if inhaled.  
H332 Harmful if inhaled.  
H341 Suspected of causing genetic defects.  
H360FD May damage fertility. May damage the unborn child.  
H370 Causes damage to organs.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H413 May cause long lasting harmful effects to aquatic life.



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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.