

Version 2.0      Revision Date: 09/13/2018

Date of last issue: 06/06/2018  
Date of first issue: 09/06/2016

**SECTION 1. IDENTIFICATION**

Product name : Fernester TXIB

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

Company name of distributor : Silver Fern Chemical, Inc.  
2226 Queen Anne Avenue North, Suite C  
Seattle WA 98109, USA

24 Hour Emergency Contact: Infotrac 1-800-535-5053 (USA & Canada)  
Outside USA & Canada 1-352-323-3500

**Recommended use of the chemical and restrictions on use**

Recommended use : Additive  
Plasticizer

Restrictions on use : None known.

**SECTION 2. HAZARDS IDENTIFICATION**

**GHS classification in accordance with 29 CFR 1910.1200**

**Reproductive toxicity** : **Category 2**

**GHS label elements** :

Hazard pictograms



Signal Word : **Warning**

Hazard Statements : **H361d Suspected of damaging the unborn child.**

Precautionary Statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

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**P308 + P313 IF exposed or concerned: Get medical advice/attention.**

**Storage:**

**P405 Store locked up.**

**Disposal:**

**P501 Dispose of contents/ container to an approved waste disposal plant.**

**Other hazards**

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Pure substance  
Substance name : 01315-00  
CAS-No. : 6846-50-0

**Ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	100

### SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.  
Call a physician or poison control center immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.  
Take off all contaminated clothing immediately.  
Call a physician or poison control center immediately.

In case of eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed : If accidentally swallowed obtain immediate medical attention.

Most important symptoms and effects, both acute and delayed : Suspected of damaging the unborn child.  
toxic effects for reproduction

Notes to physician : Treat symptomatically.

### SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide (CO2)  
Dry chemical  
Water spray

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- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.  
Do NOT use water jet.
- Specific hazards during fire fighting : None known.
- Hazardous combustion products : No hazardous combustion products are known
- Further information : None known.
- Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear appropriate personal protective equipment.  
Local authorities should be advised if significant spillages cannot be contained.
- Environmental precautions : Avoid release to the environment.
- Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.  
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

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### SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : None known.
- Advice on safe handling : Do not breathe vapors or spray mist.  
Do not get on skin or clothing.  
Do not swallow.  
Use only with adequate ventilation.  
Wash thoroughly after handling.
- Conditions for safe storage : Keep tightly closed.

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### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

- Engineering measures** : Good general ventilation (typically 10 air changes per hour) should be sufficient to control airborne levels.  
Ensure adequate ventilation.

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### Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection

Remarks : Wear suitable gloves.

Eye protection : Safety glasses

Protective measures : Remove respiratory and skin/eye protection only after vapors have been cleared from the area.  
Ensure that eye flushing systems and safety showers are located close to the working place.  
Use personal protective equipment as required.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : colorless

Odor : slight

Odor Threshold : not determined

pH : not determined

Melting point/freezing point : -94 °F / -70 °C

Boiling point/boiling range : 538.7 °F / 281.5 °C

Flash point : 277 °F / 136 °C  
(101.325 kPa)  
Method: Setaflash closed cup

Evaporation rate : not determined

Flammability (solid, gas) : Not applicable

Self-ignition : 748 °F / 398 °C  
Method: ASTM E659

Vapor pressure : < 1.5 Pa (77 °F / 25 °C)

Relative vapor density : 9.9

Relative density : 0.9435 (68 °F / 20 °C)

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Solubility(ies)  
  Water solubility                    : 0.0009 - 0.013 g/l (77 °F / 25 °C)

Partition coefficient: n-            : log Pow: 4.04 - 4.91 (77 °F / 25 °C)  
  octanol/water

Autoignition temperature        : not determined

Decomposition temperature      : not determined

Viscosity  
  Viscosity, dynamic                : 5.04 mPa.s (77 °F / 25 °C)

  Viscosity, kinematic              : 5.3 mm<sup>2</sup>/s (77 °F / 25 °C)

Explosive properties              : Not classified

Oxidizing properties               : Not classified

Surface tension                    : 27.8 mN/m, 72 °F / 22 °C

Molecular weight                  : 286.4 g/mol

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity                         : None reasonably foreseeable.

Chemical stability                 : Stable under normal conditions.

Possibility of hazardous reac-   : Stable  
  tions                                None known.

Conditions to avoid                : None known.

Incompatible materials            : Strong oxidizing agents

Hazardous decomposition         : carbon dioxide  
  products                            Carbon monoxide

    Carbon dioxide (CO<sub>2</sub>)  
    Carbon monoxide

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Not classified based on available information.

#### **Product:**

Acute oral toxicity                : Remarks: No data available

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Remarks: None.

Acute inhalation toxicity : Remarks: No data available

Remarks: No significant adverse effects were reported

Acute dermal toxicity : Remarks: No data available

Remarks: No significant adverse effects were reported

### Ingredients:

#### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate :**

Acute oral toxicity : LD50 Oral (Rat): > 2,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.12 mg/l  
Exposure time: 6 h

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2,000 mg/kg

#### **Skin corrosion/irritation**

Not classified based on available information.

#### **Product:**

Remarks : No data available

### Ingredients:

#### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate :**

Species : Guinea pig

Exposure time : 24 h

Result : slight

#### **Serious eye damage/eye irritation**

Not classified based on available information.

#### **Product:**

Remarks : No data available

### Ingredients:

#### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate :**

Species : Rabbit

Result : none

Exposure time : 24 h

#### **Respiratory or skin sensitization**

##### **Skin sensitization**

Not classified based on available information.

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### Respiratory sensitization

Not classified based on available information.

#### Product:

Remarks : No data available

#### Ingredients:

##### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate :**

Test Type : Skin Sensitization  
Species : Guinea pig  
Result : non-sensitizing

### Germ cell mutagenicity

Not classified based on available information.

### Carcinogenicity

Not classified based on available information.

#### Product:

Remarks : This information is not available.

#### Ingredients:

##### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate :**

Remarks : OSHA Not Listed.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### Reproductive toxicity

Suspected of damaging the unborn child.

#### Product:

Effects on fertility : Remarks: No data available

#### Ingredients:

##### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate :**

Effects on fetal development : Species: Rabbit  
Application Route: Oral  
Developmental Toxicity: NOAEL: 300 mg/kg body weight

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

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### STOT-single exposure

Not classified based on available information.

#### Product:

Remarks : No data available

### STOT-repeated exposure

Not classified based on available information.

#### Product:

Remarks : No data available

### Aspiration toxicity

Not classified based on available information.

#### Product:

No data available

No aspiration toxicity classification

### Further information

#### Product:

Remarks : None known.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

- Toxicity to fish : NOEC: (Fish):  $\geq 6$  mg/l  
Exposure time: 96 h  
Remarks: (limit of solubility in fresh water)
- Toxicity to daphnia and other aquatic invertebrates : NOEC: (daphnid):  $\geq 1.46$  mg/l  
Exposure time: 48 h  
Remarks: (limit of solubility in fresh water)
- Toxicity to algae : EC50 (Chlorella pyrenoidosa):  $> 7.49$  mg/l  
Exposure time: 72 h  
Remarks: (limit of solubility in fresh water)
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50 (Daphnia):  $> 1.3$  mg/l  
Exposure time: 21 d  
Remarks: (limit of solubility in fresh water)
- NOEC: (Daphnia): 0.7 mg/l  
Exposure time: 21 d



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### Ingredients:

#### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate:**

Toxicity to fish : NOEC (Fish):  $\geq 6$  mg/l  
Exposure time: 96 h  
Remarks: (limit of solubility in fresh water)

Toxicity to daphnia and other aquatic invertebrates : NOEC: (Daphnia):  $\geq 1.46$  mg/l  
Exposure time: 48 h  
Remarks: (limit of solubility in fresh water)

Toxicity to algae : EC50 (Chlorella pyrenoidosa):  $> 7.49$  mg/l  
Exposure time: 72 h  
Remarks: (limit of solubility in fresh water)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50 (Daphnia):  $> 1.3$  mg/l  
Exposure time: 21 d  
Remarks: (limit of solubility in fresh water)

NOEC (Daphnia): 0.7 mg/l  
Exposure time: 21 d

### **Persistence and degradability**

#### Product:

Biodegradability : Biodegradation: 70.73 %  
Exposure time: 28 d  
Method: Ready Biodegradability: CO2 Evolution Test

ThOD : 2.40 g/g

### Ingredients:

#### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate:**

Biodegradability : Biodegradation: 70.73 %  
Exposure time: 28 d  
Method: Ready Biodegradability: CO2 Evolution Test

ThOD : 2.40 g/g

### **Bioaccumulative potential**

#### Product:

Bioaccumulation : Species: Fish  
Bioconcentration factor (BCF): 1.95

Species: Fish  
Bioconcentration factor (BCF): 183 - 194

### Ingredients:

#### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate:**

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Bioaccumulation : Species: Fish  
Bioconcentration factor (BCF): 1.95

Species: Fish  
Bioconcentration factor (BCF): 183 - 194

### Mobility in soil

#### Ingredients:

#### **2,2,4-trimethyl-1,3-pentanediol diisobutyrate:**

Distribution among environmental compartments : log Koc: 2.69 - 3.6  
Method: QSAR model

#### **Other adverse effects**

No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

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## SECTION 14. TRANSPORT INFORMATION

### **International Regulations**

#### **IATA-DGR**

Not regulated as a dangerous good

#### **IMDG-Code**

Not regulated as a dangerous good

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

Product name : 2,2,4-TRIMETHYL-1,3-PENTANE DIOL DIISOBUTYRATE  
Pollution category : Z  
Ship type : 3

#### **Domestic regulation**

#### **49 CFR**

Not regulated as a dangerous good

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## SECTION 15. REGULATORY INFORMATION

### **EPCRA - Emergency Planning and Community Right-to-Know**

#### **CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

#### **SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

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### **SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Reproductive toxicity

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### **California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

### **The ingredients of this product are reported in the following inventories:**

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On the inventory, or in compliance with the inventory

### **TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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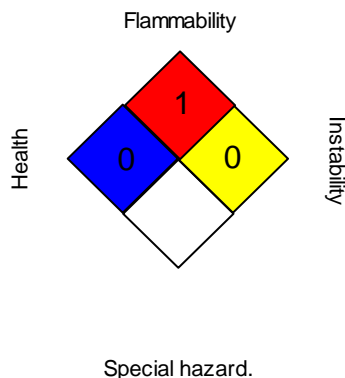
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### SECTION 16. OTHER INFORMATION

#### Further information

##### NFPA 704:



##### HMIS® IV:

HEALTH	*	0
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); EC<sub>x</sub> - Concentration associated with x% response; EHS - Extremely Hazardous Substance; EL<sub>x</sub> - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErC<sub>x</sub> - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC<sub>50</sub> - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC<sub>50</sub> - Lethal Concentration to 50 % of a test population; LD<sub>50</sub> - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG -

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United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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### DISCLAIMER OF RESPONSIBILITY

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