

# Titanium(IV) (triethanolaminate)isopropoxide solution: sc-237118



The Power to Question

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Titanium(IV) (triethanolaminate)isopropoxide solution  
**Product Number:** sc-237118  
**Supplier:** Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, CA 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

#### Emergency Overview

#### OSHA Hazards

Flammable liquid, Target Organ Effect, Irritant

#### Target Organs

Nerves, Kidney, Cardiovascular system, Gastrointestinal tract, Liver

#### GHS Classification

Flammable liquids (Category 2)

Skin irritation (Category 2)

Serious eye damage (Category 1)

Specific target organ toxicity – single exposure (Category 3)

#### GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

#### Hazard statement(s)

H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H335 + H336 May cause respiratory irritation, and drowsiness or dizziness.

#### Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P280 Wear protective gloves/ eye protection/ face protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### HMIS Classification

Health hazard: 2  
Chronic Health Hazard: \*  
Flammability: 3  
Physical hazards: 0

#### NFPA Rating

Health hazard: 2

<b>Fire:</b>	3
<b>Reactivity Hazard:</b>	0
<b>Potential Health Effects</b>	
<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms:** TYZOR® TE organic titanate

**Formula:** C<sub>9</sub>H<sub>19</sub>NO<sub>4</sub>Ti

**Molecular Weight:** 253.12

Component	Classification	Concentration
<b>Tetraisopropoxy titanate, reaction products with triethanolamine</b>		
CAS-No. 74665-17-1	Flam. Liq. 2; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; H225, H315, H318, H335	60 - 100 %
<b>2-Propanol</b>		
CAS-No. 67-63-0 EC-No. 200-661-7 Index-No. 603-117-00-0	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3; H225, H319, H336	10 - 30 %

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### 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. 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

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIREFIGHTING MEASURES

#### Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary

#### Hazardous combustion products

Hazardous decomposition products formed under fire conditions. – Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Titanium/titanium oxides

#### Further information

Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition – No smoking. Take measures to prevent the build up of electrostatic charge.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store at room temperature.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
2-Propanol	67-63-0	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Not classifiable as a human carcinogen			
		STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Not classifiable as a human carcinogen			
		TWA	400 ppm 980 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	500 ppm 1,225 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	400 ppm 980 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m <sup>3</sup> is approximate.			
		TWA	400 ppm 980 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		ST	500 ppm 1,225 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).

#### Hand 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.

#### Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### **Skin and body protection**

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

### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Form	liquid	Upper explosion limit	no data available
pH	no data available	Vapor pressure	no data available
Boiling point	no data available	Density	1.087 g/mL at 25 °C
Flash point	16 °C (61 °F)	Water solubility	no data available
Ignition temperature	no data available	Odor	no data available
Lower explosion limit	no data available	Odor Threshold	no data available
Evaporation rate	no data available	Relative vapor density	no data available
Melting point/ freezing point	no data available	Partition coefficient: n-octanol/water	no data available
Autoignition temperature	no data available		

## **10. STABILITY AND REACTIVITY**

### **Chemical stability**

Stable under recommended storage conditions.

### **Possibility of hazardous reactions**

Vapors may form explosive mixture with air.

### **Conditions to avoid**

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### **Materials to avoid**

no data available

### **Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. – Carbon oxides, nitrogen oxides (NOx), Titanium/titanium oxides Other decomposition products – no data available

## **11. TOXICOLOGICAL INFORMATION**

### **Acute toxicity**

#### **Oral LD50**

no data available

#### **Inhalation LC50**

no data available

#### **Dermal LD50**

no data available

#### **Other information on acute toxicity**

no data available

### **Skin corrosion/irritation**

no data available

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

Eyes: no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

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.

IARC: 3 – Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

no data available

**Teratogenicity**

no data available

**Specific target organ toxicity – single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity – repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential Health Effects**

**Inhalation**

May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.

**Skin**

May be harmful if absorbed through skin. Causes skin irritation.

**Eyes**

Causes eye irritation.

**Ingestion**

May be harmful if swallowed.

**Signs and Symptoms of Exposure**

Central nervous system depression, prolonged or repeated exposure can cause: nausea, headache, vomiting, narcosis, drowsiness. Overexposure may cause mild, reversible liver effects.

**Synergistic effects**

no data available

**Additional Information**

RTECS: Not available

## 12. ECOLOGICAL INFORMATION

**Toxicity**

no data available

**Bioaccumulative potential**

no data available

**PBT and vPvB assessment**

no data available

**Persistence and degradability**

no data available

**Mobility in soil**

no data available

**Other adverse effects**

no data available

## 13. DISPOSAL CONSIDERATIONS

**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

**DOT (US)**

UN number: 1993 Class: 3 Packing group: II

Proper shipping name: Flammable liquids, n.o.s. (Tetraisopropoxy titanate, reaction products with triethanolamine, 2-Propanol)

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG**

UN number: 1993 Class: 3 Packing group: II EMS-No: F-E, S-E

Proper shipping name: FLAMMABLE LIQUID, N.O.S. (Tetraisopropoxy titanate, reaction products with triethanolamine, 2- Propanol)

Marine pollutant: No

**IATA**

UN number: 1993 Class: 3 Packing group: II

Proper shipping name: Flammable liquid, n.o.s. (Tetraisopropoxy titanate, reaction products with triethanolamine, 2- Propanol)

## 15. REGULATORY INFORMATION

### OSHA Hazards

Flammable liquid, Target Organ Effect, Irritant

### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

2-Propanol CAS-No. 67-63-0

### SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

2-Propanol CAS-No. 67-63-0

### Pennsylvania Right To Know Components

Tetraisopropoxy titanate, reaction products with triethanolamine CAS-No. 74665-17-1

2-Propanol CAS-No. 67-63-0

### New Jersey Right To Know Components

Tetraisopropoxy titanate, reaction products with triethanolamine CAS-No. 74665-17-1

2-Propanol CAS-No. 67-63-0

### California Prop. 65 Components

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

## 16. OTHER INFORMATION

### Text of H-code(s) and R-phrase(s) mentioned in Section 3

Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapor
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity – single exposure

***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.***

7/23/2012