# MATERIAL SAFETY DATA SHEET (MSDS)

Contact: ShaoJun(Sales) Tel:+86-0512-58961066 Fax: +86-0512-58961068

Mobile: +86-18921980669 MSN: yaruichem@hotmail.com
Email: sales@yaruichem.com Skype: yaruichem@hotmail.com

Email: sales@yaruichem.com Website: www.chinayaruichem.com QQ:18921980669

# PRODUCT NAME: TRIBUTOXY ETHYL PHOSPHATE

# 1. Product Identification:

Synonyms: Tris(2-butoxyethyl) Ester Phosphoric acid, Tris(2-butoxyethyl)

Phosphate, 2-butoxyethanol Phosphate, TBEP, KP-140

CAS No.: 78-51-3

Molecular Weight: 398.54

Chemical Formula: C18H39O7P

Product Codes: CY-08

2. Composition:

Ingredient CAS No Percer
Tributoxy Ethyl Phosphate 78-51-3 Not Available No

3. Stability:

This chemical is stable under normal laboratory conditions.

4.Flammability(Flash Point):

This chemical has a flash point of 224°C. It is not combustible. Fires involving this material can be controlled with a dry chemical. Carbon dioxide or Halon extinguisher.

5. Reactivity:

This chemical may react with oxidizers.

# 6. Handling Procedures:

Acute/Chronic Hazards: Not available

Minimum Protective Clothing: Not available

## Recommended Glove Materials: Not available

### **Recommended Respirator:**

Where the neat test chemical is weighed and diluted, wear a Niosh-approved half face respirator equipped with and organic vapor/acid gas cartridge (specific for organic vapors, HCl, acid gas and SO2) with a dust/mist filter.

## **Storage Precautions:**

You should store this material under refrigerated temperatures and keep it asay from oxidizing materials.

### **Spills and Leakage:**

If you spill this chemical, FIRST REMOVE ALL SOURCES OF IGNITION. Then, use absorbent paper to pick up all liquid spill material. Your contaminated clothing and absorbent paper should be sealed na vapor-tight plastic bag for eventual diposal. Solvent wahs all contaminated surfaces with ethanol followed by washing with a soap and water solution. Do not reenter the contaminated area until the Safety Officer(or other responsible person) has verified that the area has been properly cleaned.

**Disposal and Waste Treatment:** Not Available.

# 7. Emergency Procedures:

#### **Skin Contact:**

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. If symptoms such as redness or irritation develop. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital for treatment.

#### **Inhalation:**

IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital even if no symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, trroat, or chest) develop. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, self-contained Breathing Apparatus should be used; if not available, use a level of protection greater than or equal to that advised under respirator recommendation.

#### **Eye Contact:**

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

## **Ingestion:**

DO NOT INDUCE VOMITING. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. Be prepared to transport the victim to a hospital if advised by a physician. If the vitim is convulsing or unconscious. Do not give anything by mouth. Ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

Symptoms: Not available.

# 8. Physical and Chemical Properties:

**Appearance:** Colorless or Light yellow transparent liquid.

**Solubility:** 

**X** Water: Soluble

95% Ethanol: SolubleAcetone: Not available

Refractive Index:  $1.432-1.437 @ 25^{\circ}\mathbb{C}$ Fire Point:  $252^{\circ}\mathbb{C} (101.3\text{Kpa/760mmHg})$ Flash Point:  $224^{\circ}\mathbb{C} (101.3\text{Kpa/760mmHg})$ Boiling Point:  $222^{\circ}\mathbb{C} (101.3\text{Kpa/760mmHg})$ 

**Density:** 1.017-1.023

## 9. Toxicity:

Carcinogenicity: Not Available

Toxicity: (abbreviations)

Typ. Dose mode specie amount unit LD50 ORL GPG 3000 MG/KG

# 10. Ecological Information:

**Environmental Fate:** No information found. **Environmental Toxicity:** No information found.

## 11. Disposal Considerations:

Whatever connot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use of contamination of this product may change the waste management options. Dispose of container and unused contents in accordance with federal, state and local requirements.

# 12. Fire Fighting Measures:

Fire:

Flash point: 224°C

**Explosion:** 

Closed continers exposed to heat may explode.

## Fire Extinguishing Media:

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

### **Special Information:**

Firefighters should wear proper protective equipment and selfcontained breathing apparatus with full facepiece operated in positive pressure mode.

## 13. Accidental Release Measures:

Wear self-contained breathing apparatus and full protective clothing. Stop leak if you can do so without risk. Use water spray to reduce vapors. Take up with sand or other non-combustible absorbent material and place into container for later disposal. Flush spill area with water.

# 14. Handling and Storage:

Keep container tightly closed. Suitable for any general chemical storage area. Containers of this material may be hazardous when empty since they retain product residues(vapors, liquid); observe all warnings and precautions listed for the product.

# 15. Transport Information:

This substance is not subject to IMO IMDG Code.

#### 16. Other Information:

Sax Toxicity Evaluation: Not available.

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## Disclaimer:

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