

# Material Safety Data Sheet

According to GHS rev 4

## BTPE-71B

Revision date: 28/05/2015

### 1 Identification

Product identifier:

GHS product Identifier: BTPE-71B  
Additional identification: Reaction mass of triphenyl phosphate and tris(p-tertbutylphenyl) phosphate and tert-butylphenyl diphenyl phosphate and di-tert-butylphenyl phenyl phosphate  
Identification of the product: CAS # ----, EC# 904-185-7

Relevant Recommended uses of the substance and Recommended Restrictions:

Recommended uses:

WKTR-71B is used as flame retardant plasticizer in PVC, PC/ABS, modified PPO and PC/ABS alloys.

Recommended Restrictions: Not available

Details of the supplier of the Material safety data sheet:

Supplier(Manufacturer): China ZHANG JIA GANG YARUI CHEMICAL CO., LTD.  
Contact person(E-mail): Sales@yaruichem.com  
Telephone: +86-512-58961066  
Fax: +86-512-58961068

### 2 Hazards Identification

GHS Classification:

Hazard categories	Hazard statement
Physical hazards:	Not classified
Health hazards:	Not classified
Environmental hazards:	Hazardous to the aquatic environment, Acute Hazard, Category 1, H400; Chronic Hazard, Category 1, H410



GHS label elements

Hazard Pictograms:

Environmental hazards

Signal Word(S): Warning  
Hazard Statement: H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statement:

Prevention: P273 Avoid release to the environment.

Response: P391 Collect spillage  
Storage: Not applicable  
Disposal: P501 Dispose of contents/container to local regulations.  
Specific Hazards: None Known

### 3 Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	CAS No.	EC No.	Concentration
t-Butylphenyl diphenyl phosphate	56803-37-3	260-391-0	40-46%
Bis(t-butylphenyl) phenyl phosphate	65652-41-7	265-859-8	12 - 18%
Tri(t-butylphenyl) phosphate	78-33-1	201-106-1	1 - 3%
Phosphoric acid, triphenyl ester	115-86-6	204-112-2	30-45%

### 4 First aid measures

Description of first aid measures: In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation: Move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if irritation develops or persists.

Skin: Immediately flush skin with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Eyes: Hold eyelids apart and flush immediately with water for at least 15 minutes. Seek medical attention.

Ingestion: Rinse mouth. Give water to drink. Induce vomiting. Never induce vomiting in unconscious or confused persons. Always seek medical advice.

Most important symptoms and effects, both acute and delayed

The product is not classified as harmful to human health effect.

Indication of any immediate medical attention and special treatment needed

If skin irritation or rash occurs, get medical advice/attention.

### 5 Fire-Fighting measures

Extinguishing media:

Suitable extinguishing media: Carbon dioxide, appropriate foam or dry chemical, water spray, water mist.

Unsuitable extinguishing media: Not available

Special hazards arising from the substance or mixture

When heated to decomposition, may release poisonous and corrosive fumes of Carbon Dioxide, Carbon Monoxide and Phosphorus Oxides.

Advice for fire-fighters:

Full protective clothing and self-contained breathing apparatus (SCBA). Contain fire fighting water to prevent entry into water or drainage systems.

### 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Use the personal protective equipment recommended in Section 8

Environmental Precautions:

Avoid disposing into drainage/sewer system or directly into the aquatic environment. Keeping away from drains, surface-and ground-water and soil.

Methods for Containment and Cleaning up:

Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Collect in suitable and properly labeled containers. Ventilate area and wash spill site after material pick up is complete.

## 7 Handling and storage

Precautions for Safe handling:

Do not breathe dusts/vapor. Avoid contact with skin and eyes. Handle in well ventilated areas. Eliminate all sources of ignition, and do not generate flames or sparks. Take precautionary measures against static discharges.

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities:

Store in a tightly closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in a cool, dry, well-ventilated area away from incompatible substances.

## 8 Exposure control/personal protection

Control parameters:

Occupational exposure limits:

US. ACGIH Threshold Limit Values: Phosphoric acid, triphenyl ester (CAS#115-86-6): TWA: 3 mg/m<sub>3</sub>

Appropriate engineering controls: Use local exhaust or general ventilation as required to minimize exposure to dust and maintain the concentration of contaminants below the TLVs. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.

Exposure Protection

Eye/face protection	If contact is likely, safety glasses with side shields are recommended
Hand protection	Wear appropriate gloves.
Skin protection	Wear suitable protective clothing.
Respiratory protection	Avoid breathing dust. In case of insufficient ventilation, wear suitable respiratory equipment. Select and use respirators in accordance with OSHA 1910.134 and good industrial hygiene practice.
Thermal hazards	Wear suitable protective clothing to prevent heat.

## 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Liquid
Color:	Transparent
Odor:	Nearly odorless
Odor threshold:	Not available
pH:	Not available
Melting point/range (°C):	Not available
Boiling point/range (°C) :	> 352°C at 1.013 hPa
Flash point (°C) :	>225°C (closed cup)
Evaporation rate:	Not applicable
Flammability (solid, gas);	Not flammable

Upper/lower flammability/explosive limits:	Not available
Vapor pressure:	0.24mmHg (20°C)
Vapor density:	Not applicable
Relative Density:	1.182±0.005 g/cm <sub>3</sub> at 25°C
Bulk density (kg/m <sub>3</sub> ):	Not available
Water solubility (mg/l):	Solubility in water 2.7 mg/l at 20°C
n-Octanol/Water (log Kow):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Molecular weight:	Not available
Molecular formula:	Not available
Viscosity, dynamic (mPa s):	65-75 mPa·s at 25°C
Explosive properties:	Not determined
Oxidising properties:	Non-oxidising

## 10 Stability and reactivity

Reactivity: The substance is stable under normal storage and handling conditions.

Chemical stability:

Under normal conditions, the product is stable. No hazardous reaction when handled and stored according to provisions. Hazardous reactions are not known.

Possibility of hazardous reactions: Under normal conditions, not hazardous reactions will occur.

Conditions to avoid: Keep away from heat.

Incompatible materials: Strong oxidizers, strong acids and strong alkalis.

Hazardous decomposition products: Carbon dioxide and carbon monoxide, Phosphorus oxides.

## 11 Toxicological information

Toxicological data:

Toxicological information: Occupational exposure to the substance or mixture may cause adverse effects.

Acute toxicity:

LD50( Oral, Rat):	>5000 mg/kg
LD50(Dermal Rabbit):	> 2000 mg/kg
LC50(Inhalation, Rat):	>3.1mg/l
Skin corrosion/Irritation:	Prolonged skin contact may cause mild irritation
Serious eye damage/irritation:	

Direct contact with eyes may cause mild irritation

Skin sensitization:

This product is not expected to cause skin sensitization

Germ cell mutagenicity:

No evidence to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity:

Not classified

Reproductive toxicity:

Not classified

STOT- single exposure:

Not classified

STOT-repeated exposure:

Not classified

Aspiration hazard:

Not an aspiration hazard.

## 12 Ecological information

Toxicity:

Acute toxicity	Time	Species	Method	Evaluation	Remarks
----------------	------	---------	--------	------------	---------

LC50	>2mg/l	96h	Rainbow trout	OECD 203	N/A	N/A
	1 mg/l		Sheepshead minnow			
EC50	NA	48h	Daphnia	OECD 202	N/A	N/A
EC50	NA	72h	Algae	OECD 201	N/A	N/A

Persistence and degradability: Easily biodegradability

Bioaccumulative potential:

Triaryl phosphate esters, including triphenyl phosphate, exhibit low aqueous solubility, have moderate potential for bioconcentration and readily undergo biodegradation.

Mobility in soil: No data available

### 13 Disposal considerations

Waste treatment methods

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing use or contamination of this product may change the waste management options.

According to local regulations. Federal and official regulations.

Product / Packaging disposal:

If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations.

### 14 Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number:	UN3082	UN3082	UN3082
UN Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Contains Triphenyl phosphate)		
Transport hazard Class:	9	9	9
Packaging group:	III	III	III
Tunnel restriction code	E	---	---
Environmental hazards:	---	Marine pollutant	---
EmS	---	F-A, S-F	----
Special precautions for user:	Read safety instructions, MSDS and emergency procedures before handling		
ADR, IATA, IMDG, RID	Marine pollutant ,		
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:	No information available.		

### 15 Regulation information

Inventory Status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### Other Regulations:

##### SARA

.Section 313 (Specific toxic chemical listings):

This product does not contain a toxic chemical subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372 (annual Toxic Chemical Release Reporting).

•SARA Title III: Section 304 - CERCLA:

This product does not contain a hazardous substance regulated under Section 304 for emergency release notification (CERCLA List).

•TSCA (Toxic Substances Control Act): Substance is listed.

•TSCA Section 12(b) - Export Notification:

This product does not contain any chemicals subject to Section 12(b) export notification.

• Proposition 65

•Chemicals known to cause cancer: None of the ingredients are listed.

•Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.

•Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

•Chemicals known to cause developmental toxicity: None of the ingredients are listed.

• OSHA status:

This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29CFR 1910.1200)

•Resource Conservation and Recovery Act (RCRA):

This product is not considered to be a hazardous waste under RCRA (40 CFR 261).

•Canadian WHMIS Classification(s): Not Controlled

#### 16 Other information:

Indication of changes                      Version 5.0 Amended by GHS rev 4

Relevant R- phrases:

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environments.

Training instructions:                      Not applicable

Further information:

This information is based upon the present state of our knowledge. This MSDS has been compiled and is solely intended for this product.

Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety

of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.