

**MATERIAL SAFETY DATA SHEET**  
**PBTCA****1. PRODUCT AND COMPANY IDENTIFICATION****CHEMICAL NAME:** 2-Phosphonobutane-1,2,4-Tricarboxylic acid (PBTCA)**CAS NO.:** 37971-36-1**MANUFACTURER:** Hebei longke water treatment Co.,Ltd**Emergency tel:** +86-319-6678518**2. HAZARDS IDENTIFICATION****Physical form:** Clear to light yellow transparent liquid

The classification of endanger:N/A

The way of endanger:Skin,eyes,mouth

Skin contact:Avoid contact with skin half the time

Eye contact:STIMULATIVE

Ingestion: STIMULATIVE,but without acute toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| INGREDIENT   | CAS#       | ACTIVE CONTENT |
|--|------------|----------------|
| 2-Phosphonobutane-1,2,4-Tricarboxylic acid (PBTCA) | 37971-36-1 | 49-51%         |

**4. FIRST AID MEASURES****If in eyes:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove any contact lenses. Get medical attention. Remove material from skin and clothing.**If on skin:** Immediate first aid is not likely to be required. This material can be removed with water. Wash heavily contaminated clothing before reuse.**If inhaled:** Immediate first aid is not likely to be required. If symptoms occur, remove to fresh air. Remove material from eyes, skin and clothing.**If swallowed:** Immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice. Wash heavily contaminated clothing before reuse.**5. FIRE FIGHTING MEASURES****Flash point:** N/T**Hazardous products of combustion:** Carbon monoxide,carbon dioxide and water.**Explosion limit:** None**Notice:**Water or water spray to cool the vessel in the event of a fire,wear full protective

clothing and self-contained apparatus with full face piece operated in the pressure demand.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Use personal protection recommended in section 8.

**Environmental precautions:** Keep out of drains and water courses.

**Methods for cleaning up:** Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Neutralize washings with soda ash or lime. Flush spill area with water.

Refer to Section 13 for disposal information and Sections 14 and 15 for reportable quantity information.

## 7. HANDLING AND STORAGE

### Handling

Avoid contact with eyes, skin and clothing.

Avoid breathing vapour or mist.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

Emptied containers retain vapour and product residue. Observe all recommended safety precautions until container

is cleaned, reconditioned or destroyed. Do not reuse this container.

### Storage

Temperature: > -10 C

Suitable materials of construction:

Glass lining; PVC; polypropylene; glass reinforced plastic; polyethylene

Unsuitable materials of construction:

Mild steel; aluminum; other metals

General: Freeze sensitive.

Keep in a cool, well-ventilated place.

Stable under normal conditions of handling and storage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Eye protection:** Wear chemical goggles. Have eye flushing equipment available.

**Hand protection:** Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice.

Wearing protective gloves is recommended.

Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application.

**Body protection:** Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice.

Wash thoroughly after handling.

**Respiratory protection:** Avoid breathing vapor or mist.

Use approved respiratory protection equipment (full face piece recommended) when airborne exposure is excessive.

If used, full face piece replaces the need for face shield and/or chemical goggles.

Consult the respirator manufacturer to determine the appropriate type of equipment for a given application.

Observe respirator use limitations specified by the manufacturer.

**Ventilation:** Provide natural or mechanical ventilation to minimize exposure.

If practical, use local mechanical exhaust ventilation at sources of air contamination such as processing equipment.

Airborne exposure limits: (ml/m<sup>3</sup> = ppm)

Polyacrylic Acid : No specific occupational exposure limit has been established.

Components referred to herein may be regulated by specific Canadian provincial legislation.

Please refer to exposure limits legislated for the province in which the substance will be used.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pale yellow liquid

Specific gravity: 1.270

PH: 1.5-2.0

Boiling point: N/T

Water solubility: Miscible with water any proportion.

## 10. STABILITY AND REACTIVITY

**Stability:**Yes

**Hazardous Chemicals:**No

**Condition to avoid:**High temperature and frequent exposure

**Materials to avoid:**Strong acid, strong alkaline, strong oxidizers and caution surface-active agent.

**Conditions to avoid:** Do not expose to extreme temperatures.

**Materials to avoid -Hazardous reactions:** Attacks many metals. Corrosive to aluminum and mild steel. Hazardous polymerization does not occur.

**Hazardous decomposition products:** carbon monoxide (CO); phosphorus oxides (P<sub>x</sub>O<sub>y</sub>)

## 11. TOXICOLOGICAL INFORMATION

Without acute toxicity.

ORL-RAT LD50 5000mg/kg

## 12. ECOLOGICAL INFORMATION

Ld50/lc50:Skin,rabbit ld50>2000mg/kg

Oral,rat:ld50>2000mg/kg

Carcunogenicity:Not listed by ACGIH,IARC.NIOSH,NTP,OR OSHA.See actual entry in RTECS for complete information.

### 13. DISPOSAL CONSIDERATIONS

**Disposal considerations:**consult the local envirmetal protection department

### 14. TRANSPORT INFORMATION

Dot proper shipping name: corrosive liquid acidic,organic,N.O.S.

2-Phosphonobutane-1,2,4-Tricarboxylic acid (PBTCA)

Dot Class:8

Dot ID number:UN 3265

Dot pack group : III

Dot label:Corrosive

IMO proper shipping namer:Corrosive liquid

acidic,organica.N.O.S.( 2-Phosphonobutane-1,2,4-Tricarboxylic acid)

IMO UN number:3265

IMO UN Class: 8

IMO subsidiary risk label:-

IATA UN ID number:3265

IATA proper shipping name : Corrosive liquid

acidic,organica.N.O.S.( 2-Phosphonobutane-1,2,4-Tricarboxylic acid)

AFI Class:8

AFI ID number:8

AFI pack group: III

AFI label:Corrosive

N.O.S.shipping name: 2-Phosphonobutane-1,2,4-Tricarboxylic acid

### 15. REGULATORY INFORMATION

European/International regulations

European labeling in accordance with EC directives

Hazard symbols:Corrosive.

Risk phrases:34 cause burns.

Safety phrases:25 avoid contact with eyes.

S36/37/39 wear suitable protective clothing ,gloves and eye/face protection/

S45 in case of accident of if you feel unwell,please seek medical advice immediately (show the label where possible)

US FEDERAL

TSCA:all components are listed on the TSCA inventory

### 16. OTHER INFORMATION

Material Safety Data Sheet  
Product name PBTC

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