



Safety data sheet

Tetrakis(hydroxymethyl)phosphonium chloride (THPC)

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Tetrakis(hydroxymethyl)phosphonium chloride

CAS number:

124-64-1

1.2 Recommended use of the chemical and restrictions on use:

- Used for flame retardant treatment of fabrics.
- Used as additive flame retardant for plastics, paper products, etc.
- Used for organic synthesis.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Chongqing Chuandong Chemical (Group) CO., LTD.
NO 70 Danxin Street Dashiba, Nanan District, Chongqing, CHINA
Tel: +86-23-62513938
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SECTION 2: Hazards Identification

Hazard classification:

Acute toxicity-oral(category 3)

Skin corrosion/irritation (category 1C)

Eye Damage/Irritation (Category 1)

Sensitization-respiratory(Category 1)

Sensitization-skin (Category 1)

Hazardous to the aquatic environment-acute hazard (Category 2)

Hazardous to the aquatic environment-long-term hazard(Category 2)

Label elements:



(Many also be black and white)

Signal word: Danger

Signal word Danger

Hazard Statements H301 - Toxic if swallowed

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H360 - May damage fertility or the unborn child

H400 - Very toxic to aquatic life

H360D - May damage the unborn child

Pathways: Inhaled, ingested, percutaneous absorption.

Health effects: May cause allergy or asthma symptoms or breathing difficulties if inhaled. Toxic if swallowed, causes burned, harmful in contact with skin, causes skin burns, may cause an allergic skin reaction. Causes serious eyes damage if contact

Environment hazards: Toxic to aquatic life and with long lasting effects. Combustion hazard: Non-inflammable substance.

SECTION 3: Composition/information on ingredients

Chemical name: Tetrakis (hydroxymethyl)phosphonium chloride

Formula: C₄H₁₂O₄P

Molecular Weight: 190.56 g/mol

Harmful ingredients: T Tetrakis (hydroxymethyl)phosphonium chloride

Content: ≥80%

CAS number: 124-64-1

EINECS number: 204-707-7

SECTION 4: First aid measures

In case of skin contact: Remove contaminated clothing and wash immediately with water at least or 15 min. consult a physician if burned.

In case or eye contact: Open the upper and lower eyelids immediate. Rinse with running rinsing or normal saline for at least 15 minutes and consult a physician.

If inhaled: Remove the person to fresh air and keep comfortable for breathing. If stopped breathing. Give in artificial respiration and consult a physician.

1r swallowed: Do not introduce vomiting. Never feed the unconscious person anything from his mouth. Rinse with water and consult a physician immediately.

SECTION 5: Fire-fighting measures

Dangerous characteristic: May decompose and produce toxic fume if got heated or burn

Hazardous Combustion Products: Phosphorus Oxide. Oxycarbide. hydrogen chloride.

Suitable extinguishing media: Carbon dioxide, spray, foam, dry powder

Protective measure for fire fighters: Must wear personal protective device when put out fire.

SECTION 6: Accidental release measures

Personal precautions: Using individual protection. (Self-contained breathing apparatus). Keep away from leakage/leak area, and stay at upwind direction. Ensure of enough ventilate

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Avoid discharge into the environment.

Methods and materials for containment and cleaning up: Suggest the operators wear self-contained breathing apparatus and chemical protective clothing. Do not directly contact with leakage. Using suitable absorbent (such as dry sand, earth, sawdust) to adsorb leakage. If there is a large leakage, diking to gather. Immediately dispose of the absorbent or collection obeys appropriate regulation.

SECTION 7: Handling and storage

Safe handling: Operate at the well-ventilated place. Wear suitable protective apparatus. Avoid fume generation. Wash thoroughly hands and face after operation. Use closed system if possible. Use pan exhaust or ventilate if generate fume or aerosol. Prevent contact with skin, eyes and clothes.

Conditions for safe storage, including incompatibility: Keep containers sealed. Store in cool shadow. Lock up the store place. Stored separately with strong oxidant, bases, edible chemicals. Avoid mixing store. Seal the opened containers carefully again, keep upright to prevent leakage. Storage areas should be equipped with leakage emergency treatment equipment and suitable containing material.

SECTION 8: Exposure controls/personal protection

Control parameter (such as the occupation exposure limits or biological exposure limit):

China MAC: No standard.

Russia MAC: No standard.

America ACGIH (TWA):2mg/m³

Proper engineering control: Use closed system or pan ventilate system if possible Provide equipment for safe shower and eyewash.

Personal protective measures:

Respiratory protection: Wear half or full mask respirator.

Eye protection: Wear protective chemical safety glasses

Body protective: Wear protective clothes. Wear protective shoes if necessary Hand protection: Wear seepage-proofing gloves

Other protection: Take shower and change clothing after operation, dispose contaminated clothing individually, reuse after wash, and pay attention to personal hygiene.

SECTION 9: Physical and chemical properties and safety characteristics

Appearance: Colorless transparent oily liquid. with pungent smell.

pH: 3.22(10% aqueous solution)

Melting point (° C): No data available.

Boiling point (° C): No data available.

Density (g/mL):1.327g/ml(20° C)

Relative vapor density (where the air is 1): No data available.

Saturation vapor pressure: No data available.

Heat of combustion (kJ/mol): No data available.

Critical temperature (° C): No data available.

Critical pressure (MPa): No data available.

Log value of octanol / water partition coefficient: -9.8(estimate)

Flash point (° C): No data available.

Ignition temperature (° C): No data available.

Upper explosion limit% (V N): No data available.

Lower explosion limit% (VIV): No data available.

Thermal decomposition temperature: No data available.

Solubility: Dissolved in water.

SECTION 10: Stability and reactivity

Stability: Stable, at the suggested storage condition

Possibility of dangerous reaction: No data available.

Conditions to avoid: High heat.

Materials to avoid: Strong oxidant, bases

Hazardous decomposition products: phosphorus Oxide. Oxycarbide, hydrogen Chloride.

SECTION 11: Toxicological information

Acute toxicity: LD50 (Oral-rat) -161 mg/kg;

LD50 (Dermal-rabbit) -No data available.

LC50 (rat-inhaled)- No data available.

Skin corrosion/irritation: Cause serious skin burn;

Serious eye damage/eye irritation: Cause serious eye damage;

Respiratory or skin sensitization: No data available.

Germ cell mutagenicity: No data available;

Carcinogenicity: No data available;

Reproductive toxicity: No data available;

Specific target organ toxicity-single exposure: No data available;

Specific target organ toxicity-repeated exposure: No data available;

Aspiration hazard: No data available.

SECTION 12: Ecological information

Toxicity:

Toxic to fish: No data available.

Toxicity to water lea and other aquatic invertebrate: No data available.

Persistence and biodegradability: No data available.

Non-biological degeneration: No data available.

SECTION 13: Disposal considerations

Product disposition: Recycle as possible, or dispose the rest and unrecyclable solution to processing companies.

Disposition of contaminated wrapper: Dispose as the unused product.

Other information: Observe local regulations before disposition.

SECTION 14: Transport information

Dangerous goods code (China): /

UN number: 2922

The United Nations official transport Name: CORROSIVE LIQUID, TOXIC, N .O.S. [Tetrakis (hydroxymethy)phosponium chloride]

The United Nations hazard classification: category 8, corrosive substance; category 6.1. toxic chemicals

Packing group: III

Transportation note: Check the integrity and leak tightness before transportation, ensure that the containers will not leak, collapse, fall or damage. Protect from sunlight and rain, drive follow the route.

SECTION 15: Regulatory information

Domestic chemicals safety management regulations: "Hazardous chemical materials safety management regulations" (No. 591st decree of the State Council, 2011) make requirement of safe handling, production, storage, transport, loading and unloading of hazardous chemicals.

International Law: UN "Recommendations on the Transport of Dangerous goods Model Regulations" etc

SECTION 16: Other information

Prepared: Comprehensive technology center of Shanghai Entry-Exit Inspection and Quarantine Bureau

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