

Safety Data Sheet (United States)

Tert-Buty-P4 (solution in hexane)

1. Identification

Product name: Tert-Buty-P4 (solution in hexane)
Catalog#: 1899BB
IUPAC name: N-[[tert-butylimino-bis[[tris(dimethylamino)-lambda5-phosphanylidene]amino]-lambda5-phosphanyl]imino-bis(dimethylamino)-lambda5-phosphanyl]-N-methylmethanamine
Product use restrictions: Only for research and development use by, or directly under the supervision of, a technically qualified individual.
Company: AK Scientific, Inc.
30023 Ahern Ave.
Union City, CA 94587
Telephone: (510) 429-8835
Fax: (510) 429-8836
Website: www.aksci.com
Emergency contact number: 1-800-633-8253 United States & Canada
1-801-629-0667 International

2. Hazard Identification:**GHS Classification (United States)**

Flammable liquids (Category 2)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)
Reproductive toxicity (Category 2)
Specific target organ toxicity - single exposure (Category 3), Central nervous system
Specific target organ toxicity - repeated exposure, Inhalation (Category 2)
Aspiration hazard (Category 1)
Short-term (acute) aquatic hazard (Category 3)
Long-term (chronic) aquatic hazard (Category 3)

Pictogram(s)**Signal word:**

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H361 Suspected of damaging fertility or the unborn child.
H336 May cause drowsiness or dizziness.
H373 Causes damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s):

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.

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P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a poison center or doctor.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+ P353	-
P304+P340+P310	-
P305+P351+P338 +P310	-
P308+P313	IF EXPOSED or concerned: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use dry sand, dry chemical, CO ₂ , water spray or alcohol-resistant foam for extinction.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS:

None

3. Composition/Information on Ingredients

Synonyms:	Not available.
CAS#:	111324-04-0
Purity:	Not available.
EC:	Not available.

4. First Aid Measures

General Information: Immediately remove any clothing contaminated by the product. Move out of dangerous area. Consult a physician and show this safety data sheet.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical aid.

Skin contact: Immediately flush skin with running water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Obtain medical aid immediately.

Eye contact: Immediately flush open eyes with running water for at least 15 minutes. Obtain medical aid immediately.

Ingestion: Do NOT induce vomiting without medical advice. Rinse mouth with water. Never administer anything by mouth to an unconscious person. Obtain medical aid immediately.

Most important symptoms and effects, both acute and delayed: No further information available. Please see sections 2 and 11.

Indication of any immediate medical attention and special treatment needed: No further information available.

5. Fire Fighting Measures

Suitable extinguishing media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Specific hazards arising from the chemical:

Carbon oxides, Nitrogen oxides, Phosphorus oxides.

Advice for firefighters: As in any fire, wear a NIOSH-approved or equivalent, pressure-demand, self-contained breathing apparatus and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Wear protective equipment and keep unprotected personnel away. Ensure adequate ventilation. Remove all sources of ignition. Prevent further leak or spill if safe to do so. For personal protective equipment, please refer to section 8.

Environmental precautions: Do not let product enter drains, other waterways, or soil.

Methods and materials for containment and cleaning up: Prevent further leak or spill if safe to do so. Vacuum, sweep up, or absorb with inert material and place into a suitable disposal container. Consult local regulations for disposal. See section 13 for further disposal information.

7. Handling and Storage

Precautions for safe handling: Avoid contact with skin, eyes, and personal clothing. Wash hands thoroughly after handling. Avoid breathing fumes. Use only with adequate ventilation. Wear suitable protective clothing, gloves, and eye/face protection. Keep away from sources of ignition. Minimize dust generation and accumulation. Keep container tightly closed. Open and handle container with care. Do not eat, drink, or smoke while handling.

Conditions for safe storage, including any incompatibilities: Store in a tightly-closed container when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from sources of ignition. Store long-term in a cool, dry place.

8. Exposure Controls/Personal Protection

Exposure limits:

OSHA PEL: Not available.

NIOSH REL: Not available.

ACGIH TLV: Not available.

Appropriate engineering controls: Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product. Facilities storing or utilizing this material should be equipped with an eyewash fountain. Use adequate general and local exhaust ventilation to keep airborne concentrations low.

Personal protection

Eyes: Not Available.

Hands: Not Available.

Skin and body: Not Available.

Respiratory: Not Available.

9. Physical and Chemical Properties

Physical State:	Liquid
Molecular Formula:	C ₂₂ H ₆₃ N ₁₃ P ₄
Molecular Weight:	633.7
Odor:	Not available.
pH:	Not available.
Boiling Point Range:	Not available.
Freezing/Melting Point:	Not available.
Flash Point:	-26 °C (-15 °F) - closed cup
Evaporation Rate:	Not available.

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Flammability(solid,gas):	Please see section 2.
Explosive limits:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Solubility:	Not available.
Relative Density:	0.850-0.875g/mL at 20°C
Refractive Index:	Not available.
Volatility:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Partition Coefficient:	Not available.

10. Stability and Reactivity

Reactivity:	Not available.
Chemical stability:	Stable under recommended temperatures and pressures.
Possibility of hazardous reactions:	Not available.
Conditions to avoid:	Dust generation.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon oxides, Nitrogen oxides, Phosphorus oxides.

11. Toxicological Information

RTECS#	Not available.
Acute toxicity:	LD50 Oral:Rat - male and female - 16,000 mg/kg (n-Hexane);LD50 Dermal:Rabbit - male - > 2,000 mg/kg (n-Hexane)
Routes of exposure:	Inhalation,eye contact,skin contact,ingestion.
Symptoms related to the physical,chemical and toxicological characteristics:	Skin contact may result in inflammation characterized by itching, scaling, reddening, blistering, pain or dryness. Eye contact may result in redness, pain or severe eye damage. Inhalation may cause irritation of the lungs and respiratory system. Overexposure may result in serious illness or death.

Carcinogenicity

IARC:	Not classified.
NTP:	Not listed.
OSHA:	Not Available..
Acute toxic effects:	Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

12. Ecological Information

Ecotoxicity:	Not available.
Persistence and degradability:	Not available.
Bioaccumulative potential:	Not available.
Mobility in soil:	Not available.
Other adverse effects:	Not available.

13. Disposal Considerations

Disposal of waste:	Not listed
Disposal of packaging:	Not listed

14. Transportation Information**DOT (United States)**

UN number: UN2924

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Proper shipping name: Flammable liquids, corrosive, n.o.s. (n-Hexane, Phosphazene base
P(4)-tert-butyl)

Transport hazard class: 3 (8);Flammable Liquid,Corrosive

Packing group: II

IATA

UN Number: UN2924

Proper shipping name: Flammable liquids, corrosive, n.o.s. (n-Hexane, Phosphazene base
P(4)-tert-butyl)

Transport hazard class: 3 (8);Flammable Liquid,Corrosive

Packing group: II

15. Regulatory Information**TSCA (United States)**

Not Available.

California Proposition 65:

Not Available..

NFPA Rating:

Health:

Not available.

Flammability:

Not available.

Instability:

Not available.

16. Additional Information

Revision Date: 03/23/2023

Printed Date: 03/23/2023

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall AK Scientific be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if AK Scientific has been advised of the possibility of such damages.