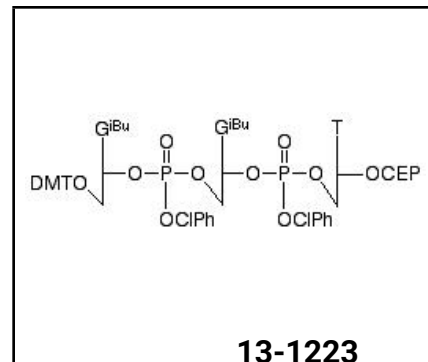


1. Product and Company Identification

| | |
|---|-----------------------------------|
| Product Code: | 13-1223-xx |
| Product Name: | GGT Trimer Phosphoramidite |
| Product Use: | For Research Use Only |
| Manufacturer Information | |
| Company Name: | Glen Research LLC |
| | 22825 Davis Drive |
| | Sterling, VA 20164 USA |
| | 1-703-437-6191 |
| Phone Number: | 1-703-437-6191 |
| Web site address: | www.glenresearch.com |
| Email address: | msds@glenres.com |
| Information in case of emergency | 1-703-437-6191 |
| CAS Number: | No data |
| Synonyms: | GGT Trimer Phosphoramidite |



2. Hazards Identification

GHS Hazard Statements

H303: May be harmful if swallowed.
H313: May be harmful in contact with skin.
H320: Causes eye irritation.
H333: May be harmful if inhaled.

GHS Precautionary Statements

P103: Read label before use.
P232: Protect from moisture.
P233: Keep container tightly closed.
P280: Wear protective gloves / protective clothing / eye protection / face protection.

GHS Response Statements

P301 + 330: IF SWALLOWED: Rinse mouth with water.
P302 + 350: IF ON SKIN: Gently wash with soap and water.
P304 + 340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + 351 + 338: IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do so - continue rinsing.
P306 + 360: IF ON CLOTHING: Rinse contaminated clothing and skin immediately with plenty of water before removing clothes.
P314: Get medical advice / attention if you feel unwell.
P362: Take off contaminated clothing and wash before use.

GHS Storage and Disposal Phrases

P401 Store in a cool, dry place
P501: Dispose of contents / container in a safe way in accordance with all federal, state and local regulations.

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Emergency Overview

No known OSHA hazards. May cause eye, skin, and respiratory tract irritation.

Route(s) of Entry:

Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes

Potential Health Effects (Acute and Chronic)

No data available.

Recommended Exposure Limits

No data available.

LD 50 / LC 50

No data available.

Signs and Symptoms of Exposure

No data available.

Medical Conditions Generally Aggravated By Exposure

No data available.

3. Composition/Information on Ingredients

| Product Name | CAS # | Concentration | M.W. | Formula |
|----------------------------|----------------------------|---------------|--------|-----------------------------------|
| GGT Trimer Phosphoramidite | No data | 100 % | 1762.5 | $C_{80}H_{91}Cl_2N_{14}O_{22}P_3$ |
| Synonyms: | GGT Trimer Phosphoramidite | | | |

4. First Aid Measures

Emergency and First Aid Procedures

If inhaled, remove to fresh air.

If not breathing, give artificial respiration.

Get medical attention.

In case of skin contact, immediately wash skin with soap and plenty of water.

Remove contaminated clothing.

Wash clothing before reuse.

Get medical attention if symptoms occur after washing.

If swallowed, rinse mouth with water.

Get medical attention.

If in contact with eyes, rinse cautiously with water for several minutes.

Get medical attention if symptoms occur after washing.

Remove contact lenses if present and continue rinsing.

5. Fire Fighting Measures

Flash Point: No data

Explosive Limits: LEL: No data UEL: No data

Fire Fighting Instructions

A finely divided dust aerosol may be explosive, although the exact conditions of the hazards are unknown.

Wear appropriate protective clothing to prevent contact with skin and eyes.

Wear a self-contained breathing apparatus (SCBA) if necessary.

Flammable Properties and Hazards

No data available.

Hazardous Combustion Products

Oxides of Nitrogen, Carbon and Phosphorus

Suitable Extinguishing Media

Use a Class A Extinguisher (Dry chemical, carbon dioxide, water or foam).

Unsuitable Extinguishing Media

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No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Sweep up bulk of material and finish by wiping with a damp towel. Do not let product enter the drain.

Wear impermeable gloves, safety glasses and a lab coat when cleaning up the spill.

A NIOSH dust mask is recommended when a possibility of dust inhalation exists. Local exhaust is usually sufficient.

7. Handling and Storage

Precautions To Be Taken in Handling

Handle using safe laboratory practices. Avoid all direct contact.

Recommended Storage

Freezer storage, -10 to -30°C, dry

Precautions To Be Taken in Storing

Keep container tightly closed. Store in well-ventilated place.

Other Precautions

Protect from sunlight.

8. Exposure Controls/Personal Protection

| Product Name | CAS # | OSHA PEL | ACGIH TLV | Other Limits |
|----------------------------|---------|----------|-----------|--------------|
| GGT Trimer Phosphoramidite | No data | No data | No data | No data |

Respiratory Equipment (Specify Type)

A NIOSH dust mask is recommended when a possibility of dust inhalation exists.

Eye Protection

Safety glasses

Protective Gloves

Impermeable gloves

Other Protective Clothing

Normal laboratory apparel

Engineering Controls (Ventilation etc.)

Local exhaust ventilation is usually sufficient

Work/Hygienic/Maintenance Practices

Wash hands after handling

9. Physical and Chemical Properties

| | | | |
|--|------------------------------|---------------------------------|---|
| Physical State: | <input type="checkbox"/> Gas | <input type="checkbox"/> Liquid | <input checked="" type="checkbox"/> Solid |
| Appearance: | White to off-white powder | | |
| Odor: | Odorless | | |
| Odor Threshold: | No data | | |
| pH: | No data | | |
| Melting Point: | No data | | |
| Freezing Point: | No data | | |
| Initial Boiling Point and Boiling Range: | No data | | |
| Flash Point: | No data | | |
| Specific Gravity: | ~1 | | |
| Evaporation Rate (Water=1): | << 1 | | |
| Flammability: | No data | | |
| Explosive Limits: | LEL: No data | UEL: No data | |
| Vapor Pressure (vs. Air or mm Hg): | No data | | |
| Vapor Density (vs. Air = 1): | No data | | |

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Relative Density: No data
 Solubility in Water: No data
 Partition Coefficient (n-octanol/water): No data
 Auto-ignition Temperature: No data

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

Stable under recommended storage conditions.

Incompatibility - Materials To Avoid

Strong oxidizing reagents

Hazardous Decomposition or Byproducts

Oxides of nitrogen, carbon and phosphorus may evolve when heated to decomposition.

Possibility of Hazardous Reactions: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Reactions

Stable material, hazardous polymerization will not occur.

11. Toxicological Information

To the best of our knowledge, the toxicological properties of this substance have not been investigated.

This product should be handled with the usual care when dealing with chemicals.

| Product Name | CAS # | NTP | IARC | OSHA |
|----------------------------|---------|---------|---------|---------|
| GGT Trimer Phosphoramidite | No data | No data | No data | No data |

12. Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

For Product - Observe all federal, state and local regulations.

For Contaminated Packaging - Dispose of in compliance with regulations.

Sweep up bulk of material and finish by wiping with a damp towel. Dispose of unused product.

14. Transport Information

LAND TRANSPORT (49CFR)

49CFR Shipping Name Not a dangerous substance as defined in the regulations.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Not a dangerous substance as defined in the regulations.

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name Not a dangerous substance as defined in the regulations.

Marine Pollutant: No

Additional Transport Information

Not regulated as a hazardous material or dangerous goods.

15. Regulatory Information

Regulatory Information

SARA 302 Components: No chemicals in this product are subject to reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This product does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

16. Other Information

For all other inquiries about this product contact Glen Research at 1-800-327-GLEN or 1-703-437-6191.

The information provided herein is based on sources believed to be reliable as of May 3, 2018 and pertains only to the material designated. Glen Research LLC makes no warranty or representation to its completeness, accuracy or currency. This material is intended for use by persons with the pertinent technical skills and at their discretion and risk. It is the responsibility of the user to determine the product's suitability for its intended use, the product's safe use and the product's proper disposal. Disposal of hazardous material may be subject to federal, state or local regulations.

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