

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) and Canadian  
Workplace Hazardous Material Information System (WHMIS 2015)

Revision date 10-Jun-2024

Revision Number 1

## 1. Identification

### Product identifier

Product Catalog Number:	Product Description:
13-1102-XX	5'-Dimethoxytrityl-N4-benzoyl-2'-deoxyCytidine-3'->5'-o-chlorophenyl-phosphoryl-N6-benzoyl-2'-deoxyAdenosine-3'->5'-o-chlorophenyl-phosphoryl-N2-isobutyryl-2'-deoxyGuanosine-3'-[(2-cyanoethyl)-(N,N-diisopropyl)]-phosphoramidite

**Product Code(s)**  
13-1102-XX

**Product Name**  
CAG Trimer Phosphoramidite

### Other means of identification

**Synonyms** None

**Registration Number(s)** CAS: 1446702-63-1

### Recommended use of the chemical and restrictions on use

**Recommended use** For research use only

**Restrictions on use** Not for human diagnostic use

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Glen Research LLC  
22825 Davis Drive  
Sterling, VA 20164 USA

#### Emergency telephone number

**Company Phone Number** 1-703-437-6191

**Website** [www.glenresearch.com](http://www.glenresearch.com)

**E-mail address** [support@glenresearch.com](mailto:support@glenresearch.com)

## 2. Hazard(s) identification

### Classification

This product is not considered hazardous by either the US 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS 2015)

**Appearance** Powder

**Physical state** Solid

**Odor** Odorless

### Label elements

#### Hazard statements

This product is not considered hazardous by either the US 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS 2015)

**Other information**

No information available.

**3. Composition/information on ingredients****Substance**

**Formula** C89H92Cl2N15O21P3

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
5'-Dimethoxytrityl-N4-benzoyl-2'-deoxyCytidine-3'->5'-o-chlorophenyl-phosphoryl-N6-benzoyl-2'-deoxyAdenosine-3'->5'-o-chlorophenyl-phosphoryl-N2-isobutyryl-2'-deoxyGuanosine-3'-[(2-cyanoethyl)-(N,N-diisopropyl)]-phosphoramidite	1446702-63-1	100	-	-

The product contains no substances which at their given concentration, are considered to be hazardous to health.

**4. First-aid measures****Description of first aid measures**

<b>General advice</b>	This product presents no hazards under normal conditions of use.
<b>Inhalation</b>	Not an expected route of exposure. IF exposed or concerned: Get medical advice/attention.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Skin contact</b>	Wash skin with soap and water. Get medical attention if symptoms occur.
<b>Ingestion</b>	Not an expected route of exposure. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Hazardous combustion products</b>	Nitrogen oxides (NOx). Carbon oxides. Phosphorus oxides.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Ensure adequate ventilation. Use personal protective equipment as required.
<b>For emergency responders</b>	Use personal protective equipment as required.
<b><u>Methods and material for containment and cleaning up</u></b>	
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Precautions for safe handling

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep at temperatures between -10 and -30 °C. Keep containers tightly closed in a dry, cool and well-ventilated place.
<b>Packaging materials</b>	Glass. Plastic container.

## 8. Exposure controls/personal protection

### Control parameters

<b>Exposure Limits</b>	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies
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**Appropriate engineering controls**

**Engineering controls**                      Showers  
 Eyewash stations  
 Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**                      If splashes are likely to occur:. Wear safety glasses with side shields (or goggles).

**Hand protection**                              No special protective equipment required.

**Skin and body protection**                      If there is a risk of contact:. Wear suitable protective clothing.

**Respiratory protection**                      No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Other protective equipment**                      No information available.

**Environmental exposure controls**                      Avoid creating dust. Prevent product from entering drains.

**General hygiene considerations**                      Handle in accordance with good industrial hygiene and safety practice.

**Thermal hazards**                                  No information available.

**9. Physical and chemical properties****Information on basic physical and chemical properties**

**Physical state**                                      Solid  
**Appearance**                                      Powder  
**Color**    White to off-white  
**Odor**     Odorless  
**Odor threshold**                                      No information available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	No data available	No data available
<b>Melting point / freezing point</b>	No data available	No data available
<b>Initial boiling point and boiling range</b>	No data available	No data available
<b>Flash point</b>	No data available	No information available
<b>Evaporation rate</b>	No data available	None known
<b>Flammability</b>	No data available	No information available
<b>Flammability Limit in Air</b>		No information available
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	No information available
<b>Relative vapor density</b>	No data available	No information available
<b>Relative density</b>	~1	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility in other solvents</b>	No data available	No information available
<b>Partition coefficient</b>	No data available	No information available
<b>Autoignition temperature</b>	No data available	No information available
<b>Decomposition temperature</b>	No data available	No data available
<b>Kinematic viscosity</b>	No data available	No data available
<b>Dynamic viscosity</b>	No data available	No data available

**Other information**

<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Softening point</b>	No information available
<b>Molecular weight</b>	1869.5
<b>VOC content</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	No information available

**10. Stability and reactivity**

<b>Reactivity</b>	No information available.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Incompatible materials</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None under normal use conditions.

**11. Toxicological information****Information on likely routes of exposure**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available.

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Symptoms</b>	No information available.
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**Acute toxicity**

<b>Numerical measures of toxicity</b>	No information available
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.

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<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

## 12. Ecological information

<b>Ecotoxicity</b>	The environmental impact of this product has not been fully investigated.
<b>Persistence and degradability</b>	No information available.
<b>Bioaccumulation</b>	There is no data for this product.
<b>Mobility in soil</b>	No information available.
<b>Other adverse effects</b>	No information available.

## 13. Disposal considerations

### Disposal methods

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Dispose of in accordance with federal, state and local regulations. Do not reuse empty containers.

## 14. Transport information

<b><u>DOT</u></b>	This product is not classified as dangerous goods, per U.S. DOT regulations under 49 CFR 172.101
<b><u>IATA</u></b>	This product is not classified as Dangerous Goods, by rules of IATA.
<b><u>IMDG</u></b>	This product is not classified as Dangerous Goods by the International Maritime Organization.

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## 15. Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

#### International Inventories

**TSCA** Not determined.

**DSL/NDSL** Not determined.

**EINECS/ELINCS** Not determined.

**ENCS** Not determined.

**IECSC** Not determined.

**KECI** Not determined.

**PICCS** Not determined.

**AIIC** Not determined.

#### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIIC** - Australian Inventory of Industrial Chemicals

#### US Federal Regulations

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

##### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

##### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

##### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

#### US State Regulations

##### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

##### **U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

**16. Other information**

<u>NFPA</u>	Health hazards 0	Flammability 0	Instability 0	Special hazards -
<u>HMIS</u>	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation

Revision date 10-Jun-2024

Revision Note No information available

Disclaimer

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**End of Safety Data Sheet**