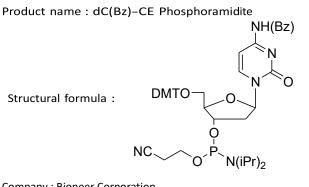


Material Safety Data Sheet

Version No.: 3(Rev. date : 2023-01-16)

dC(Bz)-CE Phosphoramidite

1. Product and company identification



Company : Bioneer Corporation

8-11, Munpyeongseo-ro, Daedeok-Gu, Daejon 34302, Republic of Korea

Telephone : +82-42-930-8594 FAX : +82-42-930-8600

2. Hazards identification

Classification of the substance or mixture

Not a dangerous substance or mixture according to Regulation (EC) No. 1272/2008 This substance is

not classified as dangerous according to Directive 67/548/EEC.

Pictogram : N/A Label

elements

This product does not need to be labelled in accordance with EC directives or respective national laws.

Caution : Substance not yet tested completely Other

hazards : none

3. Composition/information on ingredients

Synonyms : 5'-O-(4,4'-dimethoxytrityl)-N4-benzoyl-2'-deoxycytidine-3'-O-[O-(2-cyanoethyl)-(N,N'-diisopropyl)]phosphoramidite Chemical Family : Protected Nucleoside Molecular weight : 883.91 g/mol Formula : Formula : C₄₆H₅₂N₅O₈P



4. First aid measures

Description of first aid measures

General advice : Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled : If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

In case of skin contact : Wash off with soap and plenty of water. Consult a physician.

In case of eye contact : Flush eyes with water as a precaution. Consult a physician.

If swallowed : Never give anything by mouth to an unconscious person. Rinse mouth with water.

Consult a physician.

Most important symptoms and effects, both acute and delayed.

To the best of our knowledge, the chemical, physical, and toxicological propertied have not been thoroughly investigated.

Indication of any immediate medical attention and special treatment needed : N/A

5. Fire-fighting measures

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture : N/A

Advice for fire fighters : Wear self contained breathing apparatus for firefighting if necessary. Further information :

N/A

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Methods and materials for containment and cleaning up

Pick up and arrange disposal without creation dust. Sweep up and shovel. Keep in suitable, closed containers for disposal

7. Handling and storage

Precautions for safe handling

Avoid all direct contact and wear protective clothing, respirator, goggles, gloves.

Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Recommended storage

temperature : below 4 °C

8. Exposure controls / personal protection

Control parameters : Components with workplace control para	meters			
Exposure controls				
Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice.				
Wash hands before breaks and at the end of workday.				
Personal protective equipment				
Eye/Face protection : Use equipment for eye protection tested and approved under appropriate government				
standards such as NIOSH(US) or EN 166(EU)				
Skin protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal (without				
touching glove's outer surface) to avoid skin contact with this	s product. Dispose of	contaminated gloves		
after use in accordance with applicable laws and good labora	atory	practices. Wash and dry hands. The selected		
protective gloves have to satisfy the	specifications of EU	Directive 89/686/EEC and the standard EN 374		
derived from it. Body protection : Choose body protection in relation to its type, to the concentration and amount of				
dangerous substances, and to the specific work-place. The type of protective equipment must be selected				
according to the concentration and amount of the dangerous substance at the specific work-place.				
Respiratory protection : Where protection from nuisance levels of dusts are desired, use type N95 (US) or type				
P1 (EN 143) dust masks. Use respirators and components tested and approved under				
appropriate government standards such as NIOSH(US) or CEN (EU).				

9. Physical and chemical properties

Information on basic physical and chemical properties		
Appearance : Flowing powder		
Color : White to off-white free		
Odor : N/A pH : N/A		
Melting point/Freezing point : N/A		
Boiling point : N/A		
Flash point : N/A		
Evaporation rate : N/A		
Flammability(solid, gas) : N/A		
Upper/Lower flammability or explosive limits : N/A		
Vapor pressure/density : N/A		
Relative density : N/A		
Water solubility : non-soluble		
Partition coefficient(n-octanol/water) : N/A		
Autoignition temperature : N/A		
Decomposition temperature : N/A		
Viscosity : N/A		

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Explosive properties : N/A Oxidizing properties : N/A

10. Stability and Reactivity

Chemical stability Stable under recommended storage conditions. Conditions to avoid no data available Materials to avoid Strong oxidizing agents, strong reducing agents, strong bases, strong acids Hazardous decomposition products Hazardous decomposition products formed under fire conditions. - Carbon oxides(COx), nitrogen oxides (NOx), Oxides of phosphorus(PxOy)

11. Toxicological information

 Acute toxicity : N/A Skin corrosion/irritation : N/A Serious eye damage/eye irritation : N/A Respiratory or skin sensitization : N/A Germ cell mutagenicity : N/A Carcinogenicity IARC : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possitic confirmed human carcinogen by IARC. Reproductive toxicity : N/A Specific target organ toxicity - single exposure : N/A Specific target organ toxicity - repeated exposure : N/A Specific target organ toxicity - repeated exposure : N/A Potential health effects Inhalation : May be harmful if inhaled. May cause respiratory tract irritation. Ingestion : May be harmful if swallowed. Skin : May be harmful if absorbed through skin. May cause skin irritation. Eyes : May cause eye irritation. Signs and Symptoms of Exposure To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigate Additional Information RTECS : 	
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N/A	

12. Ecological information

Toxicity : N/A Persistence and degradability : N/A



Bioaccumulative potential : N/A

Mobility in soil : N/A PBT and vPvB assessment : N/A Other adverse effects : N/A

13. Disposal considerations

Waste treatment methods

Product : Offer surplus and non-recyclable solutions to d licensed disposal company. Observe all federal, state, and local environmental regulations. Contaminated packaging : Dispose of as unused product.

14. Transport information

ADR/RID : Not dangerous goods IMDG : Not dangerous goods IATA : Not dangerous goods Special precautions for user : N/A

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 Safety, health and environmental regulations/legislation specific for the substance or mixture : N/A Chemical safety assessment : For this product a chemical safety assessment was not carried out

16. Other information

First preparation date : 2012-11-29

Revision number : 2

Revision date : 2023-01-16

Bioneer Corporation makes no warranty or representation to its completeness, accuracy or currency. This material is intended for use by persons with 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 lawsor regulations.

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