

MATERIAL SAFETY DATA SHEET

1 IDENTIFICATION

Details of the supplier of the safety data sheet :

Company : Nanohelix Co., Ltd.
Address : A-dong and B-dong, 43-15, Techno 5-ro, Yuseong-gu, Daejeon 34014
 Republic of Korea
Telephone Number : +82-42-867-9055
Fax Number : +82-42-867-9057
<http://www.nanohelix.net>

Information department :

Quality control, Nanohelix Co., Ltd.
E-mail : info@nanohelix.net
Product Name : dTTP, 100mM
U.N.Number : None allocated
Dangerous Goods Class and Subsidiary Risk : None allocated
Hazchem Code : None allocated
Poison Schedule : None allocated
Use : Laboratory chemicals

2 HAZARDS IDENTIFICATION

GHS Classification : Not a hazardous substance or mixture.
GHS Label element : Not a hazardous substance or mixture.
Other hazards : None known.

3 COMPOSITION/ INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Description : The product is a mixture of the nonhazardous substances. The exact concentration percentages of the nonhazardous substances may be withheld as a Nanohelix Co., Ltd. trade secret.

4 FIRST-AID MEASURES

General advice : Show this material safety data sheet to the doctor in attendance.
If inhaled : Move to fresh air. If symptoms persist, call a physician.
In case of skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
In case of eye contact : Remove contact lenses. Protect unharmed eye. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed : If accidentally swallowed obtain immediate medical attention. Rinse mouth with water. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed : No information available.
Notes to physician : No information available.

5 | FIRE FIGHTING MEASURES

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| Suitable extinguishing media | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Specific hazards during fire fighting | : Exposure to decomposition products may be a hazard to health. |
| Hazardous combustion products | : No hazardous combustion products are known. |
| Specific extinguishing methods | : In the event of fire and/or explosion do not breathe fumes. |
| Special protective equipment for fire-fighters | : Wear self-contained breathing apparatus for firefighting if necessary. |

6 | ACCIDENTAL RELEASE MEASURES

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| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. |
| Methods and material for containment and cleaning up | : Keep in suitable, closed containers for disposal. |

7 | HANDLING AND STORAGE

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| Advice on safe handling | : For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. |
| Materials to avoid | : Do not store near acids. |

8 | EXPOSURE CONTROLS/PERSONAL PROTECTION

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| Ingredients with workplace control parameters | : Contains no substances with occupational exposure limit values. |
| Personal protective equipment | |
| <i>Hand protection</i> Remarks | : The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). |
| <i>Eye protection</i> | : Safety glasses |
| <i>Skin and body protection</i> | : Choose body protection according to the amount and concentration of the dangerous substance at the work place. Footwear protecting against chemicals. |
| <i>Hygiene measures</i> | : Keep away from food and drink. When using do not eat, drink or smoke. |

9 | PHYSICAL AND CHEMICAL PROPERTIES

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|------------------------------------|-----------------------|
| Appearance | : Liquid |
| Color | : No data available. |
| Odor | : Characteristic |
| Odor Threshold | : No data available. |
| pH | : No data available. |
| Melting point/range | : No data available. |
| Boiling point/boiling range | : >40°C |
| Flash Point | : >101°C (Closed-cup) |
| Evaporation rate | : No data available. |
| Burning rate | : No data available. |
| Upper explosion limit | : No data available. |
| Lower explosion limit | : No data available. |
| Vapor pressure | : No data available. |
| Relative vapor density | : No data available. |

| | |
|-------------------------------------|----------------------|
| Relative density | : No data available. |
| Density | : No data available. |
| Solubility(ies) | |
| <i>Water solubility</i> | : No data available. |
| <i>Solubility in other solvents</i> | : No data available. |
| Partition coefficient: | : No data available. |
| n-octanol/water | |
| Autoignition temperature | : Not determined. |
| Decomposition temperature | : No data available. |
| Viscosity | : No data available. |
| <i>Viscosity, dynamic</i> | |
| <i>Viscosity, kinematic</i> | : No data available. |
| Explosive properties | : No data available. |
| Oxidizing properties | : No data available. |

10 STABILITY AND REACTIVITY

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| Reactivity | : No decomposition if stored and applied as directed. |
| Chemical stability | : No decomposition if stored and applied as directed. |
| Possibility of hazardous reactions | : Stable under recommended storage conditions. Hazardous decomposition products formed under fire conditions. |
| Conditions to avoid | : No data available. |
| Incompatible materials | : No data available. |
| Hazardous decomposition products | : No decomposition if stored and applied as directed. |

11 TOXICOLOGICAL INFORMATION

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| Probable exposure paths | : No Information. |
| Acute toxicity | |
| <i>Oral</i> | : No Information. |
| <i>Skin</i> | : No Information. |
| <i>Inhalation</i> | : No Information. |
| <i>Skin Corrosion or Irritation</i> | : No Information. |
| <i>Severe Eye Damage or Irritation</i> | : No Information. |
| <i>Respiratory Hypersensitivity</i> | : No Information. |
| <i>Skin Hypersensitivity</i> | : No Information. |
| <i>Carcinogenic Properties</i> | : No Information. |
| <i>Industrial Safety Regulation</i> | : No Information. |
| <i>Department of Labor Notice</i> | : No Information. |
| <i>IARC</i> | : No Information. |
| <i>OSHA</i> | : No Information. |
| <i>ACGIH</i> | : No Information. |
| <i>NTP</i> | : No Information. |
| <i>EU CLP</i> | : No Information. |
| <i>Reproductive Cell Mutation Properties</i> | : No Information. |
| <i>Reproductive Toxicity</i> | : No Information. |
| <i>Target Organ Toxicity (Single Exposure)</i> | : No Information. |
| <i>Target Organ Toxicity (Repeat Exposure)</i> | : No Information. |
| <i>Inhalation Toxicity</i> | : No Information. |

12 ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish : No data available.
Toxicity to algae : No data available.
Toxicity to bacteria : No data available.

Persistence and degradability

Persistence and degradability : No data available.

Bioaccumulative potential

Bioaccumulation : No data available.
Partition coefficient: n-octanol/water : No data available.
Mobility in soil : No data available.

Other adverse effects : No data available.

13 DISPOSAL CONSIDERATION

Disposal methods

Waste from residues : Dispose of contents/container in accordance with local regulation.
Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14 TRANSPORT INFORMATION

UNRTDG : Not regulated as a dangerous good.

IATA-DGR : Not regulated as a dangerous good.

IMDG-Code : Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : No data available.

Domestic regulation

49 CFR : Not regulated as a dangerous good.

Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

15 REGULATORY INFORMATION

OSHA Hazards : No OSHA Hazards.

EPCRA - Emergency Planning and Community Right-to-Know

SARA 304 Extremely Hazardous Substances Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards.

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

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Prop 65 : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

16 OTHER INFORMATION

a. List of references

b. Issuing date : Feb. 21, 2019

c. Version : 1

d. Revision Date : Dec. 05, 2022

e. Further information

The data provided in this Material Safety Data Sheet is based on current experience and knowledge. The purpose of this Material Safety Data Sheet is to describe products in terms of their safety requirements. This data given is designed only as a guidance for safe handling, use, storage, transportation, disposal and is not to be considered quality specification or warranty. The above details do not imply any guarantee concerning composition or performance of this product.