

MATERIAL SAFETY DATA SHEET

1 IDENTIFICATION

Details of the supplier of the safety data sheet :

Company : Nanohelix Co., Ltd.
 Address : 43-15, Techno 5-ro, Yuseong-gu Deajeon 34014, South 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 : Punch-it™ NA-Sample Kit Lysis Buffer
U.N.Number : None allocated
Dangerous Goods Class and Subsidiary Risk : None allocated
Hazchem Code : None allocated
Poison Schedule : None allocated
Use : Cell Lysis Buffer

2 HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4
 Serious eye damage : Category 1
 Acute aquatic toxicity : Category 3
 Flammable liquids : Category 2

GHS Label element

Hazard pictograms



GHS02



GHS05



GHS07

Signal word : Danger

Hazard statements : H302 - Harmful if swallowed.
 : H318 - Causes serious eye damage.
 : H402 - Harmful to aquatic life.
 : H225 - Highly flammable liquid and vapour

Precautionary statements

Prevention

P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P305 + P351 + P338 : IF IN EYES - Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P311 : IF exposed or concerned - Call a POISON CENTER or doctor/ physician.

Potential Health Effects

Aggravated Medical Condition : None known.
 Symptoms of Over exposure : No information available.

Carcinogenicity

IARC	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

3 COMPOSITION/ INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Name	CAS No.	Weight (%)
Guanidine thiocyanate	593-84-0	>=25 - <35%
Isopropanol	67-69-0	>=25 - <35%

4 FIRST-AID MEASURES

General advice	: Move out of dangerous area. Show this material safety data sheet to the doctor in attendance.
If inhaled	: If unconscious place in recovery position and seek medical advice. 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	: Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses. Protect unharmed eye.
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	: Harmful if swallowed. Causes serious eye damage.
Notes to physician	: No information available.

5 FIRE FIGHTING MEASURES

Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during fire fighting	: Do not allow run-off from fire fighting to enter drains or water courses. Exposure to decomposition products may be a hazard to health.
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

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Ensure adequate ventilation. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Unsuitable cleaning agents sodium hypochlorite

7 HANDLING AND STORAGE

Advice on safe handling	: Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	: Keep container tightly closed in a dry and well-ventilated place.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters	: Contains no substances with occupational exposure limit values.
Personal protective equipment	: In the case of vapor formation use a respirator with an approved filter.
<i>Respiratory protection</i>	
<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>Material</i>	: Protective gloves
<i>Eye protection</i>	: Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems. Do not wear contact lenses. Ensure that eyewash stations and safety showers are close to the workstation location.
<i>Skin and body protection</i>	: Choose body protection according to the amount and concentration of the dangerous substance at the work place. acid-resistant protective clothing Footwear protecting against chemicals.
<i>Hygiene measures</i>	: Keep away from food and drink. Wash hands before breaks and at the end of workday. Ensure adequate ventilation, especially in confined areas. Avoid contact with the skin and the eyes. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid
Color	: No data available.
Odor	: No data available.
Odor Threshold	: No data available.
pH	: No data available.
Melting point/range	: No data available.
Boiling point/boiling range	: No data available.
Flash point	: No data available.

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)	
Water solubility	: No data available.
Solubility in other solvents	: No data available.
Partition coefficient : n-octanol/water	: No data available.
Autoignition temperature	: No data available.
Thermal decomposition	: No data available.
Viscosity	
Viscosity, dynamic	: No data available.
Viscosity, kinematic	: No data available.
Explosive properties	: No data available.
Oxidizing properties	: No data available.

10 STABILITY AND REACTIVITY

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. Thiocyanates can develop poisonous gas in contact with strong acids. Keep away from oxidizing agents, and acidic or alkaline products.
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

Acute toxicity	
<u>Product</u>	
Acute oral toxicity	: No data available.
Acute inhalation toxicity	: No data available.
Acute dermal toxicity	: No data available.
Skin corrosion/irritation	
<u>Product</u>	: May irritate skin.
Serious eye damage/eye irritation	
<u>Product</u>	: Remarks - May cause irreversible eye damage.
Respiratory or skin sensitization	: No data available.
Germ cell mutagenicity	: No data available.
Carcinogenicity	: No data available.
Reproductive toxicity	: No data available.
STOT-single exposure	: No data available.
STOT-repeated exposure	: No data available.

Aspiration toxicity	: No data available.
Further information	: No data available.

12 ECOLOGICAL INFORMATION

Ecotoxicity

Product

Toxicity to fish : No data available.

Toxicity to algae : No data available.

Toxicity to bacteria : No data available.

Persistence and degradability : No data available.

Bioaccumulative potential

Product

Bioaccumulative : No data available.

*Partition coefficient:
n-octanol/water* : No data available.

Other adverse effects : No data available.

13 DISPOSAL CONSIDERATION

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil. Send to a licensed waste management company. Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging : Dispose of as unused product. Do not re-use empty containers.

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 : For personal protection see section 8.

15 REGULATORY INFORMATION

OSHA Hazards : Harmful by ingestion., Severe eye irritant, Severe respiratory irritant.

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 : Acute Health Hazard

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

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.