

## 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** : Ready-2x-MultiPlex [Ver 2.0] (with dye)

**U.N.Number** : None allocated.

**Dangerous Goods Class** : None allocated.

**and Subsidiary Risk**

**Hazchem Code** : None allocated.

**Poison Schedule** : None allocated.

**Use** : Mixture used in DNA amplification

### 2 HAZARDS IDENTIFICATION

**Hazard pictograms**



**GHS08**

**Signal word** : Warning.

**Hazard statement** : Causes mild skin irritation.

**Precautionary statement** : Wash hands thoroughly after handling.

**Response** : If skin irritation occurs – Get medical advice/ attention, IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists – Get medical advice/ attention.

**Most Important Hazards** : Few adverse human health effects are anticipated.

**Specific Hazards** : Not available.

**GHS Classification** : Classification not possible.

### 3 COMPOSITION/ INFORMATION ON INGREDIENTS

**Substance / Mixture** : Mixture

**Description** : The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Nanohelix Co., Ltd. trade secret.

**Hazardous ingredients**

Name	CAS No.	Weight (%)
Glycerol	56-81-5	>= 1 - < 5

### 4 FIRST-AID MEASURES

**Inhalation** : In case of irritation by inhaling this product, move affected person to fresh air and await recovery. Call a POISON CENTER or doctor if you feel unwell.

<b>Skin Contact</b>	: Wash with plenty of clean water, immediately.
<b>Eye Contact</b>	: Rinse cautiously with water several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	: Try to get the affected person to vomit as much as possible. Seek medical attention, immediately.

## 5 | FIRE FIGHTING MEASURES

<b>Extinguishing Media</b>	: Water, Carbon Dioxide, Foam, Dry Chemical Powder
<b>Protection of fire-fighters</b>	: Fire-fighting should be done from the windward side of fire area. Firefighters should wear proper protective equipment in case of large scale fire.

## 6 | ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	: Wear protective gear to avoid eye/skin contact and inhalation.
<b>Environmental Precautions</b>	: Avoid disposition to the environment.
<b>Methods for Cleaning up</b>	: Use cloth, paper or anything similar to soak up the solution leaking out of the container. Take up under vacuum using dust collecting filter.

## 7 | HANDLING AND STORAGE

### HANDLING

<b>Technical Measures</b>	: Wear protective equipments and avoid contact with eyes and skin. Avoid substance contact. After handling, wash hands completely.
<b>Precautions</b>	: Handle with ventilation and local exhaust system.
<b>Safe Handling Advice</b>	: Keep the handling area always clean.

### STORAGE

<b>Storage Conditions</b>	: Store at about -20°C.
<b>Packaging Materials</b>	: Store in the original package.

## 8 | EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>ENGINEERING MEASURES</b>	: Set up good ventilation and exhaust system in the work area.
<b>PERSONAL PROTECTIVE EQUIPMENT</b>	
<b>Respiratory Protection</b>	: Wear a dust mask when needed.
<b>Hand Protection</b>	: Wear chemical safety gloves.
<b>Eye Protection</b>	: Wear protective eyeglasses or chemical safety goggles.
<b>Skin and Body Protection</b>	: Wear lab coat when needed.

## 9 | PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	: Liquid
<b>Color</b>	: No data available.
<b>Odor</b>	: None.
<b>pH</b>	: No data available.
<b>Flash point</b>	: Not flammability.
<b>Boiling point</b>	: Not available.
<b>Melting point</b>	: Not available.

## 10 | STABILITY AND REACTIVITY

<b>Stability</b>	: Stable at less than -20°C.
<b>Possible Hazardous Reactions</b>	: Nothing particular.
<b>Conditions to Avoid</b>	: High temperature, ignition sources, direct sunlight.

<b>Material to Avoid</b>	: Strong acids, strong alkalines and strong oxidizers.
<b>Hazardous Decomposition Product</b>	: Not available.

## 11 TOXICOLOGICAL INFORMATION

<b>Acute toxicity</b>	: Not available.
<b>Local Effects</b>	: May cause eye and skin irritation.
<b>Toxicological information on the component of this product</b>	: Glycerol
<b>Acute toxicity (LD<sub>50</sub>)</b>	: Oral-mouse: 4,090mg/kg Oral-rat: 12.6g/kg

## 12 ECOLOGICAL INFORMATION

<b>Mobility</b>	: Soluble in water and diffusible into water environment.
<b>Persistence/Degradability</b>	: Glycerol, enzyme, antibody, and deoxynucleotide are biodegradable.
<b>Bioaccumulation</b>	: Not available.

## 13 DISPOSAL CONSIDERATION

<b>Waste from Residues</b>	: Dispose of in accordance with all applicable local and national laws and regulations.
<b>Contaminated Packaging</b>	: Dispose of in accordance with all applicable local and national laws and regulations.

## 14 TRANSPORT INFORMATION

<b>International Regulations</b>	
<b>UN Classification Number</b>	: Not classified. Follow all of the laws and regulations in your respective country.
<b>Specific Precautions</b>	: To prevent packages from breaking, handle with care.

## 15 REGULATORY INFORMATION

<b>EPCRA - Emergency Planning and Community Right-to-Know</b>	
<b>SARA 304</b>	: This material does not contain any components with a section 304 EHS RQ.
<b>SARA 311/312 Hazards</b>	: No SARA Hazards.
<b>SARA 302</b>	: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
<b>SARA 313</b>	: 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.
<b>US State Regulations</b>	
<b>California Prop. 65</b>	: 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.