

**Material Safety Data Sheet**

Version 3.0  
Revision Date: 05/06/2015  
Print Date: 05/06/2015

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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: NANOPOP-4  
Product Number: NP4-100, NP4-101, NP4-102, NP4-120, NP4-121, NP4-122  
Product Use: For Research Use Only. Not for use in diagnostic procedures.  
Company: Molecular Cloning Laboratories(MCLAB)  
320 Harbor Way  
South San Francisco, CA 94080  
Telephone: 1-888-MCLAB-88  
Fax: 1-650-871-8771  
1-650-871-8796  
Emergency Phone # CHEMTREC +1-703-527-3887 (International)  
1-800-424-9300 (North America)

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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name:	Urea	Polymer, Trade secret
Formular:	CH <sub>4</sub> N <sub>2</sub> O	Proprietary
CAS#:	57-13-6	Proprietary
Weight %:	30-60	1-10

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**3. HAZARDS IDENTIFICATION**

**NFPA Ratings (Scale 0-4): Health = 2, Fire = 1, Reactivity = 0**

**Emergency Overview**

Physical Form: Liquid  
Major Health Hazards: Eye irritation

**Potential Health Effects****Inhalation:**

Short Term Exposure: irritation, difficulty breathing, cough, sore throat  
Long Term Exposure: lung damage

**Skin Contact:**

Short Term Exposure: irritation  
Long Term Exposure: irritation

**Eye Contact:**

Short Term Exposure: irritation  
Long Term Exposure: no information on significant adverse effects

**Ingestion:**

Short Term Exposure: irritation, sore throat, stomach pain

Long Term Exposure: tumors

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**3. FIRST AID MEASURES****In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and get immediate medical attention.

**In case of skin contact**

Wash off immediately with soap and plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Consult a physician. Thoroughly clean and dry contaminated clothing and shoes before reuse.

**Inhalation**

If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration. Get immediate medical attention.

**Ingestion**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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**4. FIRE-FIGHTING MEASURES**

**Fire and Explosion Hazards:** slight fire hazard

**Suitable Extinguishing Media:** carbon dioxide, regular dry chemical, regular foam, water

**Fire Fighting:** Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

**Flash point:** no data available

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**5. ACCIDENTAL RELEASE MEASURES****Occupational Release:**

Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible materials. Collect spilled material in appropriate container for disposal.

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**6. HANDLING AND STORAGE**

Store and handle in accordance with all current regulations and standards. Store between 2 °C to 8 °C. See original container for storage recommendations. Keep separated from incompatible substances.

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## 7. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Limits:

#### Urea:

10 mg/m<sup>3</sup> AIHA WEEL recommended TWA (WEEL)

**Ventilation:** Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**Eye Protection:** Wear splash resistant safety goggles with a face-shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Clothing:** Wear appropriate chemical resistant clothing.

**Gloves:** Wear appropriate chemical resistant gloves.

**Respirator:** Under condition of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any chemical cartridge respirator with organic vapor cartridge(s).

Any chemical cartridge respirator with a full face-piece and organic vapor cartridge(s).

Any air-purifying respirator with a full face-piece and organic vapor canister.

For Unknown Concentrations or Immediately Dangerous to Life or Health

Any supplied-air respirator with full face-piece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full face-piece.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid
<b>Odor</b>	No information available
<b>Boiling Point/Range</b>	No information available
<b>Melting Point/Range</b>	No information available
<b>Flash Point</b>	No information available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	No information available
<b>Specific Gravity</b>	No information available
<b>Water Solubility</b>	Soluble in water
<b>pH</b>	No information available
<b>Volatility</b>	No information available
<b>Odor Threshold</b>	No information available
<b>Evaporation Rate</b>	No information available
<b>Coefficient of Water/Oil Distribution</b>	No information available

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## 10. STABILITY AND REACTIVITY

### Stability

Stable under recommended storage conditions.

### Incompatible Products

Acids, bases, combustible materials, metal salts, oxidizing agents.

### Conditions to Avoid

Avoid heat, flames and sparks and other sources of ignition. Avoid contact with incompatible materials.

### Hazardous Decomposition Products

Carbon monoxide. Carbon dioxide. .

### Hazardous Polymerization

Hazardous polymerization does not occur.

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## 11. TOXICOLOGICAL INFORMATION

### Urea:

#### Irritation Data

22 mg/3 day(s)-intermittent skin-human mild; 20 percent/24 hour(s)  
skin-human moderate

#### Toxicity Data:

> 2100 mg/kg skin-rabbit LD50; 8471 mg/kg oral-rat LD50

#### Local Effects:

Irritant: eye

#### Acute Toxicity Level:

Slight Toxic: ingestion

#### Medical Conditions Aggravated by Exposure:

Eye disorders, kidney disorders, respiratory disorders, skin disorders and allergies

#### Polymer, Trade Secret:

#### Toxicity Data:

> 8 gram/kg skin-rabbit LD50; > 1 gram/kg oral-rat LD50

#### Acute Toxicity Level:

Slightly toxic: ingestion

Additional toxicological data is available on the component(s) of this product. Please call 650-872-0245 or contact [mclab@mclab.com](mailto:mclab@mclab.com) for more information.

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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

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## 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

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## 14. TRANSPORT INFORMATION

U.S. Department of Transportation: No classification assigned.  
Canadian Transportation of Dangerous Goods: No classification assigned.  
Land Transport ADR: No classification assigned.  
Land Transport RID: No classification assigned.  
Air Transport IATA: No classification assigned.  
Air Transport ICAO: No classification assigned.  
Maritime Transport IMDG: No classification assigned.

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## 15. REGULATORY INFORMATION

### **U.S. Federal Regulations**

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30): Not regulated.  
SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40): Not regulated.  
SARA Title III Section 311/312 Hazardous Categories (40 CFR 370.21):  
Acute: Yes  
Chronic: No  
Fire: No  
Reactive: No  
Sudden Release: No  
SARA Title III Section 313 (40 CFR 372.65): Not regulated.

OSHA Process Safety (29 CFR 1910.119): Not regulated.

### **State Regulations:**

California Proposition 65: No regulated.

### **Canadian Regulations:**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR and MSDS contains all of the information required by the CPR.

### **National Inventory Status:**

U.S. Inventory (TSCA): Not listed on inventory. For purposes of 40 CFR 720.36, this product is for Research and Development (R&D) Use Only.

TSCA 12 (b) Export Notification: Not listed.

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## 16. OTHER INFORMATION

### **Further information**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of MSDS