

Issue Date 23-Feb-2016

Revision Date 23-Feb-2016

Version 1

**1. IDENTIFICATION****Product identifier****Product Name** Demand**Other means of identification****Product Code** PEI-026**UN/ID no.** Final product is not regulated.**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended Use** For Laboratory Use Only.**Uses advised against** No information available**Details of the supplier of the safety data sheet****Manufacturer Address**NSI Lab Solutions, Inc.  
7212 ACC Blvd.  
Raleigh, NC 27617**Emergency telephone number****Company Phone Number** 800-234-7837**FAX** 919-789-3019**Website** www.nsilabsolutions.com**E-mail address** nsi@nsilabsolutions.com**Emergency Telephone** 919-349-7322**2. HAZARDS IDENTIFICATION****Classification****OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Label elements****Emergency Overview**

The product contains no substances which at their given concentration, are considered to be hazardous to health.

**Appearance** No information available**Physical state** Liquid**Odor** No information available**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

Not applicable

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

The product contains no substances which at their given concentration, are considered to be hazardous to health.

| Chemical Name   | CAS No.   | Weight-%  |
|-----------------|-----------|-----------|
| Water           | 7732-18-5 | 96.5-99.9 |
| D(+)-Glucose    | 50-99-7   | 0.01-1.75 |
| L-Glutamic acid | 56-86-0   | 0.01-1.75 |

Refer to Certificate of Analysis for exact percentage concentration.

#### 4. FIRST AID MEASURES

**Description of first aid measures**

|                     |  |
|---------------------|--|
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| <b>Skin contact</b> | Wash skin with soap and water.   |
| <b>Inhalation</b>   | Remove to fresh air.   |
| <b>Ingestion</b>    | Clean mouth with water and drink afterwards plenty of water.   |

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

No information available.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation, especially in confined areas.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials** None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Chemical Name              | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|----------------------------|-----------|----------|------------|
| Water<br>7732-18-5         | -         | -        | -          |
| D(+)-Glucose<br>50-99-7    | -         | -        | -          |
| L-Glutamic acid<br>56-86-0 | -         | -        | -          |

### Appropriate engineering controls

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** No special technical protective measures are necessary.

**Skin and body protection** No special technical protective measures are necessary.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                       |                          |                       |                          |
|-----------------------|--------------------------|-----------------------|--------------------------|
| <b>Physical state</b> | Liquid                   | <b>Odor</b>           | No information available |
| <b>Appearance</b>     | No information available | <b>Odor threshold</b> | No information available |
| <b>Color</b>          | No information available |                       |                          |

| <u>Property</u>                       | <u>Values</u>            | <u>Remarks • Method</u> |
|---------------------------------------|--------------------------|-------------------------|
| <b>pH</b>                             | No information available |                         |
| <b>Melting point / freezing point</b> | No information available |                         |
| <b>Boiling point / boiling range</b>  | No information available |                         |
| <b>Flash point</b>                    | No information available |                         |
| <b>Evaporation rate</b>               | No information available |                         |

|                                     |                          |
|-------------------------------------|--------------------------|
| <b>Flammability (solid, gas)</b>    | No information available |
| <b>Flammability Limit in Air</b>    |                          |
| <b>Upper flammability limit:</b>    | No information available |
| <b>Lower flammability limit:</b>    | No information available |
| <b>Vapor pressure</b>               | No information available |
| <b>Vapor density</b>                | No information available |
| <b>Relative density</b>             | No information available |
| <b>Water solubility</b>             | No information available |
| <b>Solubility in other solvents</b> | No information available |
| <b>Partition coefficient</b>        | No information available |
| <b>Autoignition temperature</b>     | No information available |
| <b>Decomposition temperature</b>    | No information available |
| <b>Kinematic viscosity</b>          | No information available |
| <b>Dynamic viscosity</b>            | No information available |
| <b>Explosive properties</b>         | No information available |
| <b>Oxidizing properties</b>         | No information available |

**Other Information**

|                         |                          |
|-------------------------|--------------------------|
| <b>Softening point</b>  | No information available |
| <b>Molecular weight</b> | No information available |
| <b>VOC Content (%)</b>  | No information available |
| <b>Density</b>          | No information available |
| <b>Bulk density</b>     | No information available |

## 10. STABILITY AND REACTIVITY

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Extremes of temperature and direct sunlight.

**Incompatible materials**

None known based on information supplied.

**Hazardous Decomposition Products**

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

|                            |                    |
|----------------------------|--------------------|
| <b>Product Information</b> | No data available  |
| <b>Inhalation</b>          | No data available. |
| <b>Eye contact</b>         | No data available. |
| <b>Skin contact</b>        | No data available. |
| <b>Ingestion</b>           | No data available. |

| Chemical Name              | Oral LD50             | Dermal LD50 | Inhalation LC50 |
|----------------------------|-----------------------|-------------|-----------------|
| D(+)-Glucose<br>50-99-7    | = 25800 mg/kg ( Rat ) | -           | -               |
| L-Glutamic acid<br>56-86-0 | > 30 g/kg ( Rat )     | -           | -               |
| Water<br>7732-18-5         | > 90 mL/kg ( Rat )    | -           | -               |

Information on toxicological effects

**Symptoms** No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Sensitization** No information available.  
**Germ cell mutagenicity** No information available.  
**Carcinogenicity** No information available.  
**Reproductive toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** No information available.

Numerical measures of toxicity - Product Information**12. ECOLOGICAL INFORMATION**Ecotoxicity

3.5 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical Name              | Algae/aquatic plants | Fish | Crustacea |
|----------------------------|----------------------|------|-----------|
| D(+)-Glucose<br>50-99-7    | -                    | -    | -         |
| L-Glutamic acid<br>56-86-0 | -                    | -    | -         |
| Water<br>7732-18-5         | -                    | -    | -         |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

**13. DISPOSAL CONSIDERATIONS**Waste treatment methods

**Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not reuse container.

| Chemical Name              | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|----------------------------|------|--------------------------|------------------------|------------------------|
| D(+)-Glucose<br>50-99-7    | -    | -                        | -                      | -                      |
| L-Glutamic acid<br>56-86-0 | -    | -                        | -                      | -                      |
| Water<br>7732-18-5         | -    | -                        | -                      | -                      |

| Chemical Name              | California Hazardous Waste Status |
|----------------------------|-----------------------------------|
| D(+)-Glucose<br>50-99-7    | -                                 |
| L-Glutamic acid<br>56-86-0 | -                                 |
| Water<br>7732-18-5         | -                                 |

## 14. TRANSPORT INFORMATION

**DOT** Not regulated  
**UN/ID no.** Final product is not regulated.

**IATA** Not regulated

**IMDG** Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

|                      |          |
|----------------------|----------|
| <b>TSCA</b>          | Complies |
| <b>DSL/NDSL</b>      | Complies |
| <b>EINECS/ELINCS</b> | Complies |
| <b>ENCS</b>          | Complies |
| <b>IECSC</b>         | Complies |
| <b>KECL</b>          | Complies |
| <b>PICCS</b>         | Complies |
| <b>AICS</b>          | Complies |

### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### US Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### SARA 311/312 Hazard Categories

|  |    |
|--|----|
| <b>Acute health hazard</b>               | No |
| <b>Chronic Health Hazard</b>             | No |
| <b>Fire hazard</b>                       | No |
| <b>Sudden release of pressure hazard</b> | No |
| <b>Reactive Hazard</b>                   | No |

#### CWA (Clean Water Act)

This product, as supplied, does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

#### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

|                    |                  |                |                    |                                    |
|--------------------|------------------|----------------|--------------------|------------------------------------|
| <b><u>NFPA</u></b> | Health hazards 0 | Flammability 0 | Instability 0      | Physical and Chemical Properties - |
| <b><u>HMIS</u></b> | Health hazards 0 | Flammability 0 | Physical hazards 0 | Personal protection X              |

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Revision Note  
 No information available

**Disclaimer**

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**