**Safety Data Sheet**

## Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

### 1.1 Product identifier

**Product Name** • **Buffer LH**

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Relevant identified use(s)** • Cell lysis

### 1.3 Details of the supplier of the safety data sheet

**Manufacturer** • NanoString Technologies

530 Fairview Avenue North
Seattle, WA 98109
United States
www.nanostring.com
operations@nanostring.com

**Telephone (General)** • 206.378.NANO (6266)

### 1.4 Emergency telephone number

**Manufacturer** • 206.378.NANO (6266)

## Section 2: Hazards Identification

### EU/EEC

**According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]**

### 2.1 Classification of the substance or mixture

**CLP** • Not classified

### 2.2 Label Elements

**CLP**

**Hazard statements** • No label element(s) required

### 2.3 Other Hazards

**CLP** • According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.

### UN GHS Revision 3

**According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Third Revised Edition**

### 2.1 Classification of the substance or mixture

**UN GHS**
- Not classified

### 2.2 Label elements

**UN GHS**

**Hazard statements**
- No label element(s) required

**Precautionary statements**

### 2.3 Other hazards

**UN GHS**
- According to the Globally Harmonized System for Classification and Labeling (GHS) this product is not considered hazardous

## United States (US)

**According to: OSHA 29 CFR 1910.1200 HCS**

### 2.1 Classification of the substance or mixture

**OSHA HCS 2012**
- Not classified

### 2.2 Label elements

**OSHA HCS 2012**

**Hazard statements**
- No label element(s) required

### 2.3 Other hazards

**OSHA HCS 2012**
- This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

## Canada

**According to: WHMIS 2015**

### 2.1 Classification of the substance or mixture

**WHMIS 2015**
- Not classified

### 2.2 Label elements

**WHMIS 2015**

**Hazard statements**
- No label element(s) required

**Precautionary statements**

### 2.3 Other hazards

**WHMIS 2015**
- In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

## Section 3 - Composition/Information on Ingredients

### 3.1 Substances

- Material does not meet the criteria of a substance.

### 3.2 Mixtures

| Composition | | | | | |
|---|---|---|---|---|---|
| **Chemical Name** | **Identifiers** | **%** | **LD50/LC50** | **Classifications According to Regulation/Directive** | **Comments** |
| Component A | **CAS:**7732-18-5<br>**EC Number:**231-791-2 | > 96% | Ingestion/Oral-Rat LD50 • >90 mL/kg | **EU CLP:** Non-Hazardous<br>**UN GHS Revision 3:** Non-Hazardous<br>**OSHA HCS 2012:** Non-Hazardous<br>**WHMIS 2015:** Non-Hazardous | NDA |
| Component E | **CAS:**77-86-1<br>**EC Number:**201-064-4 | < 1% | Ingestion/Oral-Rat LD50 • >3000 mg/kg | **EU CLP:** Skin Irrit. 2, H315<br>**UN GHS Revision 3:** Skin Irrit. 2<br>**OSHA HCS 2012:** Skin Irrit. 2<br>**WHMIS 2015:** Skin Irrit. 2 | NDA |
| Component D | **CAS:**9002-93-1 | < 1% | NDA | **EU CLP:** Acute Tox. 4, H302; Eye Irrit. 2, H319; Aquatic Chronic 2, H411<br>**UN GHS Revision 3:** Acute Tox. 4 (Orl); Eye Irrit. 2, Skin Irrit. 3; Aquatic Acute 2; Aquatic Chronic 2<br>**OSHA HCS 2012:** Acute Tox. 4 (Orl); Eye Irrit. 2<br>**WHMIS 2015:** Acute Tox. 4 (Orl); Eye Irrit. 2 | NDA |
| Component C | **CAS:**7647-01-0<br>**EU Index:**017-002-01-X<br>**EINECS:**231-595-7 | < 1% | NDA | **EU CLP:** Annex VI, Table 3.1: Skin Corr. 1B, H314; STOT SE 3, H335<br>**UN GHS Revision 3:** Skin Corr. 1; Eye Dam. 1<br>**OSHA HCS 2012:** Skin Corr. 1; Eye Dam. 1<br>**WHMIS 2015:** Skin Corr. 1; Eye Dam. 1 | NDA |
| Component B | **CAS:**7647-14-5<br>**EC Number:**231-598-3 | < 1% | Ingestion/Oral-Rat LD50 • 3000 mg/kg | **EU CLP:** Eye Irrit. 2, H319<br>**UN GHS Revision 3:** Acute Tox. 5 (Orl); Eye Irrit. 2; Skin Irrit. 3<br>**OSHA HCS 2012:** Eye Irrit. 2<br>**WHMIS 2015:** Eye Irrit. 2 | NDA |

*See Section 16 for full text of H-statements.*

## Section 4 - First Aid Measures

### 4.1 Description of first aid measures

**Inhalation**
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

**Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes.

**Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.

**Ingestion**
- If swallowed, rinse mouth with water (only if the person is conscious) If large quantities are swallowed, call a physician immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to Physician**
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media

**Suitable Extinguishing Media**
- LARGE FIRE: Water spray, fog or regular foam.

SMALL FIRES: Dry chemical, $CO_2$, water spray or regular foam.

**Unsuitable Extinguishing Media**
- No data available.

## 5.2 Special hazards arising from the substance or mixture

**Unusual Fire and Explosion Hazards**
- Some may burn but none ignite readily.

**Hazardous Combustion Products**
- No data available.

## 5.3 Advice for firefighters

- Move containers from fire area if you can do it without risk.
  Wear positive pressure self-contained breathing apparatus (SCBA).
  Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
  Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

# Section 6 - Accidental Release Measures

## 6.1 Personal precautions, protective equipment and emergency procedures

**Personal Precautions**
- Ventilate enclosed areas. Do not walk through spilled material. Use appropriate Personal Protective Equipment (PPE)

**Emergency Procedures**
- Keep unauthorized personnel away. Stay upwind.

## 6.2 Environmental precautions

- Avoid run off to waterways and sewers.

## 6.3 Methods and material for containment and cleaning up

**Containment/Clean-up Measures**
- Stop leak if you can do it without risk.
  SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
  LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

## 6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

# Section 7 - Handling and Storage

## 7.1 Precautions for safe handling

**Handling**
- Handle in accordance with good industrial and safety practice. Wear recommended Personal Protective Equipment when handling.

## 7.2 Conditions for safe storage, including any incompatibilities

**Storage**
- Keep container tightly closed and store at recommended temperature.

## 7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

# Section 8 - Exposure Controls/Personal Protection

## 8.1 Control parameters

| Exposure Limits/Guidelines | | | | |
|---|---|---|---|---|
| | Result | ACGIH | NIOSH | OSHA |

| | | | | |
|---|---|---|---|---|
| Component C (7647-01-0) | Ceilings | 2 ppm Ceiling | 5 ppm Ceiling; 7 mg/m3 Ceiling | 5 ppm Ceiling; 7 mg/m3 Ceiling |

## 8.2 Exposure controls

**Engineering Measures/Controls**

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Personal Protective Equipment**

**Respiratory**

- In case of insufficient ventilation, wear suitable respiratory equipment.

**Eye/Face**

- Wear protective eyewear (goggles, face shield, or safety glasses).

**Skin/Body**

- Wear appropriate gloves.

**Environmental Exposure Controls**

- Follow best practice for site management and disposal of waste.

**Key to abbreviations**

ACGIH = American Conference of Governmental Industrial Hygiene
NIOSH = National Institute of Occupational Safety and Health
OSHA = Occupational Safety and Health Administration

# Section 9 - Physical and Chemical Properties

## 9.1 Information on Basic Physical and Chemical Properties

| | | | |
|---|---|---|---|
| **Material Description** | | | |
| Physical Form | Liquid | Appearance/Description | Brown particulate in clear solution. |
| Color | Brown/clear | Odor | Data lacking |
| Odor Threshold | Data lacking | | |
| **General Properties** | | | |
| Boiling Point | Data lacking | Melting Point/Freezing Point | Data lacking |
| Decomposition Temperature | Data lacking | pH | Data lacking |
| Specific Gravity/Relative Density | Data lacking | Water Solubility | Data lacking |
| Viscosity | Data lacking | Explosive Properties | Data lacking |
| Oxidizing Properties: | Data lacking | | |
| **Volatility** | | | |
| Vapor Pressure | Data lacking | Vapor Density | Data lacking |
| Evaporation Rate | Data lacking | | |
| **Flammability** | | | |
| Flash Point | Data lacking | UEL | Data lacking |
| LEL | Data lacking | Autoignition | Data lacking |
| Flammability (solid, gas) | Data lacking | | |
| **Environmental** | | | |
| Octanol/Water Partition coefficient | Data lacking | | |

## 9.2 Other Information

- No additional physical and chemical parameters noted.

# Section 10: Stability and Reactivity

## 10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

## 10.2 Chemical stability

- Stable

## 10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

## 10.4 Conditions to avoid

- No data available.

## 10.5 Incompatible materials

- No data available.

## 10.6 Hazardous decomposition products

- No data available.

# Section 11 - Toxicological Information

## 11.1 Information on toxicological effects

| Components | | |
|---|---|---|
| Component B (< 1%) | 7647-14-5 | **Acute Toxicity:** Ingestion/Oral-Rat LD50 • 3000 mg/kg; Ingestion/Oral-Rat TDLo • 1.43 mg/kg; *Gastrointestinal*:**Ulceration or bleeding from stomach**;<br>**Irritation:** Eye-Rabbit • 10 mg • Moderate irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Mild irritation;<br>**Mutagen:** Micronucleus test • Ingestion/Oral-Rat • 2 pph 14 Day(s); Unscheduled DNA synthesis • Ingestion/Oral-Rat • 16800 mg/kg 4 Week(s)-Continuous |
| Component D (< 1%) | 9002-93-1 | **Acute Toxicity:** Ingestion/Oral-Rat LD50 • 1800 mg/kg;<br>**Irritation:** Eye-Rabbit • 10 µL 24 Hour(s) • Moderate irritation; Skin-Rabbit • 500 µL 24 Hour(s) • Mild irritation;<br>**Multi-dose Toxicity:** Skin-Rat TDLo • 36 mL/kg 11 Day(s)-Intermittent; *Skin and Appendages:After systemic exposure*:**Dermatitis, other**;<br>**Reproductive:** Ingestion/Oral-Rat TDLo • 11600 mg/kg (2W pre-22D post); *Reproductive Effects:Specific Developmental Abnormalities*:**Urogenital system**; Skin-Rat TDLo • 40 mL/kg (6-15D preg); *Reproductive Effects:Maternal Effects*:**Other effects**; *Reproductive Effects:Specific Developmental Abnormalities*:**Musculoskeletal system** |
| Component E (< 1%) | 77-86-1 | **Acute Toxicity:** Ingestion/Oral-Rat LD50 • >3000 mg/kg;<br>**Irritation:** Skin-Rabbit • 500 mg • Severe irritation; Skin-Rabbit • 25 % • Moderate irritation |
| Component C (< 1%) | 7647-01-0 | **Acute Toxicity:** Inhalation-Mouse LC50 • 3940 mg/m³ 30 Minute(s); *Lungs, Thorax, or Respiration*:**Acute pulmonary edema**; Inhalation-Rat LC50 • 3124 ppm 1 Hour(s); *Sense Organs and Special Senses:Olfaction*:**Other changes**; *Sense Organs and Special Senses:Eye*:**Iritis**;<br>**Irritation:** Eye-Rabbit • 5 mg 30 Second(s)-Rinse • Mild irritation; Skin-Human • 4 % 24 Hour(s) • Mild irritation;<br>**Reproductive:** Inhalation-Rat TCLo • 450 mg/m³ 1 Hour(s)(1D pre); *Reproductive Effects:Effects on Embryo or Fetus*:**Fetotoxicity (except death, e.g., stunted fetus)**; *Reproductive Effects:Specific Developmental Abnormalities*:**Homeostasis** |

| GHS Properties | Classification |
|---|---|
| **Acute toxicity** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| **Skin corrosion/Irritation** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| | **EU/CLP** • Data lacking |

| | |
|---|---|
| **Serious eye damage/Irritation** | **UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| **Skin sensitization** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| **Respiratory sensitization** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| **Aspiration Hazard** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| **Carcinogenicity** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| **Germ Cell Mutagenicity** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| **Toxicity for Reproduction** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| **STOT-SE** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |
| **STOT-RE** | **EU/CLP** • Data lacking<br>**UN GHS 3** • Data lacking<br>**OSHA HCS 2012** • Data lacking<br>**WHMIS 2015** • Data lacking |

## Potential Health Effects

### Inhalation

**Acute (Immediate)** • Under normal conditions of use, no health effects are expected.

**Chronic (Delayed)** • No data available.

### Skin

**Acute (Immediate)** • Under normal conditions of use, no health effects are expected.

**Chronic (Delayed)** • No data available.

### Eye

**Acute (Immediate)** • Under normal conditions of use, no health effects are expected.

**Chronic (Delayed)** • No data available.

### Ingestion

**Acute (Immediate)** • Under normal conditions of use, no health effects are expected.

**Chronic (Delayed)**
- No data available.

**Key to abbreviations**
LC = Lethal Concentration
LD = Lethal Dose
TC = Toxic Concentration
TD = Toxic Dose

## Section 12 - Ecological Information

### 12.1 Toxicity

| | CAS | |
|---|---|---|
| Buffer LH | NDA | **Aquatic Toxicity-Fish:** 4 Day(s) LC50 *Fathead minnow* 4.3-4.8 mg/L Comments: Glycols, polyethylene, mono(p-(1,1,3,3-tetramethylbutyl)phenyl) ether (9002-93-1)<br>96 Hour(s) LC50 *Morone saxatilis (Striped Bass)* 1000 mg/L Comments: Sodium chloride (7647-14-5)<br>21 Day(s) NOEC *Pimephales promelas (Fathead Minnow)* 25.43 mg/L Comments: Sodium chloride (7647-14-5)<br>96 Hour(s) LC50 *Gambusia affinis (Western Mosquitofish)* 282 mg/L Comments: Hydrochloric Acid (7647-01-0)<br>**Aquatic Toxicity-Crustacea:** 48 Hour(s) LC50 *Carcinus maenas (Green Crab)* 240 mg/L Comments: Hydrochloric Acid (7647-01-0)<br>7 Day(s) NOEC *Ceriodaphnia dubia (Water Flea)* 130 mg/L Comments: Sodium chloride (7647-14-5)<br>48 Hour(s) EC50 *Daphnia Magna (Water flea)* 402.6 mg/L Comments: Sodium chloride (7647-14-5)<br>**Aquatic Toxicity-Algae and Other Aquatic Plant(s):** 72 Hour(s) EC50 *Microcystis aeruginosa (Blue-Green Algae)* 4473 mg/L Comments: Sodium chloride (7647-14-5)<br>7 Day(s) NOEC *Nannochloropsis sp.(Microalgae)* 40000 mg/L Comments: Sodium chloride (7647-14-5) |

### 12.2 Persistence and degradability
- Material data lacking.

### 12.3 Bioaccumulative potential
- Material data lacking.

### 12.4 Mobility in Soil
- Material data lacking.

### 12.5 Results of PBT and vPvB assessment
- No PBT and vPvB assessment has been conducted.

### 12.6 Other adverse effects
- No studies have been found.

## Section 13 - Disposal Considerations

### 13.1 Waste treatment methods
**Product waste**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Packaging waste**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## Section 14 - Transport Information

| | 14.1 UN number | 14.2 UN proper shipping name | 14.3 Transport hazard class(es) | 14.4 Packing group | 14.5 Environmental hazards |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **DOT** | Not Applicable | Not Regulated | Not Applicable | Not Applicable | NDA |
| **TDG** | Not Applicable | Not Regulated | Not Applicable | Not Applicable | NDA |
| **IMO/IMDG** | Not Applicable | Not Regulated | Not Applicable | Not Applicable | NDA |
| **IATA/ICAO** | Not Applicable | Not Regulated | Not Applicable | Not Applicable | NDA |

**14.6 Special precautions for user**
- None specified.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**
- Data lacking.

## Section 15 - Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**SARA Hazard Classifications**
- None

| State Right To Know | | | | |
|---|---|---|---|---|
| **Component** | **CAS** | **MA** | **NJ** | **PA** |
| Component E | 77-86-1 | No | No | No |
| Component D | 9002-93-1 | No | No | No |
| Component C | 7647-01-0 | Yes | Yes | Yes |
| Component B | 7647-14-5 | No | No | No |
| Component A | 7732-18-5 | No | No | No |

| Inventory | | | | | | |
|---|---|---|---|---|---|---|
| **Component** | **CAS** | **Canada DSL** | **Canada NDSL** | **EU EINECS** | **EU ELNICS** | **TSCA** |
| Component E | 77-86-1 | Yes | No | Yes | No | Yes |
| Component D | 9002-93-1 | Yes | No | No | No | Yes |
| Component C | 7647-01-0 | Yes | No | Yes | No | Yes |
| Component B | 7647-14-5 | Yes | No | Yes | No | Yes |
| Component A | 7732-18-5 | Yes | No | Yes | No | Yes |

### Canada

**Labor**

**Canada - WHMIS 1988 - Classifications of Substances**

| | | |
|---|---|---|
| • Component E | 77-86-1 | D2B |
| • Component B | 7647-14-5 | Uncontrolled product according to WHMIS classification criteria |
| • Component C | 7647-01-0 | A, D1A, E (listed under Hydrogen chloride); D1A, E; E (0.036% in aqueous solution, 0.36% in aqueous solution, 3.6% in aqueous solution); D1B, E (28% in aqueous solution); D1A, E (31.45% in aqueous solution, 35.2% in aqueous solution) |
| • Component A | 7732-18-5 | Uncontrolled product according to WHMIS |

| | | |
|---|---|---|
| | | classification criteria |
| • Component D | 9002-93-1 | Not Listed |

**Canada - WHMIS 1988 - Ingredient Disclosure List**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | 1 % |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | 1 % |

### Environment

**Canada - CEPA - Priority Substances List**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

## United States

### Labor

**U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | 5000 lb TQ; 5000 lb TQ (anhydrous) |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

**U.S. - OSHA - Specifically Regulated Chemicals**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

### Environment

**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

**U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | 5000 lb final RQ; 2270 kg final RQ |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

**U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |

| | | |
|---|---|---|
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | 5000 lb EPCRA RQ (gas only) |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | 500 lb TPQ (gas only) |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

**U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

## United States - California

### Environment

**U.S. - California - Proposition 65 - Carcinogens List**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

**U.S. - California - Proposition 65 - Developmental Toxicity**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

**U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)**

| | | |
|---|---|---|
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |

| | | |
|---|---|---|
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |
| **U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)** | | |
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |
| **U.S. - California - Proposition 65 - Reproductive Toxicity - Female** | | |
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |
| **U.S. - California - Proposition 65 - Reproductive Toxicity - Male** | | |
| • Component E | 77-86-1 | Not Listed |
| • Component B | 7647-14-5 | Not Listed |
| • Component C | 7647-01-0 | Not Listed |
| • Component A | 7732-18-5 | Not Listed |
| • Component D | 9002-93-1 | Not Listed |

## 15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

# Section 16 - Other Information

**Relevant Phrases (code & full text)**

- H302 - Harmful if swallowed
  H314 - Causes severe skin burns and eye damage.
  H315 - Causes skin irritation
  H319 - Causes serious eye irritation
  H335 - May cause respiratory irritation
  H411 - Toxic to aquatic life with long lasting effects

**Revision Date**
- 19/February/2019

**Preparation Date**
- 30/August/2016

**Disclaimer/Statement of Liability**
- The information herein is given in good faith but no warranty, expressed or implied, is made.

**Key to abbreviations**

NDA = No Data Available