

## Safety Data Sheet



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

#### 1.1 Product identifier

**Product Name** • Buffer PW (NanoString)

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

**Relevant identified use(s)** • Sample permeabilization and washing

#### 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 5

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Fifth 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

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## 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.

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## 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).

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## 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 EC Number:231-791-2	88% TO 90%	Ingestion/Oral-Rat LD50 • >90 mL/kg	EU CLP: Not Classified UN GHS Revision 5: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Component B	NDA	10%	NDA	EU CLP: Not Classified UN GHS Revision 5: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Component D	CAS:9011-18-1	< 1%	Ingestion/Oral-Rat LD50 • 20600 mg/kg	EU CLP: Not Classified UN GHS Revision 5: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Component C	CAS:9007-49-2	< 1%	NDA	EU CLP: Not Classified UN GHS Revision 5: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA

## 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, CO2, 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**
- No applicable exposure limits available for product or components.

### 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.

## Section 9 - Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

<b>Material Description</b>			
Physical Form	Liquid	Appearance/Description	Clear liquid.
Color	Clear	Odor	Data lacking
Odor Threshold	Data lacking		
<b>General Properties</b>			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	7.9 to 7.06
Specific Gravity/Relative Density	1.00955 g/ml	Water Solubility	Soluble
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
<b>Volatility</b>			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
<b>Flammability</b>			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
<b>Environmental</b>			
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 D (< 1%)	9011-18 -1	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 20600 mg/kg; <i>Behavioral:Somnolence (general depressed activity); Behavioral:Ataxia; Gastrointestinal:Hypermotility, diarrhea;</i> <b>Mutagen:</b> Micronucleus test • Ingestion/Oral-Mouse • 84 g/kg 14 Day(s)-Intermittent

GHS Properties	Classification
<b>Acute toxicity</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
<b>Skin corrosion/Irritation</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
<b>Serious eye damage/Irritation</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
<b>Skin sensitization</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
<b>Respiratory sensitization</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
<b>Aspiration Hazard</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
<b>Carcinogenicity</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
<b>Germ Cell Mutagenicity</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
<b>Toxicity for Reproduction</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
<b>STOT-SE</b>	EU/CLP • Data lacking UN GHS 5 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking

STOT-RE

EU/CLP • Data lacking  
 UN GHS • Data lacking  
 OSHA HCS 2012 • Data lacking  
 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

LD = Lethal Dose

## Section 12 - Ecological Information

### 12.1 Toxicity

- Material data lacking.

### 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 C	9007-49-2	No	No	No
Component D	9011-18-1	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
Component C	9007-49-2	Yes	No	No	No	No
Component D	9011-18-1	Yes	No	No	No	Yes

### Canada

Labor			
Canada - WHMIS 1988 - Classifications of Substances			
• Component D	9011-18-1	Not Listed	
• Component C	9007-49-2	Not Listed	
Canada - WHMIS 1988 - Ingredient Disclosure List			
• Component D	9011-18-1	Not Listed	
• Component C	9007-49-2	Not Listed	

Environment			
Canada - CEPA - Priority Substances List			
• Component D	9011-18-1	Not Listed	
• Component C	9007-49-2	Not Listed	

### United States

Labor			
U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals			
• Component D	9011-18-1	Not Listed	



• Component C	9007-49-2	Not Listed
<b>U.S. - OSHA - Specifically Regulated Chemicals</b>		
• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

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

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

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

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

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

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

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

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

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

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

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

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

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

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

**United States - California****Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

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

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

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

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

**U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)**

• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

**U.S. - California - Proposition 65 - Reproductive Toxicity - Female**

• Component D	9011-18-1	Not Listed
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• Component C	9007-49-2	Not Listed
<b>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</b>		
• Component D	9011-18-1	Not Listed
• Component C	9007-49-2	Not Listed

## 15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

## Section 16 - Other Information

**Revision Date**

- 28/February/2019

**Preparation Date**

- 29/March/2017

**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