

**Section 1: Identification of the Substance/Mixture and of the Company/Undertaking****1.1 Product Identifier**

**Product Name** Xpert Xpress MVP  
**Product Code** 900-0788; 900-0836; 900-0968; 900-0969; RXPRSMVP-10; XPRSMVP-CE-10;  
XPRSMVP-10; XPRSMVP-120

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**

**Relevant Identified Use(s)** Laboratory use

**1.3 Details of the Supplier of the Safety Data Sheet**

**Manufacturer** Cepheid  
904 Caribbean Drive  
Sunnyvale, CA 94089  
United States  
www.cepheid.com  
US: techsupport@cepheid.com

**Telephone (General)** 1 (888) 838-3222 - US Option 2  
**Telephone (General)** 1 (408) 541-4191 - Outside of the US

**1.4 Emergency Telephone Number**

**Manufacturer** 1 (800) 535-5053 - INFOTRAC - 24 hr Emergency  
**Manufacturer** 1 (352) 323-3500 - Outside of the US

**Section 2: Hazards Identification**

The following SDS is for the final finished mixture product only as used in the laboratory. The product contains beads and reagents in the cartridge or in off-board containers. Exemptions for disclosing some component information are pursuant to CLP Article 1(5)(d) and 29 CFR 1910.1200(g)(2)(i)(C)(1)&(2).

**EU/EEC**

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

**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.



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### UN GHS

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 Acute Toxicity Oral 5  
Acute Toxicity Dermal 5  
Eye Irritation 2B

#### 2.2 Label Elements

UN GHS

##### WARNING

**Hazard Statements** May be harmful if swallowed  
May be harmful in contact with skin  
Causes eye irritation

##### Precautionary Statements

**Prevention** Wash thoroughly after handling.  
**Response** Call a POISON CENTER or doctor/physician if you feel unwell.  
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.

#### 2.3 Other Hazards

UN GHS According to the Globally Harmonized System for Classification and Labeling (GHS) this product is 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 Eye Irritation 2B

#### 2.2 Label Elements

OSHA HCS 2012

##### WARNING

**Hazard Statements** Causes eye irritation

##### Precautionary Statements

**Prevention** Wash thoroughly after handling.  
**Response** 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.

#### 2.3 Other Hazards

OSHA HCS 2012 According to Regulation 29 CFR 1910.1200 (Hazard Communication Standard) this product is considered hazardous.

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**Canada**

According to: WHMIS 2015

**2.1 Classification of the Substance or Mixture****WHMIS** Eye Irritation 2B**2.2 Label Elements****WHMIS****WARNING****Hazard Statements** Causes eye irritation**Precautionary Statements****Prevention** Wash thoroughly after handling.**Response** 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.**2.3 Other Hazards****WHMIS** According to the Workplace Hazardous Materials Information System (WHMIS), this product is considered hazardous.

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**2.4 Other Information**

All other reagents, beads, and other constituents are at concentrations less than 1% in the mixture or not considered hazardous under US hazard communication regulations (29 CFR 1910.1200), EU directives for classification and labeling of substances or mixtures or the Global Harmonization System for classification and labeling of substances or mixtures.

**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                      | %        | Classifications According to Regulation/Directive |
| Guanidinium thiocyanate | CAS:593-84-0<br>EINECS:209-812-1 | 10 - 20% | EU CLP: Acute Tox. 4, H302                        |

See Section 16 for full text of H-statements.

## Section 4: First Aid Measures

### 4.1 Description of First Aid Measures

|                   |  |
|-------------------|--|
| <b>Inhalation</b> | First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Move victim to fresh air. Administer oxygen if breathing is difficult. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Give artificial respiration if victim is not breathing. |
| <b>Skin</b>       | First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. For minor skin contact, avoid spreading material on unaffected skin. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing.   |
| <b>Eye</b>        | First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.  |
| <b>Ingestion</b>  | First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Obtain medical attention immediately if ingested.   |

### 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

|                           |  |
|---------------------------|--|
| <b>Notes to Physician</b> | 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

|                                       |   |
|---------------------------------------|---|
| <b>Suitable Extinguishing Media</b>   | LARGE FIRES: Dry chemical, CO <sub>2</sub> , alcohol-resistant foam or water spray.<br>SMALL FIRES: Dry chemical, CO <sub>2</sub> or water spray. |
| <b>Unsuitable Extinguishing Media</b> | No data available   |

### 5.2 Special Hazards Arising from the Substance or Mixture

|   |   |
|---|---|
| <b>Unusual Fire and Explosion Hazards</b> | Plastic cartridge containing reagents may emit toxic vapors of carbon oxides, sulfur oxides, nitrogen oxides. |
|---|---|

**Hazardous Combustion Products**                      No data available

### 5.3 Advice for Firefighters

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.

Wear positive pressure self-contained breathing apparatus (SCBA).

SMALL FIRES: Move containers from fire area if you can do it without risk.

## Section 6: Accidental Release Measures

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

**Personal Precautions**                      In the event a cartridge is broken these personal precautions are applicable. Wear appropriate protective clothing. Do not walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate enclosed areas.

**Emergency Procedures**                      No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended.

### 6.2 Environmental Precautions

Prevent entry into waterways, sewers, basements or confined areas.

### 6.3 Methods and Material for Containment and Cleaning Up

**Containment/  
Clean-up Measures**                      For small spills, wear gloves and absorb spill with paper towel. Do not dispose spilled materials down drain.

### 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**                                      No special handling necessary. If cartridge is broken avoid contact with spilled reagents.

### 7.2 Conditions for Safe Storage, Including Any Incompatibilities

**Storage**                                        Store according to product labeling. Keep away from incompatible materials. Store locked up. Keep container/package tightly closed in a cool, well-ventilated place.

### 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            |
| Guanidinium thiocyanate    | TWA    | Not established | Not established | Not established |

### 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**

Respiratory equipment is not expected to be necessary if material is used under ordinary conditions and as recommended. Otherwise, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

**Eye/Face**

Wear chemical splash safety goggles.

**Skin/Body**

Wear protective clothing

**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  
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

## Section 9: Physical and Chemical Properties

### 9.1 Information on Physical and Chemical Properties

| Material Description              |                   |                              |  |
|-----------------------------------|-------------------|------------------------------|--|
| Physical Form                     | Liquid            | Appearance/Description       | Beads are solid white components in cartridges; reagents are clear liquids which are primarily buffered in aqueous solutions. Components are odorless. |
| Color                             | White/clear       | Odor                         | Odorless   |
| Odor Threshold                    | No data available |                              |  |
| General Properties                |                   |                              |  |
| Boiling Point                     | 100 °C (212 °F)   | Melting Point/Freezing Point | 0 °C (32 °F)   |
| Decomposition Temperature         | No data available | pH                           | 7 to 9   |
| Specific Gravity/Relative Density | No data available | Water Solubility             | No data available  |

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|                                     |                   |                      |                   |
|-------------------------------------|-------------------|----------------------|-------------------|
| Viscosity                           | No data available | Explosive Properties | No data available |
| Oxidizing Properties:               | No data available |                      |                   |
| <b>Volatility</b>                   |                   |                      |                   |
| Vapor Pressure                      | No data available | Vapor Density        | No data available |
| Evaporation Rate                    | No data available |                      |                   |
| <b>Flammability</b>                 |                   |                      |                   |
| Flash Point                         | No data available | UEL                  | No data available |
| LEL                                 | No data available | Autoignition         | No data available |
| Flammability (solid, gas)           | No data available |                      |                   |
| <b>Environmental</b>                |                   |                      |                   |
| Octanol/Water Partition Coefficient | No data available |                      |                   |

**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**

Incompatible materials. Burning plastic cartridge containing reagents may liberate toxic byproducts.

**10.5 Incompatible Materials**

Acids, oxidizing agents.

**10.6 Hazardous Decomposition Products**

Burning plastic cartridge containing reagents may liberate toxic byproducts.

**Section 11: Toxicological Information**

**11.1 Information on Toxicological Effects**

**Product Information:**

Acute Toxicity

|              |                             |
|--------------|-----------------------------|
| Inhalation   | May cause irritation        |
| Eye Contact  | Causes eye irritation       |
| Skin Contact | Causes mild skin irritation |
| Ingestion    | Harmful if swallowed        |

|                          |                   |
|--------------------------|-------------------|
| Sensitization            | No data available |
| Mutagenic effects        | No data available |
| Carcinogenic effects     | No data available |
| Reproductive effects     | No data available |
| STOT - single exposure   | No data available |
| STOT - repeated exposure | No data available |



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Aspiration hazard

No data available

### Component Information

|                         |          |  |
|-------------------------|----------|--|
| Guanidinium thiocyanate | 593-84-0 | Acute Toxicity: Intraperitoneal-Mouse LD50 • 593 mg/kg |
|-------------------------|----------|--|

#### Key to abbreviations

LD = Lethal Dose

The following values are calculated based on chapter 3.1 of the GHS document (ATE)

ATEmix (oral) 2,965 mg/kg

## Section 12: Ecological Information

### 12.1 Toxicity

Guanidinium thiocyanate (593-84-0): LC50 (guppy): 89.1 mg/l @ 96h

### 12.2 Persistence and Degradability

No data available.

### 12.3 Bioaccumulative Potential

No data available.

### 12.4 Mobility in Soil

No data available.

### 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.



**13.2 Other Information**

Biological specimens, transfer devices, and used cartridges should be considered capable of transmitting infectious agents requiring standard precautions. Follow your institution's environmental waste procedures for proper disposal of used cartridges and unused reagents. These materials may exhibit characteristics of chemical hazardous waste requiring specific national or regional disposal procedures. If national or regional regulations do not provide clear direction on proper disposal, biological specimens and used cartridges should be disposed per WHO (World Health Organization) medical waste handling and disposal guidelines.

**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 applicable               | Not applicable                  | Not applicable     | Not applicable             |
| TDG       | Not applicable | Not applicable               | Not applicable                  | Not applicable     | Not applicable             |
| IMO/IMDG  | Not applicable | Not applicable               | Not applicable                  | Not applicable     | Not applicable             |
| IATA/ICAO | Not applicable | Not applicable               | Not applicable                  | Not applicable     | Not applicable             |

**14.6 Special Precautions for User**

None specified.

**14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

No data available.

**Section 15: Regulatory Information**

**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

**SARA Hazard Classifications**

Acute

| Component               | Inventory |            |             |           |           |      |
|-------------------------|-----------|------------|-------------|-----------|-----------|------|
|                         | CAS       | Canada DSL | Canada NDSL | EU EINECS | EU ELNICS | TSCA |
| Guanidinium thiocyanate | NDA       | Yes        | No          | Yes       | No        | Yes  |

**Canada**

**Labor**

**Canada - WHMIS - Classifications of Substances**

• Guanidinium thiocyanate 593-84-0 Not Listed

**Canada - WHMIS - Ingredient Disclosure List**

• Guanidinium thiocyanate 593-84-0 Not Listed

**Environment**

**Canada - CEPA - Priority Substances List**

• Guanidinium thiocyanate 593-84-0 Not Listed



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### United States

#### Labor

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

#### Environment

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

### United States- California

#### Environment

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 Not Listed

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

• Guanidinium thiocyanate 593-84-0 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

**Disclaimer/  
Statement of Liability**

The above information is based on data available to us and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its



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use and all persons receiving it must make their own determination of the effects, properties, protections, and disposal which pertain to their particular conditions. No representation, warranty, or guarantee, express or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the materials, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material. The above information is offered in good faith and with the belief that it is accurate. As of the date of issuance, we are providing all information relevant to the foreseeable handling of the material. However, in the event of an adverse incident associated with this product, this Safety Data Sheet is not, and is not intended to be, a substitute for consultation with appropriately trained personnel.

**Key to abbreviations**

NDA = No data available