

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.



Safety Data Sheet

Effective Date: October 2022

Xpert Xpress MVP

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.

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.

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.

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 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

Inhalation	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.
Skin	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.
Eye	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.
Ingestion	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

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.
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Section 5: Firefighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media	LARGE FIRES: Dry chemical, CO ₂ , alcohol-resistant foam or water spray. SMALL FIRES: Dry chemical, CO ₂ or water spray.
Unsuitable Extinguishing Media	No data available

5.2 Special Hazards Arising from the Substance or Mixture

Unusual Fire and Explosion Hazards	Plastic cartridge containing reagents may emit toxic vapors of carbon oxides, sulfur oxides, nitrogen oxides.
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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

Safety Data Sheet

Effective Date: October 2022

Xpert Xpress MVP

Viscosity	No data available	Explosive Properties	No data available
Oxidizing Properties:	No data available		
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	No data available	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
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



Safety Data Sheet

Effective Date: October 2022

Xpert Xpress MVP

Aspiration hazard

No data available

Component Information

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



Safety Data Sheet

Effective Date: October 2022

Xpert Xpress MVP

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



Safety Data Sheet

Effective Date: October 2022

Xpert Xpress MVP

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