

SAFETY DATA SHEET according to Hazard Communication Standard (HCS) 29 CFR 1910.1200

SECTION 1.0 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Product name: PrimeStore Molecular Transport Medium® (MTM)

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

Identified uses: Transport medium for swabs

1.3 Details of the supplier of the safety data sheet

Name: Longhorn Vaccines and Diagnostics LLC
Address: 1747 Citadel Plaza, Ste 206, San Antonio, TX 78209

Telephone: USA (210) 826-0910
Email: info@lhnvd.com

1.4 Emergency telephone number

001-301-233-1551 (24 hours).

SECTION 2.0 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS classification according to 29 CFR 1910.1200 (OSHA HCS)

Hazard classes and hazard categories	Hazard statements
Acute toxicity, category 4, inhalation	H332
Skin corrosion, category 1C	H314
Serious eye damage, category 1	H318
Chronic aquatic toxicity, category 3	H412

For the full text of the H-Statements mentioned in this section, see section 16.

2.2 GHS Label elements

Hazard pictograms



Signal word: Danger

Hazard statements	
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements	
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P303 +P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 +P351 +P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P260	Do not breathe fumes/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.

2.3 Hazards not otherwise classified (HNOC)

Contact with acids liberates very toxic gas.

< 0.7% of the mixture consists of ingredients of unknown dermal toxicity.

This mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3.0 COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical Name	Percentage Range	CAS No.	Classification
Guanidine Thiocyanate	20 - 30	593-84-0	Acute Tox. 4; H302+H312+H332 Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412
Ethanol	19 - 25	64-17-5	Flam. Liq.2; H225 Eye Irrit.2; H319 Specific concentration limits: ≥ 50% Eye. Irrit. 2
N-Lauroylsarcosine Na ⁺	< 0.7	137-16-6	Acute Tox.2; H330 Skin Irrit.2; H315 Eye Dam.1; H318 Specific concentration limits: ≤ 34.5% Acute Tox. 4 > 34.5% Acute Tox. 2 > 30% Skin Irrit. 2; Eye damage 1 ≥ 1 - ≤ 30% Eye Irrit. 2

SECTION 4.0 FIRST AID MEASURES

4.1 Description of first aid measures

General advice

If exposed or in case of symptoms caused by eye or skin contact, inhalation or swallowing, consult a physician. Show this safety data sheet to the physician in attendance. Never give anything by mouth to an unconscious person. Do not leave affected person unattended.

In case of inhalation:	Remove patient immediately from source of exposure. Move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
In case of eye contact:	Rinse immediately with plenty of water (also under the eyelids) for at least 15 minutes, holding the eye open. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain immediate medical attention.
In case of skin contact:	Wash off immediately with plenty of soap and water. Take off contaminated clothing and shoes immediately and wash before reuse. Obtain immediate medical attention.
In case of ingestion:	Immediately call a POISON CENTRE/doctor. Do not induce vomiting. Immediately rinse mouth with water and drink plenty of water (200-300ml).

4.2 Most important symptoms and effects, both acute and delayed

Product is a corrosive material. Causes severe burns by all exposure routes. May cause perforation of the stomach or oesophagus. Ingestion causes severe swelling, severe damage to delicate tissue and possible perforation.

4.3 Indication of any immediate medical attention and special treatment needed

Obtain immediate medical attention following inhalation, ingestion or skin, or eye contact. Treatment should be symptomatic and supportive.

SECTION 5.0 FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water spray, alcohol resistant foam, carbon dioxide or dry powder.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Produces hazardous combustion products of hydrogen sulphide, sulphur dioxide, ammonia, hydrocyanic acid, carbon oxides, nitric oxides.

5.3 Advice for firefighters

Self-contained breathing apparatus with full-face mask and full protective clothing. Containers may explode in heat of fire. Use water to cool fire-exposed containers and to disperse vapour. Prevent run-off from fire-fighting entering drains, sewers or watercourses.

5.4 Further information

None.

SECTION 6.0 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Wear appropriate protective clothing - see Section 8. Do not breathe fumes/mist/vapours/spray. Avoid contact with skin and eyes.

6.2 Environmental precautions

Product or extinguishing media with product must not be allowed to enter soil, drains, sewers or watercourses. Do not flush into surface water or sanitary sewer system. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

6.3 Methods and material for containment and cleaning up

Absorb using earth, sand or other inert material then transfer into suitable, closed containers for disposal. Ventilate contaminated area thoroughly. Flush with water. Dispose of as hazardous waste.

6.4 Reference to other sections

See also Sections 8 and 13.

SECTION 7.0 HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Provide appropriate exhaust ventilation at machinery.

Do not inhale vapours, mists or aerosols. Avoid contact with eyes, skin and clothing. Keep away from heat.

Wear protective gloves/protective clothing/eye protection/face protection. Wash parts of the body in contact with substance thoroughly after handling. Do not eat, drink or smoke when using this product. See section 8.2 for occupational hygiene and exposure prevention measures.

7.2 Consideration for safe storage, including any incompatibilities

Store unused product at 2 to 25 Deg C. Store in the dark. Storage area should be dry, well ventilated, out of direct sunlight and separated from oxidants and acids. Store in tightly closed, original containers. Store away from sources of heat. Do not smoke eat or drink in areas of use and storage.

7.3 Specific end use(s)

Refer to Section 1.

SECTION 8.0 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters:

Chemical Name	CAS No.	Value	Control parameters	Comments
Guanidine Thiocyanate	593-84-0			No Occupational Exposure Limit assigned
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m ³	USA - OSHA
		STEL	1,000 ppm	USA – ACGIH Threshold Limit Value (TLV)
		TWA	1,000 ppm 1,900 mg/m ³	USA - NIOSH
		PEL	1,000 ppm 1,900 mg/m ³	California permissible exposure limits for chemical contaminants
N-Lauroylsarcosine Na ⁺	137-16-6			No Occupational Exposure Limit assigned

8.2 Exposure controls

The measures appropriate for a particular workplace depend on how the material is used and on the potential for exposure. If engineering controls and work practices are not effective in preventing or controlling exposure, then suitable personal equipment, which is known to perform satisfactorily, should be used. Check workplace health risk assessment.

Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment

There are multiple factors that will affect the specific requirements such as amount and concentration of the material, duration of exposure, frequency of exposure, permeability, contact temperature etc. See also Section 5.

Eye/face protection

Tightly fitting safety goggles/safety glasses with side protection.

Skin protection

Handling bulk mixture: Nitrile rubber gloves; break through time: > 480 min;

Glove thickness 0.4 mm. The exact choice of glove type depends on the type of work being undertaken. Gloves should be chosen in consultation with a glove manufacturer and after a full assessment of the working conditions. Gloves should be replaced regularly.

Body protection

Standard work wear for normal handling and use.

Respiratory protection

Required if vapours, mists or aerosols are generated.

Environmental exposure controls

Do not let product enter drains. Measures based on adequate handling practices and facilities, containment and filtered extraction intended to minimise exposure to the material should also minimise release of it to the environment. See also Section 6.2.

General hygiene

Wash hands after contact. Do not eat, drink or smoke in immediate work area. Remove contaminated clothing and protective equipment before entering eating areas.

SECTION 9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Colourless liquid
Odour	Alcohol-like
Odour threshold	No information available
pH	6.8 - 7.0 at 25 Deg C
Melting point/freezing point	No information available
Initial boiling point and boiling point range	>35 Deg C
Flash point	37 Deg C (closed cup)
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Upper/lower flammability or explosive limits	Upper explosion limit: 13.5% Lower explosion limit: 2.5% (Ethanol)
Vapour pressure	No information available
Vapour density	No information available
Relative density	No information available
Solubility in water	Miscible
Solubility in other	No information available
Partition coefficient: n- octanol/water	Not applicable
Autoignition temperature	Does not self-ignite
Decomposition temperature	No information available
Viscosity	No information available
Explosive properties	Not classified as explosive
Oxidising properties	Not oxidising

9.2 Other information

This product does not sustain combustion, up to and including 75 Deg C, when tested in accordance with the L.2 Sustained Combustibility Test.

SECTION 10.0 STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions. Do not mix with bleach or other halogenated chemicals as this produces cyanide gas.

10.2 Chemical stability

Stable under normal temperature conditions. Light sensitive (Guanidine thiocyanate).

10.3 Possibility of hazardous reactions

Contact with acids or acid vapours may liberate cyanide vapours.

10.4 Conditions to avoid

Avoid temperatures above 40 °C. Avoid exposure to light.

10.5 Incompatible materials

Peroxides, oxidizing agents, acids and alkalis. Aluminium at higher temperatures.

10.6 Hazardous decomposition products

Hydrogen sulphide, sulphur dioxide, ammonia, hydrocyanic acid, carbon oxides, nitric oxides.

SECTION 11.0 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Guanidine thiocyanate

Acute toxicity

LD50, Oral Rat - 593 mg/kg (OECD Test Guideline 401).

ATE, Dermal - 1100

ATE, Inhalation - 1.5

Skin corrosion/irritation

Skin, Rabbit, 4 Hr – Corrosive (OECD Test Guideline 404).

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Unlikely to cause sensitisation in contact with skin.

No data available on respiratory sensitisation.

Specific target organ toxicity (STOT) - single exposure

No information.

Specific target organ toxicity (STOT) - repeated exposure

No information.

Aspiration hazard

Not applicable.

Germ cell mutagenicity

No indications of germ cell mutagenicity.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No indications of reproductive toxicity.

Other toxicological information

High doses may cause an adverse effect on the thyroid gland.

Ethanol

Acute toxicity

LD50, Oral Rat - 10,470 mg/kg (OECD Test Guideline 401).

LD50, Dermal Rat - > 2,000 mg/kg Body Weight

LC50, Inhalation Rat, 4 Hr - 124.7 mg/l (OECD Test Guideline 403).

Skin corrosion/irritation

Skin, Rabbit, 24 Hr – No skin irritation (OECD Test Guideline 404).

Serious eye damage/irritation

Eyes, Rabbit – Causes serious eye damage (OECD Test Guideline 405).

Respiratory or skin sensitisation

Unlikely to cause respiratory or skin sensitisation.

Guinea Pig, Maximisation Test – Negative (OECD Test Guideline 406).

Specific target organ toxicity (STOT) - single exposure

No data available.

Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

No data available.

Germ cell mutagenicity

Ames Test (Salmonella typhimurium) – Negative.

In vitro mammalian cell gene mutation test, mouse lymphoma cells – Negative (OECD Test Guideline 478).

Mouse, Male - Positive results obtained in some in vivo tests.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available.

Other toxicological information

Repeated dose toxicity, Oral, Male Rat - No observed adverse effect level 1,730 mg/kg. Lowest observed adverse effect level 3,200 mg/kg.

Affects include, irritant effects, respiratory paralysis, dizziness, narcosis, inebriation, euphoria, nausea, vomiting.

N-Lauroylsarcosine Na⁺

Acute toxicity

LD50, Oral Rat - >5,000 mg/kg (OECD Test Guideline 401).

LD50, Dermal Rat - No data available.

LC50, Inhalation Rat, 4 Hr - >0.05 – 0.5 mg/l (OECD Test Guideline 403).

Skin corrosion/irritation

In vitro (skin) - Non-corrosive (OECD Test Guideline 431).

Causes skin irritation.

Serious eye damage

Causes serious eye damage.

Respiratory or skin sensitisation

No data available on respiratory sensitisation.

Unlikely to cause sensitisation in contact with skin.

Guinea pig, Maximisation test – Negative (OECD Test Guideline 406).

STOT - single exposure

No data available.

STOT - repeated exposure

No data available.

Germ cell mutagenicity

Ames test, Salmonella typhimurium - Negative.

Mutagenicity (mammalian cell test) – Chromosome aberration.

Human lymphocytes – Negative.

In vitro mammalian cell gene mutation test, mouse lymphoma test – Negative.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available.

SECTION 12.0 ECOLOGICAL INFORMATION

12.1 Toxicity

Guanidine thiocyanate	
Harmful to aquatic organisms with long lasting effects.	
Toxicity to fish	LC50, <i>Poecilia reticulata</i> (guppy), 96 Hr - 89.1 mg/l (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	EC50, <i>Daphnia magna</i> (Water flea), 48 Hr - 42.4 mg/l (OECD Test Guideline 202)
Ethanol	
Toxicity to fish	LC50, <i>Pimephales</i> (fathead minnow), 96 Hr, flow-through – 15,300 mg/l
Toxicity to daphnia and other aquatic invertebrates	EC50, <i>Ceriodaphnia dubia</i> (water flea), 48 Hr – 5,012 mg/l
Toxicity to algae	ErC50, <i>Chlorella vulgaris</i> (fresh water algae), 72 Hr – 275 mg/l (OECD Test Guideline 201)
Toxicity to bacteria	IC50, activated sludge, 3 Hr, static - >1,000 mg/l (OECD Test Guideline 209)
N-Lauroylsarcosine Na⁺	
Toxicity to fish	LC50, <i>Pimephales</i> (<i>Danio rerio</i>), 96 Hr, semi-static - 107 mg/l (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	EC50, <i>Daphnia magna</i> (water flea), 48 Hr, static – 29.7 mg/l (OECD Test Guideline 202)
Toxicity to algae	NOEC, <i>Desmodesmus subspicatus</i> (green algae), 72 Hr, static – 9.2 mg/l (OECD Test Guideline 201)
Toxicity to bacteria	EC50, activated sludge, 3 Hr, static - >1,000 mg/l (OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability

Guanidine thiocyanate

No data available.

Ethanol

Readily biodegradable.

Biodegradability, aerobic (15 Days) – 95% (OECD Test Guideline 301E)
Biochemical Oxygen Demand (BOD) 930 – 1,670 mg/g
Theoretical Oxygen Demand (ThOD) – 2,100 mg/g

N-Lauroylsarcosine Na⁺

Readily biodegradable.

Biodegradability, aerobic (28 Days) – 82% (OECD Test Guideline 301E)

12.3 Bioaccumulative potential

Guanidine thiocyanate

No data available.

Ethanol

Accumulation in organisms is unlikely.

N-Lauroylsarcosine Na⁺

No data available.

12.4 Mobility in soil

Guanidine thiocyanate

No data available.

Ethanol

No data available.

N-Lauroylsarcosine Na⁺

No data available.

12.5 Results of PBT and vPvB assessment

None of the ingredients are PBT or vPvB.

12.6 Other adverse effects

Harmful to aquatic organisms with long lasting effects.

SECTION 13.0 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

This product must be disposed of as hazardous waste. Dispose of waste in accordance with local, state, and federal regulations. Incineration is the recommended method of disposal. Product must not be treated as household waste. Do not mix the product with bleach or other halogenated chemicals. Do not mix with other waste. Do not allow product to enter sewage system.

Contaminated packaging

Dispose of as unused product. Empty containers may contain hazardous residues. Contaminated containers or packaging must not be treated as household waste. Do not use bleach or other halogenated chemicals to clean or decontaminate containers or packaging. Do not mix with other waste.

SECTION 14.0 TRANSPORT INFORMATION

This product is dangerous for transport. If it is transported or offered for carriage it must be packaged, marked, labelled and documented in accordance with the applicable modal transport rules (**49 CFR** for Domestic Shipping within the USA, **IMDG Code** for international sea and **ICAO/IATA Technical Instructions** for international air).

UN number:	1760
UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (GUANIDINE THIOCYANTE)
Transport hazard class:	8
Subsidiary hazard:	None
Packing group:	III
Environmental hazards:	Not Environmentally Hazardous / Not classified as a Marine Pollutant.
Reportable Quantity (RQ):	
Poison Inhalation Hazard:	No

SECTION 15.0 REGULATORY INFORMATION

- 15.1** This safety data sheet has been compiled according to Hazard Communication Standard (HCS) 29 CFR 1910.1200.

SARA 302 Components

This product does not contain any substances which are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This product does not contain any substances which are subject to the reporting requirements of SARA Title III, Section 313.

Massachusetts Right To Know Components

Gaunidium thiocyanate - Not listed
Ethanol - Not listed
N-Lauroylsarcosine Na⁺ - Not listed

Pennsylvania Right To Know Components

Gaunidium thiocyanate - Not listed
Ethanol - Listed
N-Lauroylsarcosine Na⁺ - Not listed

New Jersey Right To Know Components

Gaunidium thiocyanate - Not listed
Ethanol - Listed
N-Lauroylsarcosine Na⁺ - Not listed

California Proposition 65 Components

Gaunidium thiocyanate - Not listed
Ethanol - Not listed
N-Lauroylsarcosine Na⁺ - Not listed

SECTION 16.0 OTHER INFORMATION

Abbreviations and acronyms used in this SDS

ACGIH	American Conference of Governmental Industrial Hygienist's
EPA	Environmental Protection Agency
IARC	International Agency for Research on Cancer
IATA-DGR	International Air Transport Association-Dangerous Goods Regulations
ICAO-TI	International Civil Aviation Organization-Technical Instructions
IMDG	International Maritime Code for Dangerous Goods
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OECD	Organisation for Economic Co-operation and Development
OSHA	Occupational Safety & Health Administration
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible Exposure Limit
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Level
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienist's
EPA	Environmental Protection Agency
IARC	International Agency for Research on Cancer

Sources of data used for this SDS:

Suppliers safety data sheets.
European Chemicals Agency: <http://echa.europa.eu/>
US Regulatory Lists.

Hazard Statements referred to in this SDS

H302+H312+H332:	Harmful if swallowed, in contact with skin or if inhaled.
H314:	Causes severe skin burns and eye damage.
H315:	Causes skin irritation.
H318:	Causes serious eye damage.
H319:	Causes serious eye irritation.
H330:	Fatal if inhaled.
H412:	Harmful to aquatic life with long lasting effects.