

Section 1. Identification

Product identifier

Product Identity	Nucleic Acid Prep Buffer
Other means of identification	A00657

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

Lab reagents

Details of the supplier of the safety data sheet

Company Name	Asuragen, Inc. 2150 Woodward Street Austin, Texas 78744 +1 512 681 5200
Emergency 24 hour Emergency Telephone No.	Asuragen, Inc. +1 512 681 5200 US, Toll-free Tel: 1-877-777-1874 (Normal Business Hours)

Customer Service:

Section 2. Hazard(s) identification

Classification of the substance or mixture under US OSHA's Hazard Communication Standard (1910.1200) revised 2024 and Canadian Hazardous Products Regulations (SOR/2015-17) (GHS revision 7)

Flammable Liquid, category 2;H225	Highly Flammable liquid and vapor.
Acute toxicity(oral), category 4;H302	Harmful if swallowed.
Skin corrosion/irritation category 2;H315	Causes skin irritation.
Serious eye damage / eye irritation, category 2A;H319	Causes serious eye irritation.

Label elements



Danger

H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

[Prevention]

P210 Keep away from heat, sparks, open flames, and other ignition sources - No smoking.
P233 Keep container tightly closed.
P235 Keep cool.
P240 Ground, bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating, light, equipment.
P242 Use only non-sparking tools.
P243 Take action to prevent static discharges.
P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves, eye protection, and face protection.

[Response]

P301+312 IF SWALLOWED: Call a POISON CENTER, doctor or physician if you feel unwell.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P303+361+353 IF ON SKIN (or hair): Remove, take off immediately all contaminated clothing. Rinse skin with water, shower.

P304+312 IF INHALED: Call a poison center or doctor or physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P330 Rinse mouth.

P332+313 If skin irritation occurs: Get medical attention.

P337+313 If eye irritation persists: Get medical advice or attention.

P362+364 Take off contaminated clothing and wash it before reuse.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]

P403+235 Store in a well ventilated place. Keep cool.

[Disposal]

P501 Dispose of contents or container in accordance with local and national regulations.

Other hazards

This product contains no PBT/vPvB/vPvM chemicals.

This product contains no endocrine disrupting chemicals.

Does not contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per the Organisation for Economic Co-operation and Development (OECD) list of Per- and Polyfluoroalkyl Substances (PFASs).

Section 3. Composition/information on ingredients
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This product contains the following substances that present a hazard within the meaning of US OSHA's Hazard Communication Standard (1910.1200) revised 2024 and Canadian Hazardous Products Regulations (SOR/2015-17) (GHS revision 7)

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Ethanol CAS Number: 64-17-5 Synonyms: Ethyl Alcohol	80 - 100	Flammable Liquid, category 2;H225 Serious eye damage / eye irritation, category 2;H319	-----
Guanidine hydrochloride CAS Number: 50-01-1 Synonyms: Guanidine, monohydrochloride	30 - 60	Acute toxicity(oral), category 4;H302 Serious eye damage / eye irritation, category 2;H319 Skin corrosion/irritation category 2;H315 Acute toxicity(inhalation), category 4;H332	-----

The actual concentration or concentration range is withheld as a trade secret.

*PBT/vPvB - PBT, vPvM or vPvB-substance.

The full texts of the phrases are shown in Section 16.

Section 4. First aid measures

Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Overview No chronic toxicity or long term toxicity information available. Treat symptomatically. Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness,

drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.

Eyes Causes serious eye irritation.

Skin Causes skin irritation.

Ingestion Harmful if swallowed.

Section 5. Fire-fighting measures

Extinguishing media

CO₂, Dry Chemical, Foam, Sand.

Special hazards arising from the substance or mixture

Hazardous decomposition: High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

Keep away from heat, sparks, open flames, and other ignition sources - No smoking.

Keep container tightly closed.

Keep cool.

Ground, bond container and receiving equipment.

Use explosion-proof electrical, ventilating, light, equipment.

Use only non-sparking tools.

Take action to prevent static discharges.

Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

Environmental precautions

Do not allow spills to enter drains or waterways.
Collect in flammable waste container for disposal.

Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.
Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.

Section 7. Handling and storage

Precautions for safe handling

Handle containers carefully to prevent damage and spillage.
See section 2 for further details. - [Prevention]

Conditions for safe storage, including any incompatibilities

Incompatible materials: Incompatible with strong oxidizing agents
See section 2 for further details. - [Storage]

Specific end use(s)

No available information

Section 8. Exposure controls / personal protection

Control parameters

Exposure Limits

CAS No.	Ingredient	Source	Value
50-01-1	Guanidine hydrochloride	ACGIH	No Established Limit
		OSHA	No Established Limit
		NIOSH	No Established Limit
		Alberta	No Established Limit
		British Columbia	No Established Limit
		Manitoba	No Established Limit
		New Brunswick	No Established Limit
		Newfoundland and Labrador	No Established Limit
		Nova Scotia	No Established Limit
		Northwest Territories	No Established Limit
		Nunavut	No Established Limit
		Ontario	No Established Limit
		Prince Edward Island	No Established Limit
		Quebec	No Established Limit
		Saskatchewan	No Established Limit
		Yukon	No Established Limit
64-17-5	Ethanol	ACGIH	1000 ppm
		OSHA	1000 ppm, 1900 mg/m ³
		NIOSH	TWA 1000 ppm (1900 mg/m ³)
		Alberta	1000 ppm TWA; 1880 mg/m ³ TWA
		British Columbia	1000 ppm STEL
		Manitoba	1000 ppm STEL
		New Brunswick	1000 ppm TWA; 1880 mg/m ³ TWA
		Newfoundland and Labrador	1000 ppm STEL
		Nova Scotia	1000 ppm STEL
		Northwest Territories	1000 ppm TWA 1250 ppm STEL
		Nunavut	1000 ppm TWA 1250 ppm STEL
		Ontario	1000 ppm STEL
		Prince Edward Island	1000 ppm STEL
		Quebec	1000 ppm TWAEV; 1880 mg/m ³ TWAEV
		Saskatchewan	1000 ppm TWA 1250 ppm STEL
		Yukon	1000 ppm TWA; 1900 mg/m ³ TWA 1000 ppm STEL; 1900 mg/m ³ STEL

**Exposure
controls**

Respiratory If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes Protective safety glasses recommended

Skin Avoid skin contact. Use neoprene or rubber gloves or PVC.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State	Liquid
Color	Yellow tint
Odor	Odorless
Odor threshold	No available information
Melting point / freezing point	No available information
Initial boiling point and boiling range	No available information
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: No available information Upper Explosive Limit: No available information
Flash Point	°F °C, Test method: (Open/Close cup)
Auto-ignition temperature	25 °C (797 °F)
Decomposition temperature	No available information

pH	No available information
Viscosity (cSt)	No available information
Solubility in Water	No available information
Partition coefficient n-octanol/water (Log Kow)	No available information
Vapor pressure (Pa)	Vapor pressure at 20 °C (68 °F): 59 hPa (44.3 mm Hg)
Relative Density	No available information
Vapor Density	No available information
Evaporation rate (Ether = 1)	No available information
VOC Content	· Solvent content: Organic solvents: 80.0 % VOC content: 80.00 % 800.0 g/l / 6.68 lb/gal
Oxidising properties	No available information
Explosive properties	Lower: 3.5 Vol % Upper: 15 Vol %

Other information

No other relevant information.

Section 10. Stability and reactivity

Reactivity

Hazardous Polymerization will not occur.

Chemical stability

Stable under normal circumstances.

Possibility of hazardous reactions

No available information

Conditions to avoid

High temperatures and fires.

Incompatible materials

Incompatible with strong oxidizing agents

Hazardous decomposition products

High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

Section 11. Toxicological information

Acute toxicity

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Ethanol - (64-17-5)	10,470.00, Rat - Category: NA	17,100.00, Rabbit - Category: NA	124.70, Rat - Category: NA	No data available.	No data available.
Guanidine hydrochloride - (50-01-1)	556.50, Rat - Category: 4	>2,000.00, Rabbit - Category: 5	No data available.	No data available.	No data available.

Carcinogen Data

CAS No.	Ingredient	Source	Value
50-01-1	Guanidine hydrochloride	IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	No Established Limit
64-17-5	Ethanol	IARC	Group 1: Yes; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	A3

Classification	Category	Hazard Description
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Acute toxicity (oral)	4	Harmful if swallowed.
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	2A	Causes serious eye irritation.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

Possible routes of entry:No available information

Symptoms and effects, both acute and delayed:

No chronic toxicity or long term toxicity information available. Treat symptomatically.

Eyes Causes serious eye irritation.
Skin Causes skin irritation.
Ingestion Harmful if swallowed.

Section 12. Ecological information

Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L
Ethanol - (64-17-5)	15,400.00, Lepomis macrochirus	> 10,000, Daphnia magna	17.92, Ulva pertusa
Guanidine hydrochloride - (50-01-1)			

Ingredient	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L
	1,850.00, Pimephales promelas	70.20, Daphnia magna	11.80, Pseudokirchnerella subcapitata

Persistence and degradability

There is no data available on the preparation itself.

Bioaccumulative potential

No available information

Mobility in soil

No available information

Results of PBT and vPvB assessment

This product contains no PBT/vPvB/vPvM chemicals.

Other adverse effects

No available information

Section 13. Disposal considerations

Waste treatment methods

Destroy by liquid incineration. Use absorbent material and deposit in toxic landfill in accordance with local, state, and federal regulations.

Section 14. Transport information

Classification Method: Classified as per Part 2, Sections 2.1-2.8 of the Transportation of Dangerous Goods Regulations.

	DOT (Domestic Surface Transportation)	TDG (Domestic Surface Transportation)
UN number	UN1170	UN1170
UN proper shipping name	Ethanol or Ethyl alcohol or Ethanol solutions or Ethyl alcohol solutions	Ethanol or Ethyl alcohol or Ethanol solutions or Ethyl alcohol solutions

Transport hazard class(es)	Class:3	Class:3
Packing group	II	Sub Class: Not Applicable
UN number	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN proper shipping name	UN1170 Ethanol or Ethyl alcohol or Ethanol solutions or Ethyl alcohol solutions	UN1170 Ethanol or Ethyl alcohol or Ethanol solutions or Ethyl alcohol solutions
Transport hazard class(es)	Class:3	Class:3
Packing group	Sub Class: Not Applicable	Sub Class: Not Applicable
	II	II

Environmental hazards

IMDG Marine Pollutant: No;

Special precautions for user

No available information

Section 15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

This product has been classified in accordance with US OSHA's Hazard Communication Standard (1910.1200) revised 2024 and Canadian Hazardous Products Regulations (SOR/2015-17 amended 2022-12-15) (GHS revision 7) and the SDS contains all of the information required by those regulations.

Toxic Substance Control Act (TSCA)

Ethanol

Guanidine hydrochloride

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:

Ethanol

Canadian Domestic Substance List (DSL):

Ethanol

Guanidine hydrochloride

Canadian Non-Domestic Substance List (NDSL):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 Label Warning:

This product contains no chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Note: Ethanol (Ethyl alcohol) has been placed on the California Proposition 65 Cancer and Developmental Lists when in alcoholic beverages.

Section 16. Other information

Revision Date

08/12/2025

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

Disclaimer: The information presented herein is supplied as a guide to those who handle or use this product. Safe work practices must be employed when working with any materials.

It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

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