

Safety Data Sheet

SECTION 1: Identification

Contact information

General



Vizgen, Inc.
61 Moulton St.
Cambridge, MA 02138
Main: +1 (833) 222-8206
E-mail: info@vizgen.com

Emergency telephone number Chemtrec (24-hour availability):
+1 (800) 424-9300 (USA and Canada);
+1 (703) 527-3887 (International; collect calls accepted)

Product identifier	Blocking Buffer C Premix
Product number	20300100
Trade name	Not applicable
Chemical family	Mixture
Recommended uses and restrictions	Reagent for research and development purposes only.
Note	The toxicological and ecological properties of this mixture have not been fully characterized. This SDS will be updated as more data become available.

SECTION 2: Hazard(s) identification

Classification of the substance or mixture

Respiratory sensitization, Category 1

May cause an allergy or asthma symptoms or breathing difficulties if inhaled

Skin sensitization, Category 1

May cause an allergic skin reaction

Label elements

GHS Hazard pictograms



GHS Signal word

Danger

GHS Hazard statements

H317 - May cause an allergic skin reaction

H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled

GHS Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. P272 - Contaminated work clothing must not be allowed out of the workplace. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P284 - [In case of inadequate ventilation] wear respiratory protection. P302+P352 - If on skin: Wash with plenty of water. P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. P321 - Specific treatment (see supplemental first aid instruction on this label). P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor. P363 - Wash contaminated clothing before reuse. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Other hazards

The potential health hazards associated with exposure/handling of this mixture are unknown; no data specific for the mixture were identified. The following data describe the hazards of individual ingredients, where applicable.

As bovine serum albumin (BSA) is derived from animal (foreign) protein, there is potential for the material to cause an allergic response in humans.

Note

This mixture is classified as hazardous under GHS as implemented by Regulation EC No 1272/2008 (EU CLP), WHMIS 2015 (Health Canada), and Hazard Communication Standard No. 1910.1200 (US OSHA).

SECTION 3: Composition/Information on ingredients

Ingredient	CAS number	EINECS/ELINCS#	Amount	GHS classification
Bovine Serum Albumin	9048-46-8	232-936-2	< 5 %	Resp. Sens. 1, H334 Skin Sens. 1, H317

Note The ingredients listed above are considered hazardous. Amounts are listed as ranges; the exact percentage of composition is withheld as a trade secret. Product also contains trace amounts of oligodeoxyribonucleic acid (DNA) (e.g. <0.1%). The remaining components of this product are non-hazardous and/or present in formulation at amounts below reportable limits. See Section 16 for full text of GHS classifications.

SECTION 4: First-aid measures**Description of first aid measures**

Immediate medical attention and special treatment, if necessary Yes.

Inhalation If experiencing respiratory symptoms: Call a poison center or a doctor. Immediately move exposed subject to fresh air. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. Immediately notify medical personnel and supervisor.

Skin contact Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.

Eye contact If easy to do, remove contact lenses, if worn. Immediately flush eyes with copious quantities of water for at least 15 minutes. If irritation occurs or persists, notify medical personnel and supervisor.

Ingestion If swallowed, call a physician immediately. Do not induce vomiting unless directed by medical personnel. Do not give anything to drink unless directed by medical personnel. Never give anything by mouth to an unconscious person. Notify medical personnel and supervisor.

Most Important Symptoms/Effects

Medical conditions aggravated by exposure: None known or reported. Treat symptomatically and supportively.

Expected Symptoms/Effects, Acute and Delayed See Sections 2 and 11

SECTION 5: Fire-fighting measures**Suitable (and unsuitable) extinguishing media**

Suitable extinguishing media Use water spray (fog), foam, dry powder, or carbon dioxide, as appropriate for surrounding fire and materials.

Specific hazards arising from the chemical

No information identified. May emit carbon monoxide, carbon dioxide, oxides of nitrogen and other nitrogen-containing compounds.

Fire hazard As product is an aqueous solution, it is not expected to be flammable.

Explosion hazard As product is an aqueous solution, it is not expected to be explosive.

Special protective equipment and precautions for fire-fighters

Firefighting instructions In case of fire in the surroundings: use the appropriate extinguishing agent. Wear full protective clothing and an approved, positive pressure, self-contained breathing apparatus. Decontaminate all equipment after use.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Protective equipment If product is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment (see Section 8). Area should be adequately ventilated.

Emergency procedures Do not breathe vapors/mist/spray.

Environmental precautions Do not empty into drains. Avoid release to the environment.

Methods and material for containment and cleaning up

Methods for cleaning up

DO NOT CAUSE MATERIAL TO BECOME AIRBORNE. For small spills, soak up material with absorbent, e.g. paper towels. For large spills, cordon off spill area and minimize the spreading of spilled material. Soak up material with absorbent. Collect spilled material, absorbent, and rinse water into suitable containers for proper disposal in accordance with applicable waste disposal regulations (see Section 13). Decontaminate the area twice with an appropriate solvent. .

Other information

Dispose of materials or solid residues at an authorized site.

Reference to other sections

See Sections 8 and 13 for more information.

SECTION 7: Handling and storage

Precautions for safe handling

Follow recommendations for handling bulk formulated biochemical reagents (i.e. use of engineering controls and/or other personal protective equipment if needed). Avoid contact with eyes, skin and other mucous membranes. Wash thoroughly after handling. Do not breathe vapor/mist/spray.

Conditions for safe storage, including any incompatibilities

Storage conditions

Store at NMT -20° C, away from incompatible materials.

Storage temperature

≤ -20 °C

Specific end use(s)

Research and development.

SECTION 8: Exposure controls/personal protection

Control parameters/Occupational Exposure Limits

Name	Issuer	Value
Bovine Serum Albumin	No data available	No data available

Appropriate engineering controls

Selection and use of containment devices and personal protective equipment should be based on a risk assessment of exposure potential. Use local exhaust and/ or enclosure at aerosol/mist-generating points. Use engineered local exhaust ventilation (LEV) and/or enclosure for procedures where aerosolization may occur such as opened transfers, pumping, and spraying. Solutions can be handled outside a containment system or without LEV during procedures with no potential for aerosolization. All containers for solutions and slurries must be covered while being transferred.

Respiratory protection

Choice of respiratory protection should be appropriate to the task and the level of existing engineering controls. At a minimum, a tight-fitting full-face respirator with HEPA filters is required when performing aerosol generating operations. A powered air-purifying respirator (PAPR) with HEPA filters and head cover is required for spill cleanup.

Hand protection

Wear nitrile or other impervious gloves if skin contact is possible. When the material is diluted in an organic solvent, wear gloves that provide protection against the solvent.

Eye protection

Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.

Skin and body protection

Wear disposable coveralls appropriate to the task, booties, and safety glasses with side shields. Ensure gloves are protective against solvents in use. Protective garments (coveralls, disposable coveralls, lab coats) are not to be worn in common areas (e.g., cafeterias) or out-of-doors. Employees must be trained in proper gowning and degowning practices

Other protective measures

Wash hands in the event of contact with this product/mixture, especially before eating, drinking or smoking. Protective equipment is not to be worn outside the work area (e.g., in common areas or out-of-doors). Decontaminate all protective equipment following use.

Environmental exposure controls

Avoid release to the environment and operate within closed systems wherever practicable. Air and liquid emissions should be directed to appropriate pollution control devices. In case of spill, do not release to drains. Implement appropriate and effective emergency response procedures to prevent release or spread of contamination and to prevent inadvertent contact by personnel.

SECTION 9: Physical and chemical properties

Physical state	Liquid
Appearance	Clear
Formula	Mixture (Not Applicable)
Molecular mass	Mixture (Not Applicable)
Color	Colorless.
Odor	Odorless.
Odor threshold	No data available
pH	No data available

Melting point	Not applicable.
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Relative evaporation rate (butyl acetate=1)	No data available
Flammability (solid, gas)	No data available
Vapor pressure	No data available
Relative vapor density at 20 °C	No data available
Relative density	No data available
Solubility	Soluble in water (aqueous solution)
Log Pow	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosion limits	No data available
Explosive properties	No data available
Oxidizing properties	No data available

SECTION 10: Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No dangerous reactions known under normal conditions of use.
Conditions to avoid	None under recommended storage and handling conditions (see section 7).
Incompatible materials	No data available.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Likely routes of exposure May be absorbed by inhalation, skin contact and ingestion.

Toxicological information

Acute toxicity

Component	Type	Dose
Bovine Serum Albumin	No data available	No data available
Additional information	No data available	
Serious eye damage/irritation	No data available	
Skin corrosion/irritation	No data available	
Sensitization	As it is derived from animal (foreign) protein, there is potential for the material to cause an allergic response in humans. Occupational exposure to BSA has caused some cases of allergic sensitization in workers handling this material. Repeated inhalation of product may cause sensitization and can cause allergic type reactions in sensitized individuals.	
STOT-single exposure	No data available	
STOT-repeated exposure	No data available	
Reproductive toxicity	No data available	
Developmental toxicity	No data available	
Genotoxicity	No data available	
Carcinogenicity	No data available. None of the components of this product/mixture present at levels greater than or equal to 0.1% are listed by NTP, IARC, ACGIH or OSHA as a carcinogen.	
Aspiration hazard	No data available	
Experience with humans	See "Section 2 - Other Hazards".	

SECTION 12: Ecological information

Toxicity

Component	Type	Concentration
Bovine Serum Albumin	No data available	No data available
Persistence and degradability	Protein solution, bacterial degradation expected.	
Bioaccumulative potential	No data available.	
Mobility in soil	No data available	
Results of PBT assessment	No data available	
Other adverse effects	No data available	
Note	The environmental characteristics of this product/mixture have not been fully investigated. Releases to the environment should be avoided.	

SECTION 13: Disposal considerations

Waste treatment methods	Used product should be disposed of according to local, state, and federal regulations. All wastes containing the material should be properly labeled. Dispose of wastes in accordance to prescribed federal, state, and local guidelines, e.g, appropriately permitted chemical waste incinerator. Rinse waters resulting from spill cleanups should be discharged in an environmentally safe manner, e.g, appropriately permitted municipal or on-site wastewater treatment facility.
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SECTION 14: Transport information

Transport	Based on the available data, this product/mixture is not regulated as a hazardous material/dangerous good under EU ADR/RID, US DOT, Canada TDG, IATA, or IMDG.
UN number	None assigned.
UN proper shipping name	None assigned.
Transport hazard class(es) (DOT)	None assigned.
Packing group	None assigned.
Marine pollutant	Based on the available data, this product/mixture is not regulated as an environmental hazard or a marine pollutant.
Special transport precautions	Avoid release to the environment.
Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture	This SDS generally complies with the requirements listed under current guidelines in the US, EU and Canada. Consult your local or regional authorities for more information.
Chemical safety assessment	No chemical safety assessment has been carried out.
TSCA	All components of this product are listed as active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.
SARA Section 313 - Emission Reporting	This substance or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
California Proposition 65	California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.
Additional information	This SDS generally complies with the requirements listed under current guidelines in the US, EU and Canada. Consult your local or regional authorities for more information.

SECTION 16: Other information

Full text of H phrases and GHS classification	Resp. Sens. 1 - Respiratory sensitization, Category 1. Skin Sens. 1 - Skin sensitization, Category 1. H317 - May cause an allergic skin reaction. H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Data sources	Information from published literature and internal company data.

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists; ADR/RID - European Agreement Concerning the International Carriage of Dangerous Goods by Road/Rail; AIHA - American Industrial Hygiene Association; CAS# - Chemical Abstract Services Number; CLP - Classification, Labelling, and Packaging of Substances and Mixtures; DNEL - Derived No Effect Level; DOT - Department of Transportation; EINECS - European Inventory of New and Existing Chemical Substances; ELINCS - European List of Notified Chemical Substances; EU - European Union; GHS - Globally Harmonized System of Classification and Labeling of Chemicals; IARC - International Agency for Research on Cancer; IDLH - Immediately Dangerous to Life or Health; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; LOEL - Lowest Observed Effect Level; LOAEL - Lowest Observed Adverse Effect Level; NIOSH - The National Institute for Occupational Safety and Health; NMT - Not More Than; NOEL - No Observed Effect Level; NOAEL - No Observed Adverse Effect Level; NTP - National Toxicology Program; OEL - Occupational Exposure Limit; OSHA - Occupational Safety and Health Administration; PBT - Persistent, Bioaccumulative, and Toxic; PNEC - Predicted No Effect Concentration; SARA - Superfund Amendments and Reauthorization Act; STOT - Specific Target Organ Toxicity; STEL - Short Term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Issue date

26 June 2022

Current revision

1.2

Indication of changes

This is the second version of this SDS

Disclaimer

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 use and all persons receiving it must make their own determination of the effects, properties and protections 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 because it is a biochemical reagent. 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.