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	Clearing Premix
Product number	20300003; 20300114
Trade name	Not applicable
Chemical family	Mixture
Recommended uses and restrictions	Reagent for research and development purposes only.
Note	This SDS is written to address potential worker health and safety issues associated with the handling of the formulated product/mixture. Workers manufacturing this product/mixture should consult the SDS of each hazardous ingredient for hazard information and handling recommendations. This SDS will be revisited if more data become available.

SECTION 2: Hazard(s) identification

Serious eye damage/eye irritation Category 1
Causes serious eye damage

Label elements

GHS Hazard pictograms

GHS Signal word	Danger
GHS Hazard statements	H318 - Causes serious eye damage
GHS Precautionary statements	P280 - Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a poison center or doctor.
Other hazards	No data were available for the mixture. The following data describe the hazards associated with the active ingredient and/or the individual ingredients where applicable.
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
Sodium n-Dodecyl Sulfate	151-21-3	205-788-1	< 5 %	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412
Octylphenoxy polyethoxyethanol (Triton X-100)	9002-93-1	618-344-0	< 1 %	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411

Note The ingredients listed above are considered hazardous. Amounts are listed as ranges; the exact percentage of composition is withheld as a trade secret. 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 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 Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. 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.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical No information identified. May emit carbon monoxide, carbon dioxide, oxides of nitrogen and other nitrogen- and sulfur-containing compounds.

Fire hazard No information identified. As product is an aqueous solution, it is not expected to be flammable.

Explosion hazard No information identified. 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 (see Section 9).

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 refrigerated, away from incompatible materials.

Storage temperature ≤ 4 °C

Specific end use(s) Research and development.

SECTION 8: Exposure controls/personal protection

Control parameters/Occupational Exposure Limits

Name	Issuer	Value
Sodium n-Dodecyl Sulfate	No data available	No data available
Octylphenoxy polyethoxyethanol	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. Double gloves should be considered. 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, two pairs of gloves and safety glasses with side shields. 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. An anteroom or transition area must be used for gowning and degowning.

Other protective measures Wash hands in the event of contact with this substance, 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).

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 liquid with white precipitate.
Formula	Mixture (Not Applicable)
Molecular mass	Mixture (Not Applicable)
Color	Clear liquid containing white solid.
Odor	Odorless
Odor threshold	No data available
pH	No data available
Melting point	No data available
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
Sodium n-Dodecyl Sulfate	LD50 Oral rat	1288 mg/kg
	LD50 Dermal rat	> 2000 mg/kg
Octylphenoxy polyethoxyethanol	LD50 Oral rat	1800 mg/kg

Additional information	No data available
Serious eye damage/irritation	Sodium n-dodecyl sulfate was an eye irritant in rabbits. Octylphenoxy polyethoxyethanol (Triton X-100) was a severe eye irritant in rabbits.
Skin corrosion/irritation	Sodium n-dodecyl sulfate was a skin irritant in rabbits. Octylphenoxy polyethoxyethanol (Triton X-100) was a mild skin irritant in rabbits.
Sensitization	Sodium n-dodecyl sulfate is not a sensitizer in humans.
STOT-single exposure	No data available
STOT-repeated exposure	Repeat-dose oral toxicity studies with sodium n-dodecyl sulfate showed only local gastrointestinal tract irritation in rats with no systemic effects seen at 100 mg/kg/day.
Reproductive toxicity	No evidence of impaired fertility was observed in rats and male mice orally treated with 100 mg/kg/day sodium n-dodecyl sulfate. No effects on sperm were seen in male mice at high doses.
Developmental toxicity	Developmental toxicity was observed in mice and rabbits treated with oral sodium n-dodecyl sulfate, but only at severely maternally toxic doses.
Genotoxicity	Sodium n-dodecyl sulfate was negative for genotoxicity in several in vitro and in vivo assays.
Carcinogenicity	Sodium n-dodecyl sulfate was not carcinogenic in Beagle dogs. 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
Sodium n-Dodecyl Sulfate	LC50 fish	4.1 mg/l
	EC50 crustacea	5.55 mg/l
	ErC50 algae	< 60 mg/l
	NOEC (chronic)	0.88 mg/l Ceriodaphnia dubia, 7d
Octylphenoxy polyethoxyethanol	LC50 fish	4.5 mg/l

Persistence and degradability	No data available.
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.

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	No additional information available

SECTION 16: Other information

Full text of H phrases and GHS classification	Acute Tox. 4 (Oral) - Acute toxicity (oral) Category 4. Aquatic Chronic 2 - Hazardous to the aquatic environment - Chronic Hazard Category 2. Aquatic Chronic 3 - Hazardous to the aquatic environment - Chronic Hazard Category 3. Eye Dam. 1 - Serious eye damage/eye irritation Category 1. Skin Irrit. 2 - Skin corrosion/irritation Category 2. STOT SE 3 - Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation. H302 - Harmful if swallowed. H315 - Causes skin irritation. H318 - Causes serious eye damage. H335 - May cause respiratory irritation. H411 - Toxic to aquatic life with long lasting effects. H412 - Harmful to aquatic life with long lasting effects.
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; 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	November 2022
Current revision	B
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.