

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : BIO-GEM
Product code : 1194

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laundry pre-spotter
Restrictions on use : For professional use only

1.4. Supplier's details

Christeyns North America, LLC
311 Staton Road
Greenville, NC 27834
USA
T 252-756-8616 / 800.869.6171
info@christeyns.us - www.christeyns.com

1.5. Emergency phone number

Emergency number : VELOCITY EHS (800) 255-3924 (24 HOURS)
(For use only in the event of emergencies involving a spill, leak, fire, exposure, or accident involving chemicals)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H318 - Causes serious eye damage
H361 - Suspected of damaging fertility or the unborn child
Precautionary statements (GHS US) : P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, protective clothing, and eye 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.

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P308+P313 - If exposed or concerned: Get medical advice/attention.

P310 - Immediately call a poison center or doctor.

P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Alcohols, C10-16, ethoxylated	CAS-No.: 68002-97-1	10 - 30
Alcohols, C12-15, ethoxylated	CAS-No.: 68131-39-5	1 - 5
Benzenesulfonic acid, C10-16-alkyl derivs.	CAS-No.: 68584-22-5	1 - 5
Boric acid	CAS-No.: 10043-35-3	0.5 - 1.5

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Treat symptomatically. Get medical attention if symptoms occur.
First-aid measures after skin contact	: Rinse skin with plenty of water or shower. If irritation persists, get medical attention.
First-aid measures after eye contact	: Rinse immediately with water for 15 minutes, occasionally lifting upper and lower eyelids. Remove contact lenses, if present, and easy to do. Continue rinsing. Get medical attention immediately.
First-aid measures after ingestion	: Rinse mouth with water if the person is conscious. Do not induce vomiting unless directed by medical personnel. Get medical attention if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/injuries after eye contact	: Liquid and vapor corrosive to eyes; will cause permanent damage if not rinsed promptly.
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4.3. Indication of immediate medical attention and special treatment needed, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Do not use a water jet as this can spread the fire and may cause the splattering of corrosive liquid.
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5.2. Specific hazards arising from the chemical

Fire hazard	: Decomposition products may include carbon oxides.
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5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. In case of fire, do not breathe fumes. Move containers from the fire area if you can do so without risk. Prevent firefighting water from entering the environment.
- Protection during firefighting : Wear a self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

- Protective equipment : For spills or leaks, contact a supervisor and/or emergency responder. Avoid contact with spilled material and keep unnecessary personnel away.

For emergency responders

- Protective equipment : See Section 8 for recommended personal protective equipment. Ventilate the area and restrict access to the spill or leak zone. Have emergency procedures in place for treating exposures or incidents. Only trained and authorized personnel equipped with proper protective equipment should perform cleanup.

- Environmental precautions : Avoid release onto the ground, into storm sewers, or bodies of water.

6.2. Methods and materials for containment and cleaning up

- Methods for cleaning up : Stop leak if safe to do so. Contain spillage, soak up with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and collect all waste in suitable, labeled, and closed containers. Dispose according to local legislation (See Section 13).

SECTION 7 Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Handle in accordance with good industrial hygiene and safety practices. Use only with adequate ventilation. Avoid contact with skin, eyes, and clothing. Use appropriate personal protection equipment (PPE). Wash thoroughly after handling.

7.2. Conditions for safe storage, including incompatibilities

- Storage conditions : Store upright in a tightly closed, suitably labeled container. Store in a dry, cool, well-ventilated area with appropriate designated containment measures. Keep out of reach of children. Have readily available spill kits with appropriate absorbent materials. Protect from sunlight. Store in original labeled containers.
- Incompatible products : Keep away from strong acids, strong bases, flammables/combustibles, oxidizers, and reactive metals (aluminum, zinc, magnesium, iron filings).

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Boric acid (10043-35-3)

USA - ACGIH® - Threshold Limit Values

Local name	Boric acid
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Boric acid (10043-35-3)

ACGIH® TLV® TWA	2 mg/m³ (I - Inhalable particulate matter)
ACGIH® TLV® STEL	6 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH®)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025

8.2. Appropriate engineering controls

Appropriate engineering controls : Maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable guidelines, use only with adequate ventilation. Eye wash facilities and emergency showers must be available when handling this product.

8.3. Individual protection measures, such as personal protective equipment

Materials for protective clothing:

Wear suitable protective clothing. Long sleeved protective clothing.

Hand protection:

Chemical resistant PVC gloves

Eye protection:

Safety glasses with side shields.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless
Odor	: Citrus
Odor threshold	: No data available
pH	: 7 – 8
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 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	: No data available
Log Pow	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

Alcohols, C10-16, ethoxylated

Particle characteristics	No data available
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Alcohols, C12-15, ethoxylated

Particle characteristics	No data available
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Benzenesulfonic acid, C10-16-alkyl derivs.

Particle characteristics	No data available
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Boric acid

Particle characteristics	No data available
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9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Not reactive under normal conditions of use, storage, and transport.

10.2. Chemical stability

Stable under recommended handling and storage conditions. Decomposes when overheated or exposed to strong oxidizers or acids/bases.

10.3. Possibility of hazardous reactions

No hazardous polymerization expected. Contact with incompatible materials (strong acids, alkalis, oxidizers) may cause degradation with release of vapors or mild exothermic reactions.

10.4. Conditions to avoid

Avoid excessive heat, open flames, and prolonged exposure to direct sunlight.

10.5. Incompatible materials

Incompatible with strong oxidizing agents, strong acids, and strong bases.

10.6. Hazardous decomposition products

Thermal decomposition may produce carbon oxides (CO, CO₂) and minor irritating vapors.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Alcohols, C12-15, ethoxylated (68131-39-5)

LD50 oral rat	2000 mg/kg Source: Corporate Solution From Thomson Micromedex
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 1.6 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

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Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)	
LD50 oral rat	1350 mg/kg Source: IUCLID;
LD50 dermal rat	530 – 1060 mg/kg Source: IUCLID;
LD50 dermal rabbit	> 5000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 1.9 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
Boric acid (10043-35-3)	
LD50 oral rat	2660 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 2.12 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: other:
Skin corrosion/irritation	: Not classified pH: 7 – 8
Serious eye damage/irritation	: Causes serious eye damage. pH: 7 – 8
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Alcohols, C12-15, ethoxylated (68131-39-5)	
NOAEL (oral,rat,90 days)	≥ 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)	
NOAEL (oral,rat,90 days)	500 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	> 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
Aspiration hazard	: Not classified
BIO-GEM	
Viscosity, kinematic	No data available
Alcohols, C10-16, ethoxylated (68002-97-1)	
Viscosity, kinematic	No data available
Alcohols, C12-15, ethoxylated (68131-39-5)	
Viscosity, kinematic	16 mm²/s Temp.: '40°C' Parameter: 'kinematic viscosity (in mm²/s)'
Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)	
Viscosity, kinematic	No data available

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Alcohols, C10-16, ethoxylated (68002-97-1)	
Boric acid (10043-35-3)	
Viscosity, kinematic	No data available
Symptoms/injuries after eye contact	: Liquid and vapor corrosive to eyes; will cause permanent damage if not rinsed promptly.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term : Not classified

(acute)

Hazardous to the aquatic environment, long-term : Not classified

(chronic)

Alcohols, C10-16, ethoxylated (68002-97-1)	
LC50 - Fish [1]	63.704 mg/l Source: ECOSAR
Alcohols, C12-15, ethoxylated (68131-39-5)	
LC50 - Fish [1]	1.03 mg/l Source: The ECOTOXicology database
EC50 - Crustacea [1]	0.302 mg/l Source: The ECOTOXicology database
EC50 - Other aquatic organisms [1]	0.88 mg/l Test organisms (species): other:
EC50 96h - Algae [1]	0.7 mg/l Source: ECOTOX
Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)	
LC50 - Fish [1]	3 mg/l Source: IUCLID
EC50 - Crustacea [1]	2.9 mg/l Source: IUCLID
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	170 mg/l Source: IUCLID
Boric acid (10043-35-3)	
LC50 - Fish [1]	600 mg/l
LC50 - Fish [2]	74 mg/l Test organisms (species): Limanda limanda
EC50 72h - Algae [1]	66 mg/l Test organisms (species): Phaeodactylum tricornutum
EC50 72h - Algae [2]	54 mg/l Test organisms (species): Phaeodactylum tricornutum
NOEC chronic fish	6.4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '34 d'

12.2. Persistence and degradability

BIO-GEM	
Persistence and degradability	Not rapidly degradable
Alcohols, C10-16, ethoxylated (68002-97-1)	
Persistence and degradability	Not rapidly degradable
Alcohols, C12-15, ethoxylated (68131-39-5)	
Persistence and degradability	Not rapidly degradable

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Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)

Persistence and degradability	Not rapidly degradable
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Boric acid (10043-35-3)

Persistence and degradability	Not rapidly degradable
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12.3. Bioaccumulative potential

Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)

Log Pow	2
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Boric acid (10043-35-3)

Log Pow	0.18
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12.4. Mobility in soil

Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)

Mobility in soil	1064
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12.5. Other adverse effects

No additional information available

SECTION 13 Disposal considerations

Regional legislation (waste)	: Avoid unauthorized disposal. Do not dump into any body of water. Comply with federal, state/provincial and local laws/regulations. Do not reuse empty containers.
Waste treatment methods	: Do not allow the product to contaminate any body of water. Refer to Section 8 for personal protection equipment.

SECTION 14 Transport information

In accordance with DOT

DOT

14.1. UN number

Not regulated for transport

14.2. Proper Shipping Name

Not regulated

14.3. Transport hazard class(es)

Not regulated

14.4. Packing group

Not regulated

14.5. Environmental hazards

Not regulated

No supplementary information available

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14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product 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.

Alcohols, C10-16, ethoxylated (68002-97-1)

SARA Section 311/312 Hazard Classes

Health hazard - Acute toxicity (any route of exposure)
Health hazard - Serious eye damage or eye irritation

15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date : 6/25/2026

Full text of hazard classes and H-statements

H318 Causes serious eye damage

H361 Suspected of damaging fertility or the unborn child

Safety Data Sheet (SDS), USA ML

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.