

Material Safety Data Sheet
Version No.: 2.0 (Rev. date: 2022-08-08)**BST Solution**

1. Product and company identification

- A. Product Name: BST Solution
- B. Recommended Use: Research Use Only
- C. Supply Information
 - Company: Bioneer
 - Address: 8-11, Munpyeongseo-ro, Daedeok-gu, Daejeon 306-220, Republic of Korea
 - Emergency telephone number: +82-42-930-8777

2. Hazards identification

- A. Classification of the substance or mixture
 - Flammable liquids, Category 3 H226
 - Skin corrosion/irritation, Category 2 H315
 - Serious eye damage/eye irritation, Category 1 H318

- B. Label elements

- Hazard pictograms



- Signal word

Warning

- Hazard statements

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H318 Causes serious eye damage.

- Precautionary statements

Precaution:

P210 Keep away from heat/hot surfaces/sparks/open flames/other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground container and receiving equipment.

P241 Use explosion-proof electrical, lighting, ventilating equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash hands thoroughly after handling.

P280 Wear eye protection, protective clothing, protective gloves.

Treatment:

P302+P352 IF ON SKIN: Wash with plenty of water.

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 medical institutions, a doctor, a POISON CENTER.

P321 Take medical advice, medical attention treatment.

P332+P313 If skin irritation occurs: Get medical advice, medical attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P370+P378 In case of fire: Use dry sand, carbon dioxide (CO₂) to extinguish.

Storage:

P403+P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents and container according to waste related regulations.

C. Hazards – Other hazards which do not result in classification – Hazard Risk

Not applicable

3. Composition/information on ingredients

Chemical name	Synonyms	CAS No.	Weight (%)
Ethanol	Ethyl alcohol	64-17-5	< 15%
Sodium hydroxide		1310-73-2	< 5%

4. First aid measures

A. First-aid measures after eye contact

Rinse eyes with water as a precaution.

Remove contact lenses, if present and easy to do. Continue rinsing.

Call a physician immediately.

B. First-aid measures after skin contact

Wash skin with plenty of water.

Take off contaminated clothing.

If skin irritation occurs: Get medical advice/attention.

C. First-aid measures after inhalation

Remove person to fresh air and keep comfortable for breathing.

D. First-aid measures after ingestion

Call a poison center or a doctor if you feel unwell.

E. Other medical advice or treatment

Treat symptomatically.

5. Fire-fighting measures

A. Suitable (and unsuitable) extinguishing media

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

Unsuitable extinguishing media: No data available

B. Special hazards arising from the substance or mixture

Fire hazard: Flammable liquid and vapor.

C. Special protective equipment and precautions for fire-fighters

Protection during firefighting:

Do not attempt to take action without suitable protective equipment.

Self-contained breathing apparatus.

Complete protective clothing.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures

Ventilate spillage area.

No open flames, no sparks, and no smoking.

Avoid contact with skin and eyes.

Do not attempt to take action without suitable protective equipment.

Dispose of materials or solid residues at an authorized site.

B. Environmental precautions and protective procedures

Avoid release to the environment.

C. Methods and material for containment and cleaning up

Take up liquid spill into absorbent material.

7. Handling and storage

A. Precautions for safe handling

○ Precautions for safe handling

Ensure good ventilation of the work station.

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

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Flammable vapors may accumulate in the container.

Use explosion-proof equipment.

Avoid contact with skin and eyes.

Wear personal protective equipment.

- Hygiene measures

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

Always wash hands after handling the product.

- B. Conditions for safe storage

- Technical measures

Ground/bond container and receiving equipment.

- Storage conditions

Store in a well-ventilated place.

Keep cool.

8. Exposure controls / personal protection

- A. Occupational Exposure Limits

No data available

- B. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

- C. Personal protection

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment

Eye protection: Safety glasses

Hand protection: Protective gloves

Skin and body protection: Wear suitable protective clothing

9. Physical and chemical properties

- A. Appearance: Liquid

- B. Odor: No data available

- C. Odor threshold: No data available

- D. pH: No data available

- E. Melting / freezing point: Not applicable / No data available

- F. Initial boiling point and boiling range: No data available

- G. Flash point: 49°C

- H. Evaporation rate: No data available

- I. Flammability (solid, gas): Not applicable

- J. Upper / lower flammability or explosive limits: No data available

- K. Vapor pressure: No data available

- L. Solubility: No data available

- M. Vapor density: No data available
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- N. Relative density: No data available
 - O. Partition coefficient n-octanol/water: No data available
 - P. Auto-ignition temperature: No data available
 - Q. Decomposition temperature: No data available
 - R. Viscosity: No data available
 - S. Molecular mass: No data available
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10. Stability and Reactivity

- A. Chemical stability and Possibility of hazardous reactions
 - Flammable liquid and vapor.
 - Stable under normal conditions.
 - No dangerous reactions known under normal conditions of use.
 - B. Conditions to avoid
 - Avoid contact with hot surfaces.
 - Heat.
 - No flames, no sparks. Eliminate all sources of ignition.
 - C. Incompatible materials
 - No data available
 - D. Hazardous decomposition products
 - Under normal conditions of storage and use, hazardous decomposition products should not be produced.
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11. Toxicological information

- A. Information on exposure routes
 - Oral: Not classified
 - Skin and eyes contact: Causes skin irritation. Causes serious eye damage.
 - Inhalation: Not classified
 - B. Health hazards
 - Acute toxicity (oral): Not classified
 - Acute toxicity (dermal): Not classified
 - Acute toxicity (inhalation): Not classified
 - Skin corrosion/irritation: Causes skin irritation.
 - Serious eye damage/irritation: Causes serious eye damage.
 - Respiratory sensitization: Not classified
 - Skin sensitization: Not classified
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Carcinogenicity: Not classified

Mutagenicity: Not classified

Reproductive toxicity: Not classified

STOT–single exposure: Not classified

STOT–repeated exposure: Not classified

Aspiration hazard: Not classified

12. Ecological information

A. Exotoxicity

Ecology – general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

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

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

B. Persistence and degradability

No data available

C. Bioaccumulative potential

No data available

D. Mobility in soil

No data available

E. Other adverse effects

Ozone: Not classified

Other adverse effects: No additional information available

13. Disposal considerations

A. Disposal method

Dispose of contents/container in accordance with licensed collector's sorting instructions.

B. Disposal precaution

No data available

14. Transport information

UN RTDG	ADR	IMDG	IATA
A. UN number			
2924	Not applicable	2924	2924
B. UN proper shipping name			
FLAMMABLE LIQUID, CORROSIVE, N.O.S.	Not applicable	FLAMMABLE LIQUID, CORROSIVE, N.O.S.	FLAMMABLE LIQUID, CORROSIVE, N.O.S.

C. Transport hazard class(es)			
3 (8)	Not applicable	3 (8)	3 (8)
D. Packaging group			
III	Not applicable	III	III
E. Marine pollutant			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			
F. Special precautions for user: No data available			

15. Regulatory information

- A. Occupational Safety and Health Act
 Hazardous Substances Prohibited for Manufacturing: Not applicable
 Hazardous Substances Requiring Permission: Not applicable
 Threshold Limit Values Chemicals: Applicable
 Hazardous Substances Below Permissible Level: Not applicable
 Hazardous Substances Subject to Working Environment Measurement: Applicable
 Hazardous Substances Subject to Workers Requiring Health Examination: Not applicable
 Hazardous Substances Subject to Control: Applicable
 Substance Subject to PSM Submission: Applicable
- B. Chemicals Control Act
 Toxic Chemicals: Not applicable
 Prohibited Chemicals: Not applicable
 Restricted Chemicals: Not applicable
 Substance requiring preparation for accidents: Not applicable
- C. ACT ON REGISTRATION, EVALUATION, ETC. OF CHEMICALS (K-REACH)
 Korea Existing Chemicals Inventory (KECI): Applicable
 Priority Existing Chemical ('PEC') – subject to registration: Applicable
 Priority Control Substances (Korea): Not applicable
 CMR Substances (Korea): Not applicable
- D. Safety Control of Dangerous Substances Act
 Safety Control of Dangerous Substances Act: Applicable
- E. Wastes Control Act
 Hazardous Substances in Designated wastes: Not applicable
 Types of wastes: No data available
- F. Other Domestic and International Regulatory Information

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- Domestic
 - Persistent Organic Pollutants(POPs) Control Act: Not applicable
 - Ozone Depleting Substances(ODS): Not applicable
 - International (EU Regulatory Information)
 - EU Candidate list (SVHC): Contains no substance on the REACH candidate list
 - EU authorization list (REACH Annex XIV): Contains no REACH Annex XIV substances
 - EU restriction list (REACH Annex XVII): Not applicable
 - US Regulatory Information
 - CERCLA Section 103 (40CFR302.4): Contains listed substances
 - EPCRA Section 302 (40CFR355.30): Not applicable
 - EPCRA Section 304 (40CFR355.40): Not applicable
 - EPCRA Section 313 (40CFR372.65): Not applicable
 - International agreements
 - No data available
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16. Other information

Bioneer Corporation makes no warranty or representation to its completeness, accuracy or currency. This material is intended for use by persons with pertinent technical skills and at their discretion and risk. It is the responsibility of the user to determine the product's suitability for its intended use, the product's safe use, and the product's proper disposal. Disposal of hazardous material may be subject to federal, state or local laws or regulations.
