Oppenheimer Biotechnology, Inc.

Safety Data Sheet

1. Identification

Product identifier: BioZomeBOOST®
Other means of identification: NONE
Recommended use: Bioremediation of hydrocarbons
Recommended restrictions: None known. Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Manufacturer

Company name:	Oppenheimer Biotechnology, Inc.
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2. Hazard(s) identification

Health Hazard(s)

Eye Damage / Irritation	Category 2A STOT-	**H319**
SE	Category 3	
Carcinogenicity	Category 1A	

Physical Hazard(s)
None
Hazard(s) not otherwise classified
Dust can cause mechanical irritation of skin and eyes

Labeling
Signal Word: DANGER
Pictograms: Exclamation Mark, Health
HazardStatements of Hazard Statements
Causes serious eye irritation
Dust may cause respiratory irritation May cause cancer if inhaled
Precautionary Statements
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. If exposed or concerned; get medical advice. Avoid breathing dust. Use outdoors or in a well ventilated area. Wash hands thoroughly after handling. Wear eye and face protection. Store in a well-ventilated area. Keep container tightly closed. Dispose of contents and container in accordance with applicable regulations. If exposed or concerned, if you feel unwell: Immediately get medical advice. If in eyes: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a physician if you feel unwell.

3. Composition/information on ingredients

Chemical Name	CAS Number	Percent by Wt.
Potassium Nitrate	**7457-79-1**	**1-2***
Crystalline silica, quartz	**14808-60-7**	**0.1-1***
Potassium Chloride	**7447-40-7**	**3-5***
Ammonium Sulfate	**7783-20-2**	**15-20***
Mixed microbe population	**NONE**	**>=5**

* Exact percentage of composition has been withheld as a trade secret

4. First-aid measures

General Advice: Dust causes serious eye irritation and may cause respiratory irritation. Avoid breathing dust. Avoid eye contact. Keep container closed.
Inhalation: Remove to fresh air and keep comfortable for breathing. Call a physician if you feel unwell.
Skin Contact: Wipe excess from skin; remove contaminated clothing. Rinse skin with water or shower. Call a doctor if irritation develops and persists.
Eye Contact: Rinse cautiously with water for several minutes Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.

Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately all a doctor.

5. Fire-fighting measures

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Suitable: Carbon Dioxide, Dry Chemical and Foam
Unsuitable: Alcohol, Alcohol based solutions, any other media not listed above.
Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus, pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire and Explosion Hazards: While not classified as an oxidizing solid, this product contains a material which is an oxidizer and may intensify fire.
Hazardous Combustion/ Decomposition Products: Ammonia, Metal Oxides, Oxides of carbon, nitrogen, potassium, phosphorous and sulfur. Chlorine gas. Toxic and corrosive hydrogen chloride.

6. **Accidental release measures**

Personal Precautions / Protective Equipment / Emergency Procedures: Avoid creating dusty conditions. Ensure adequate ventilation. Use personal protective equipment. Spills can be extremely slippery.
Methods and materials for containment and cleaning up: Do not flush into surface water or sanitary sewer system. Contain spillage. Use clean tools to collect absorbed material and transfer to a properly labeled container for reuse or disposal according to applicable regulations.

7. Handling and storage

HANDLING
Precautions for Safe Handling: Avoid eye contact. Use with adequate ventilation. Do not breathe dust. Follow all SDS/label precautions.
STORAGE
Conditions to avoid: To avoid caking, keep dry. Store between 40oF and 100oF in a well-ventilated place in the original container. Keep container tightly closed when not in use

8. Exposure controls /personal protection

EXPOSURE LIMITS
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

ACGIH	OSHA	NIOSH REL
Component	TLV	
ppm	TLV	
mg/m3	PEL	
Ppm	PEL	
mg/m3	ppm	mg/m3
Nuisance Dust / PNOR	Not Est.10*	Not Est.5*/15** Not Est.Not Est.
Crystalline silica, quartz	Not Est.0.025*	Not Est.4.7*/14** Not Est.0.05*

* respirable fraction ** total dust
Engineering Controls: Use outdoors or with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.
Personal Protection
Respiratory Protection: Wear a dust mask. In case of insufficient ventilation and for exposures above occupational exposure limits wear a NIOSH approved air purifying respirator.
Hand / Skin Protection: Product can dry skin; For prolonged use, wear impermeable gloves such as neoprene or nitrile rubber gloves. Gauntlets and apron may be worn depending on the extent and duration of exposure.
Eye / Face Protection: Face shield, safety glasses with side-shields. An eyewash station should be available to the area of use. General Hygiene Measures: Avoid eye contact. Always wash hands and face before eating, drinking or smoking. Remove and wash contaminated clothing before re-use.

9. Physical and chemical properties

Appearance: Fine powder with granules
Physical State: Powder
Odor: No data available
Color: Light grey with reddish granules
Viscosity, cSt @ 40°C: Not applicable
pH: No data available
Boiling Point (°F): No data available
Melting Point: Not established
Flash Point: Not applicable
Method: Not applicable
Lower Explosive Limit, vol %: Not established Upper Explosive Limit, vol %: Not established Autoignition Temperature: Not applicable

Volatile by volume (%): <1
Vapor Density (Air=1) : Not established
Evaporation Rate (BuAc=1) : Not established Vapor Pressure, mmHg @23°C: Not established Solubility in water: Appreciable Octanol/Water Partition (log Kow) Not established VOC Content (g/L) (%): 0 (0)
Specific Gravity @ 22.2°C: Not applicable
Relative Density: 0.9-1.4 g/cm2
Pour Point: Not applicable
Non-volatile by Volume (%): >99
Dielectric Strength (KV):Not applicable

10. Stability and reactivity

Stability: Stable at ambient temperatures.
Conditions to Avoid: Do not store in moist environments.
Hazardous Polymerization: Will not occur.
Materials to Avoid: Strong oxidizing and reducing materials. Reactive metals including aluminum and magnesium. Do not add primary or secondary amines. A nitrosamine, which may cause cancer, may be formed. Hot nitric acid, bromine trifluoride/ potassium permanganate/sulfuric acid.

11. Toxicological information

Acute Toxicity
Product Information: Not established
Ingredient Information
Potassium Chloride: Orl-rat LD50: >2,600; Orl-mse LD50: >1,500
Potassium Nitrate: Orl-rat LD50: >2000 mg/kg: Skn-rat LD50: >5000 mg/kg;
Crystalline silica, quartz: Carcinogenicity: IARC 1, ACGIH A2, Known to be a human carcinogen, NIOSH Carcinogen
Ammonium Sulfate: Orl-rat LD50: 2,840-4,250 mg/kg; Skn-rbt LD50: >2,000 mgkg;
Acute Effects
Signs and Symptoms of Overexposure: Severe Eye Irritation, Coughing, Sneezing
Inhalation: Dust may cause respiratory irritation with nasal discomfort and discharge, coughing and sneezing.
Skin Contact: Prolonged exposure may dry skin seen as dryness and redness. Eye Contact: Causes serious eye irritation seen as stinging, tearing and redness. Ingestion: May cause nausea, vomiting and diarrhea.
Primary Route(s) of Exposure: Eyes, Skin, Inhalation Primary Route(s) of Entry: Inhalation, Ingestion Target Organs: Eyes, Skin, Lungs
Chronic Effects: Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease.

Carcinogenicity: May cause cancer. Risk of cancer depends on duration and level of exposure.
Medical Conditions Aggravated by Exposure: May aggravate existing skin, eye and respiratory conditions including asthma and dermatitis.

12. Ecological information

Product Data: Not biodegradable. Does not bioaccumulate.
Ingredient Data
Potassium Chloride: Toxicity to Fish: Lepomis macrochirus LC50 - 2010 mg/l, Physa heterostrapha LC50 - 940 mg/l, Toxicity to Algae: Scenedesmus subspicatus EC50 - 2500 mg/l
Crystalline silica, quartz: Not expected to be harmful to aquatic organisms. Discharge into waste waters may increase total suspended particulate (TSP) levels that can be harmful to certain aquatic organisms.
Ammonium Sulfate: Toxicity to Fish: LC5O Atlantic Salmon: 306817 ug/L; Toxicity to Daphnids: LC5O Daphnia magna: 218,400 ug/L Elimination Information: Nitrate has low potential for adsorption. Portion not take up by plants can leach to groundwater. Excess nitrate leaching may enrich waters leading to eutrophication. Dissolution of large quantities of chloride salts in water may create an elevated level of salinity which can be harmful to fresh water aquatic species and to plants that are not salt tolerant.

13. Disposal considerations

Product: Dispose of contents in accordance with applicable regulations.
Container: Empty remaining contents. Empty containers can be recycled or discarded as solid waste.

14. Transport information

Road Transport
DOT Hazard Class: Non-Hazardous/ Non-Restricted
Sea Transport
IMDG/GGV See Class: Non-Hazardous/ Non-Restricted
Air Transport
ICAO/IATA Class: Non-Hazardous/ Non-Restricted

15. Regulatory information

U.S. Federal Regulations

Toxic Substances Control Act (TSCA): All ingredients are on the TSCA inventory, or are not required to be listed on the TSCA inventory.
US EPCRA (SARA Title III) Section 304 - Extremely Hazardous Spill: Reportable quantity: Not regulated.
US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Crystalline silica.
Superfund Amendments and Reauthorization Act (SARA) Title III:

Immediate Hazard	Delayed Hazard	Fire Hazard	Pressure Hazard	Reactivity Hazard
Yes	Yes	No	No	Yes

US State Right-to-Know Regulations
US California Proposition 65: Contains chemicals known to the State of California to cause cancer, birth defects and/or reproductive harm.

16. Other Information

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National Fire Protection Association (704)
Health: 2 Flammability: 1 Reactivity: 0 Other:

This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk. National Fire Protection Association, Quincy, MA 02269.

The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results and assume no liability for damage incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical and application of such products is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the sole responsibility of the user to comply with all applicable Federal, State and Local Laws and Regulations. Any questions with regards to information contained herein should be referred to: Oppenheimer Biotechnology, Incorporated.

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