

SAFETY DATA SHEET

Date: January 31, 2024

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: BactoSpore™ 485/500 Membrane Stain, 500X in EtOH
Catalog Number: 40119-T, 40119
Unit Size: 20 uL, 100 uL
Manufacturer/Supplier: Biotium, Inc.
46117 Landing Parkway, Fremont, CA 94538, USA
Phone: 1-510-265-1027, Fax: 1-510-265-1352
Web: <http://www.biotium.com>

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

GHS classification

Signal word Danger
Health hazards Eye irritation (Category 2A)
Physical hazards Flammable liquids (Category 2)

Hazard statements

H319 Causes serious eye irritation.
H225 Highly Flammable liquid and vapor

Precautionary statements

P264 Wash hands thoroughly after handling
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.
P337+P313 IF eye irritation persists: Get medical advice/attention
P303+ P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.
P370+P378 In case of fire: Use carbon dioxide, dry chemical extinguishers, foam extinguishers or water for extinction.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container to approved waste facility.

GHS hazard pictogram



WHMIS classification

Serious eye damage/eye irritation, Category 2B
Flammable liquids, Category 2
Flash point = 13 °C closed cup (non reported method) and boiling point = 78 °C

NFPA Rating

Health hazard: 2
Fire: 3
Reactivity Hazard: 0

Classification according to Regulation (EC) No 1272/2008[CLP]

Flam. Liq. 2

Labeling according to Regulation (EC) No 1272/2008[CLP]**Hazard pictogram****Signal word** Danger**Hazard statements**

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P280 Wear protective gloves/protective clothing/eye protection/face protection.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS No.	EC No.	Weight %	Classification
Ethanol	64-17-5	200-578-6	>99%	Flam. Liq. 2 Eye irritation 2A (GHS) Eye irritation 2B (WHMIS)

4. FIRST-AID MEASURES**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES**Suitable extinguishing media**

Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Store at 4°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Substance: Ethanol

CAS no. 64-17-5

Country	Australia	Austria	Belgium	Canada	Denmark	Finland	France
Limit value, 8hours	1000 ppm, 1880 mg/m ³	1000 ppm, 1900 mg/m ³	1000 ppm, 1907 mg/m ³	1000 ppm, 1880 mg/m ³	1000 ppm, 1900 mg/m ³	1000 ppm, 1900 mg/m ³	1000 ppm, 1900 mg/m ³
Limit value, short term	--	2000 ppm, 3800 mg/m ³	--	1,000 ppm	2000 ppm, 3800 mg/m ³	1300 ppm, 2500 mg/m ³ (1)	5000 ppm, 9500 mg/m ³

Country	Germany	Hungary	Ireland	Latvia	New Zealand	Norway	Poland
Limit value, 8hours	200 ppm, 380 mg/m ³	1900 mg/m ³	1000 ppm (1)	1000 ppm (1)	1000 ppm	500 ppm	1900 mg/m ³
Limit value, short term	800 ppm, 1520 mg/m ³ (1)	7600 mg/m ³	--	--	1880 mg/m ³	950 mg/m ³	--

Country	Romania	Singapore	Netherlands	South Korea	Spain	Sweden	Switzerland
Limit value, 8hours	1000 ppm, 1900 mg/m ³	1000 ppm	260 mg/m ³	1000 ppm, 1900 mg/m ³	--	500 ppm, 1000 mg/m ³	500 ppm, 960 mg/m ³
Limit value, short term	5000 ppm, 9500 mg/m ³ (1)	1880 mg/m ³	1900 mg/m ³	--	1000 ppm, 1910 mg/m ³	1000 ppm, 1900 mg/m ³ (1)	1000 ppm, 1920 mg/m ³

Country	The Netherlands	United Kingdom	USA-NIOSH	USA-OSHA
Limit value, 8hours	260 mg/m ³	1000 ppm, 1920 mg/m ³	1000 ppm, 1900 mg/m ³	1000 ppm, 1900 mg/m ³
Limit value, short term	1900 mg/m ³	--	--	--

Remarks:

Canada (1) 15 minutes average value
Finland (1) 15 minutes average value
Germany (1) 15 minutes average value
Hungary (1) 15 minutes average value
Ireland (1) 15 minutes reference period
Romania (1) 15 minutes average value
Sweden (1) 15 minutes average value
The Netherlands (1) Skin (2) 15 minutes average value

Personal protective equipment

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	BactoSpore™ 485/500 Membrane Stain, 500X in EtOH
Appearance	Liquid
Odor	No data available
Odor threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporate rate	No data available
Flammability	No data available
Explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility	No data available
Partition coefficient:n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

No data available

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available

11. TOXICOLOGICAL INFORMATION**All information listed below is for ethanol****Acute toxicity**

LD50 Oral - Rat - male and female - 10,470 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - 124.7 mg/l
(OECD Test Guideline 403)
Dermal: No data available
No data available

Skin corrosion/irritation

Skin - Rabbit
Result: No skin irritation - 24 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit
Result: Causes serious eye irritation.
(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig
Result: negative
(OECD Test Guideline 406)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: Methanol

Germ cell mutagenicity

Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
Test Type: dominant lethal test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 478
Result: Positive results were obtained in some in vivo tests.

Carcinogenicity

IARC: 1 - Group 1: Carcinogenic to humans (ethanol)
NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard No data available

Additional Information

Repeated dose toxicity - Rat - male - Oral - NOAEL (No observed adverse effect level) - 1,730 mg/kg - LOAEL (Lowest observed adverse effect level) - 3,200 mg/kg
irritant effects, respiratory paralysis, Dizziness, narcosis, inebriation, euphoria, Nausea, Vomiting

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

RTECS: KQ6300000 (ethanol)

12. ECOLOGICAL INFORMATION

All information listed below is for ethanol

Toxicity

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 15,300 mg/l - 96 h US-EPA)

Toxicity to daphnia and other aquatic invertebrates static test LC50 - Ceriodaphnia dubia (water flea) - 5,012 mg/l - 48 h Remarks: (ECHA)

Toxicity to algae static test ErC50 - Chlorella vulgaris (Fresh water algae) - 275 mg/l

Persistence and degradability

Biodegradability aerobic - Exposure time 15 d Result: ca.95 % - Readily biodegradable. (OECD Test Guideline 301E)

Biochemical Oxygen Demand (BOD) 930 - 1,670 mg/g

Remarks: (Lit.) Theoretical oxygen demand 2,100 mg/g Remarks: (Lit.)

Bioaccumulative potential

Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Mobility in soil No information available

Results of PBT and vPvB assessment No information available

Other adverse effects No information available

Additional information No information available

13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

14. TRANSPORT INFORMATION

IATA, IMDG, DOT (US), TDG Not dangerous goods during transportation

UN number None

UN proper shipping name None

Transport hazard class None

Packing group None

Environmental hazards None

Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code None

Special precaution for user None

15. REGULATION INFORMATION

US Federal Regulations

US Toxic Substances Control Act (TSCA): Active (ethanol)

SARA 302: No chemicals were found.

SARA 313: No chemicals were found.

SARA 311/312: Fire Hazard, Acute Health Hazard, Chronic Health Hazard (ethanol)

WHMIS Hazard Class

Flammable liquids, Category 2

Serious eye damage/eye irritation, Category 2B

16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008
Refer to section 2 and section 3

Prepared by: Regulatory Department
Biotium Inc.

Version no. 1
Revision date (Initials)
Reason for revision

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Biotium shall not be held liable for any damage resulting from handling or contact with the above product.