

SAFETY DATA SHEET

Date: June 29, 2022

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: CellBrite Cytoplasmic Membrane Dyes
Catalog Number: 30021, 30022, 30023
Unit Size: 1 mL
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 under

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

Hazard statements

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

Precautionary statements

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P337+P313 IF eye irritation persists: Get medical advice/attention
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 dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/ container to an approved waste disposal plant.

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

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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Precautionary statements

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

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 an approved waste disposal plant.

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 – Ontario | Canada – Québec | Denmark | Finland | France |
|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------------|------------------------|
| Limit value, 8hours | 1000 ppm 1880 mg/m3 | 1000 ppm 1900 mg/m3 | 1000 ppm 1907 mg/m3 | -- | 1000 ppm 1880 mg/m3 | 1000 ppm 1900 mg/m3 | 1000 ppm 1900 mg/m3 | 1000 ppm 1900 mg/m3 |
| Limit value, short term | -- | 2000 ppm 3800 mg/m3 | -- | 1000 ppm | -- | 2000 ppm 3800 mg/m3 | 1300 ppm (1) 2500 mg/m3 (1) | 5000 ppm 9500 mg/m3 |

| Country | Germany (AGS) | Germany (DFG) | Hungary | Ireland | Latvia | Netherlands | New Zealand | Norway |
|-------------------------|-------------------------------|-------------------------------|------------|--------------|------------|-------------|------------------------|----------------------|
| Limit value, 8hours | 200 ppm 380 mg/m3 | 200 ppm 380 mg/m3 | 1900 mg/m3 | -- | 1900 mg/m3 | 260 mg/m3 | 1000 ppm 1880 mg/m3 | 500 ppm 950 mg/m3 |
| Limit value, short term | 800 ppm (1) 1520 mg/m3 (1) | 800 ppm (1) 1520 mg/m3 (1) | 7600 mg/m3 | 1000 ppm (1) | -- | 1900 mg/m3 | -- | -- |

| Country | Poland | Romania | Singapore | South Korea | Spain | Sweden | Switzerland | The Netherlands |
|-------------------------|------------|--------------------------------|------------------------|------------------------|------------------------|--------------------------------|------------------------|-----------------|
| Limit value, 8hours | 1900 mg/m3 | 1000 ppm 1900 mg/m3 | 1000 ppm 1880 mg/m3 | 1000 ppm 1900 mg/m3 | -- | -- | 500 ppm 960 mg/m3 | 260 mg/m3 |
| Limit value, short term | -- | 5000 ppm (1) 9500 mg/m3 (1) | -- | -- | 1000 ppm 1910 mg/m3 | 1000 ppm (1) 1900 mg/m3 (1) | 1000 ppm 1920 mg/m3 | 1900 mg/m3 |

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

Remarks:

Finland (1) 15 minutes average value
 Germany (1) 15 minutes average value
 Ireland (1) 15 minutes reference period
 Romania (1) 15 minutes average value
 Sweden (1) 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 | CellBrite Cytoplasmic Membrane Dyes |
| 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 | Water soluble |
| 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

Oral LD50 3450 mg/kg 4 hours (mouse)

Inhalation LC50 39000 mg/m³ 4 hours (mouse)

Dermal LD50 20000 mg/kg 4 hours (rabbit)

Other information on acute toxicity 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 (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.

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**Toxicity**

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

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) Flammable liquid 3
UN number 1170
UN proper shipping name Ethanol
Transport hazard class 3
Packing group II
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: No chemicals were found

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.
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