SAFETY DATA SHEET
Date Revised: March 9, 2016

1. PRODUCT AND COMPANY IDENTIFICATION
   
   Product Name: EvaGreen Dye, 2000X in DMSO
   Catalog Number: 31019
   Unit Size: 50uL
   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

2. HAZARDS IDENTIFICATION
   
   Classification according to Regulation (EC) No 1272/2008[CLP]
   Not classified
   
   Classification according to Directive 1999/45/EC
   None
   
   Labelling according to Regulation (EC) No 1272/2008[CLP]
   None
   
   HMIS Classification
   Health hazard: 0
   Flammability: 2
   Physical hazards: 0
   
   NFPA Rating
   Health hazard: 0
   Fire: 2
   Reactivity Hazard: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS
   
<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to regulation (EC)No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>67-68-5</td>
<td>200-664-3</td>
<td>-</td>
<td>&gt;99%</td>
<td>NA</td>
</tr>
</tbody>
</table>

4. FIRST- AID MEASURES
   
   General advice
   Remove affected clothing and launder before reuse.
   
   If inhaled
   If breathed in, move person into fresh air. If not breathing, give artificial respiration and seek medical care.
   
   In case of skin contact
   Wash off with soap and plenty of water. If irritation persists, seek medical care.
   
   In case of eye contact
   Flush eyes with water for 15 minutes. If irritation persists, seek medical care.
   
   If swallowed
   Do NOT induce vomiting. Rinse mouth with water. Seek medical care.
5. FIREFIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

Special protective equipment for firefighters
Burning produces poisonous gases, sulfur oxides. 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 Dimethylsulfoxide
CAS no. 67-68-5

<table>
<thead>
<tr>
<th>country</th>
<th>Austria</th>
<th>Belgium</th>
<th>Denmark</th>
<th>European Union</th>
<th>France</th>
<th>Germany</th>
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<tbody>
<tr>
<td>Limit value, 8hours</td>
<td>160mg/m3</td>
<td>-</td>
<td>160mg/m3</td>
<td>-</td>
<td>-</td>
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<tr>
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<td>-</td>
<td>320mg/m3</td>
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<td>320mg/m3</td>
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<table>
<thead>
<tr>
<th>country</th>
<th>Hungary</th>
<th>Italy</th>
<th>Poland</th>
<th>Spain</th>
<th>Sweden</th>
<th>Netherlands</th>
<th>United Kingdom</th>
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<tbody>
<tr>
<td>Limit value, 8hours</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>160mg/m3</td>
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<td>500mg/m3</td>
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<table>
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<th>country</th>
<th>United Kingdom</th>
<th>USA-NIOSH</th>
<th>USA-OSHA</th>
<th>Australia</th>
<th>Canada</th>
<th>Japan</th>
<th>South Korea</th>
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<tr>
<td>Limit value, 8hours</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Limit value, short term</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EvaGreen Dye, 2000X in DMSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
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<tr>
<td>Odor</td>
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<tr>
<td>Odor threshold</td>
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<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
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</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporate rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Partition coefficient:n-octanol/water</td>
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</tr>
<tr>
<td>Auto-ignition temperature</td>
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</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
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<tr>
<td>Viscosity</td>
<td>No data available</td>
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<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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, sulfur oxides
Other decomposition products - no data available
11. TOXICOLOGICAL INFORMATION

Acute toxicity DMSO

Oral LD50  
rat - 14,500 mg/kg

Inhalation LC50  
Inhalation - rat - 4 h - 40250 ppm

Dermal LD50  
rabbit - > 5,000 mg/kg

Other information on acute toxicity  
no data available

Skin corrosion/irritation  
no data available

Serious eye damage/eye irritation  
no data available

Respiratory or skin sensitization  
no data available

Germ cell mutagenicity  
Salmonella typhimurium assay (Ames test): negative (+/- activation), DMSO is used as a neutral solvent in the Ames mutagen test

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component 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 identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity  
Experiments have shown reproductive toxicity effects on laboratory animals (Dimethyl sulfoxide)

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  
May cause respiratory irritation

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

RTECS: PV6210000 (DMSO)

12. ECOLOGICAL INFORMATION

Toxicity DMSO  
The LC50(96hrs) for ten species of fish range from 32500 to 43000ppm

Persistence and degradability  
no information available

Biodegradation  
Dimethyl sulfoxide: biodegradation: 90% (28d).

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

<table>
<thead>
<tr>
<th>IATA, IMDG, DOT (US)</th>
<th>Not dangerous good during shipping</th>
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</thead>
<tbody>
<tr>
<td>UN number</td>
<td>None</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>None</td>
</tr>
<tr>
<td>Transport hazard class</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>none</td>
</tr>
<tr>
<td>Special precaution for user</td>
<td>none</td>
</tr>
</tbody>
</table>

15. REGULATION INFORMATION

**US Federal Regulations**

Us Toxic Substances Control Act (TSCA): Not listed
SARA 302: No chemicals were found.
SARA 313: No chemicals were found.
SARA 311/312 Hazards: DMSO: fire hazard, chronic health hazard
Acute Health Hazard: Yes
Chronic Health Hazard: No
Fire Hazard: Yes
Sudden Release of Pressure Hazard: No
Reactive Hazard: No

16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008

Prepared by: Regulatory Department
Biotium Inc.
Version no. 6
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.