SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

Product code S11494
Product name SYBR® Gold nucleic acid gel stain

Company/undertaking identification

Life Technologies
5791 Van Allen Way
PO Box 6482
Carlsbad, CA 92008
+1 760 603 7200

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

SECTION 2: Hazards identification

In accordance with local and national regulations

GHS - Classification

Signal word Warning

Health hazards Not Hazardous

Physical hazards
GHS Physical Hazard 1 Flammable liquids
GHS Physical Hazard Category Number Category 4

Hazard Statements
H227 - Combustible liquid

24 hour Emergency Response:
866-536-0631
301-431-8585
Outside of the U.S. ++1-301-431-8585

Company/undertaking identification

LIFE TECHNOLOGIES LIMITED
3 FOUNTAIN DRIVE
INCHINNAN BUSINESS PARK
PAISLEY, PA4 9RF
SCOTLAND
44-141 814-6100

20-Nov-2014
Precautionary Statements
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P370 + P378 - In case of fire, use water/water spray/water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction

European Union
Not Hazardous

EU Specific Hazard Statements

R-phrase(s)
None

S phrases
None

Principle Routes of Exposure/
Potential Health effects

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>skin</td>
<td>Mild skin irritation. Components of the product may be absorbed into the body through the skin.</td>
</tr>
<tr>
<td>eyes</td>
<td>Mild eye irritation.</td>
</tr>
</tbody>
</table>

Specific effects

<table>
<thead>
<tr>
<th>Category</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenic effects</td>
<td>None</td>
</tr>
<tr>
<td>Mutagenic effects</td>
<td>None</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>None</td>
</tr>
<tr>
<td>Sensitisation</td>
<td>No sensitisation responses were observed</td>
</tr>
</tbody>
</table>

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>EINECS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>200-664-3</td>
<td>95-100</td>
</tr>
<tr>
<td>SYBR® Gold nucleic acid gel stain</td>
<td>NONE</td>
<td>-</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

We recommend handling all chemicals with caution.

SECTION 4: First aid measures

Skin contact
Wash off immediately with plenty of water. If symptoms occur, obtain medical advice.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a doctor if necessary.

Ingestion
Never give anything by mouth to an unconscious person. If symptoms persist, call a doctor. Do not induce vomiting without medical advice.

Inhalation
Remove to fresh air. If symptoms persist, call a doctor. If not breathing, give artificial respiration.

Notes to Physician
Treat symptomatically.

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www.lifetechnologies.com
SECTION 5: Firefighting measures

Suitable extinguishing media

Special protective equipment for firefighters
Wear self-contained breathing apparatus and protective suit.

SECTION 6: Accidental release measures

Personal precautions
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Use personal protection equipment.

Methods for cleaning up
Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

Environmental precautions
Prevent further leakage or spillage if safe to do so.

See Section 12 for more information.

SECTION 7: Handling and storage

Handling
Avoid contact with skin and eyes. Avoid contact with skin, eyes and clothing.

Storage
Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Do not store near combustible materials. Keep in properly labelled containers.

SECTION 8: Exposure controls/personal protection

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EU OEL (TWA)</th>
<th>EU OEL (STEL)</th>
<th>EU Skin Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide 67-68-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>SYBR® Gold nucleic acid gel stain</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Austria</th>
<th>Belgium (TWA)</th>
<th>Denmark (TWA)</th>
<th>Finland OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide 67-68-5</td>
<td>50 ppm 160 mg/m³</td>
<td>None</td>
<td>50 ppm 160 mg/m³</td>
<td>None</td>
</tr>
<tr>
<td>SYBR® Gold nucleic acid gel stain</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>France OEL (VME)</th>
<th>Germany OEL (TWA)</th>
<th>Ireland (TWA)</th>
<th>Italy OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide 67-68-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>SYBR® Gold nucleic acid gel stain</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Sweden - Occupational Exposure Limits - TLVs (LLVs)</th>
<th>Netherlands OEL (MAC)</th>
<th>Spain OEL (TWA)</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide 67-68-5</td>
<td>50 ppm LLV; 150 mg/m³ LLV</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Personal protective equipment

Personal Protective Equipment requirements are dependent on the user institution’s risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

- **Respiratory protection**: In case of insufficient ventilation, wear suitable respiratory equipment.
- **Hand protection**: Impervious butyl rubber gloves. Nitrile gloves are not recommended. Some brands of Nitrile gloves have breakthrough times of five minutes.
- **Eye protection**: Safety glasses with side-shields.
- **Skin and body protection**: Lightweight protective clothing.
- **Hygiene measures**: Handle in accordance with good industrial hygiene and safety practice.
- **Environmental exposure controls**: Prevent product from entering drains.

### SECTION 9: Physical and chemical properties

**General information**

- **Form**: liquid
- **Appearance**: No information available
- **Odour**: No information available
- **Boiling point / boiling range**: °C 188 - 190, °F 370 - 374
Melting point / melting range  °C 18 - 19  °F 64.4 - 66.2
flash point  °C 87 - 89  °F 188.6 - 192.2
Autoignition temperature  °C 214 - 216  °F 417.2 - 420.8
Oxidising properties  No information available
Water solubility  Miscible
Upper explosion limit  61% - 64%
Lower explosion limit  2.4% - 2.8%
PH Range  6-8

SECTION 10: Stability and reactivity

Stability  Stable under normal conditions.
Materials to avoid  Strong acids. Strong oxidising agents.
Hazardous decomposition products  Hazardous decomposition products formed under fire conditions. Sulphur oxides. Carbon oxides.
polymerisation  Hazardous polymerisation does not occur.

SECTION 11: Toxicological information

Acute toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral,rat/mouse)</th>
<th>LD50 (dermal,rat/rabbit)</th>
<th>LC50 (inhalation,rat/mouse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>14500 mg/kg Oral LD50</td>
<td>&gt;40000 mg/kg bw</td>
<td>&gt;5000 mg/l</td>
</tr>
<tr>
<td>SYBR® Gold nucleic acid gel stain</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Principle Routes of Exposure/
Potential Health effects

eyes  Mild eye irritation
Skin  Mild skin irritation Components of the product may be absorbed into the body through the skin
Inhalation  No information available
Ingestion  No information available
Carcinogenic effects  None
Mutagenic effects  None
Reproductive toxicity  None
Sensitisation  No sensitisation responses were observed

SECTION 12: Ecological information

Ecotoxicity  Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Mobility  completely soluble
Biodegradation  Inherently biodegradable.
Bioaccumulation  Material does not bioaccumulate

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Freshwater Algae Data</th>
<th>Water Flea Data</th>
<th>Freshwater Fish Species Data</th>
<th>Microtox Data</th>
<th>log Pow</th>
</tr>
</thead>
</table>

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Product name  SYBR® Gold nucleic acid gel stain
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**DIMETHYL SULFOXIDE**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>PICCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>Listed</td>
<td>-</td>
<td>Listed</td>
<td>Listed</td>
</tr>
<tr>
<td>SYBR® Gold nucleic acid gel stain</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Skeletonema costatum**

**EC50** 12350 - 25500 mg/L (96 h)

**Daphnia species**

**EC50** = 7000 mg/L (24 h)

<table>
<thead>
<tr>
<th>IATA</th>
<th>Proper shipping name</th>
<th>Hazard Class</th>
<th>Subsidiary class</th>
<th>Packing group</th>
<th>UN-No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not classified as dangerous in the meaning of transport regulations.</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>none</td>
</tr>
</tbody>
</table>

**SECTION 13: Disposal considerations**

Dispose of contents/containers in accordance with local regulations.

**SECTION 14: Transport information**

<table>
<thead>
<tr>
<th>IATA</th>
<th>Proper shipping name</th>
<th>Hazard Class</th>
<th>Subsidiary class</th>
<th>Packing group</th>
<th>UN-No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not classified as dangerous in the meaning of transport regulations.</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td>Proper shipping name</td>
<td>Hazard Class</td>
<td>Subsidiary class</td>
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</tr>
<tr>
<td></td>
<td>Not classified as dangerous in the meaning of transport regulations.</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>none</td>
</tr>
</tbody>
</table>

**SECTION 15: Regulatory information**

**International Inventories**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>AICS</th>
<th>KECL</th>
<th>DSL</th>
<th>NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
<td>-</td>
</tr>
<tr>
<td>SYBR® Gold nucleic acid gel stain</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**SECTION 16: Other information**

**Reason for revision**

SDS sections updated

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"