1. PRODUCT AND COMPANY IDENTIFICATION

Identification

Product Name        LUNA™ Standard Beads
Product Number      B13101

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

Manufacturer

Logos Biosystems, Inc.
FL 2 & 3 28 Simindaero 327 beon-gil
Dongan-gu, Anyang-si
Gyeonggi-do 14055
South Korea
Telephone: +82-31-478-4185
Fax: +82-31-360-4277
E-mail: sales@logosbio.com

Supplier

Logos Biosystems, Inc.
FL 2 & 3 28 Simindaero 327 beon-gil
Dongan-gu, Anyang-si
Gyeonggi-do 14055
South Korea
Telephone: +82-31-478-4185
Fax: +82-31-360-4277
E-mail: sales@logosbio.com

Emergency telephone number +82 31 478 4185

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

2. HAZARDS IDENTIFICATION

[GHS classification]

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Carcinogenicity (Category 1B)

Label elements
Labelling according Regulation (EC) No 1272/2008

Hazard pictograms
Signal word  Danger

Hazard statements
H350 – May cause cancer.

Precautionary statements
P201 – Obtain special instructions before use.
P202 – Do not handle until all safety precautions have been read and understood.
P280 – Wear protective gloves, eyewear, and clothing.
P308 + P313 – IF exposed or concerned: Get medical advice/attention.
P405 – Store locked up.
P501 – Dispose of contents/container to an approved waste disposal plant.

Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Synonyms</th>
<th>Formula</th>
<th>CAS No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trypan blue</td>
<td>Tetrasodium 3,3’-[(3,3’-dimethyl[1,1’-biphenyl]-4,4’-dil)</td>
<td>C₃₄H₂₄N₆Na₄O₁₄S₄</td>
<td>72-57-1</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>Benzene, ethenyl-, homopolymer</td>
<td>Polystyrene</td>
<td>(C₈H₈)n</td>
<td>9003-53-6</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>Hydrazoic acid sodium salt</td>
<td>NaN₃</td>
<td>26628-22-8</td>
<td>&lt; 0.001%</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Description of first aid measures**

<table>
<thead>
<tr>
<th>General advice</th>
<th>Consult a physician. Show this safety data sheet to the doctor in attendance.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If inhaled</td>
<td>If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.</td>
</tr>
<tr>
<td>In case of skin contact</td>
<td>Wash off with soap and plenty of water. Consult a physician.</td>
</tr>
<tr>
<td>In case of eye contact</td>
<td>Flush eyes with water as a precaution.</td>
</tr>
<tr>
<td>If swallowed</td>
<td>Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.</td>
</tr>
</tbody>
</table>
Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed
No data available

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substances or mixture
Nature of decomposition products not known.

Advice of fire-fighters

Protective equipment
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personal to safe areas. For personal protection see section 8.

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

Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid exposure – obtain special instructions before use. Avoid inhalation of vapour or mist. For precautions see section 2.

Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters
Components with workplace control parameters

Exposure controls

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

Personal protective equipment

<table>
<thead>
<tr>
<th>Eye/face protection</th>
<th>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).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin protection</td>
<td>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.</td>
</tr>
<tr>
<td>Body protection</td>
<td>Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substances at the specific workplace.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).</td>
</tr>
<tr>
<td>Control of Environmental exposure</td>
<td>Prevent further leakage or spillage if safe to do so. Do not let product enter drains.</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Form: liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>100°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Upper/lower flammability or explosive limits | No data available
---|---
Vapour pressure | No data available
Vapour density | No data available
Specific Gravity/Relative density | No data available
Water Solubility | Dilutable
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

Other safety information
No data available

10. STABILITY AND REACTIVITY

**Stability**

- **Stability**: Stable under recommended storage conditions.
- **Reactivity**: No data available

**Possibility of hazardous reactions**
No data available

**Conditions to avoid**
No data available

**Incompatible materials**
Strong oxidizing agents

**Hazardous decomposition products**
Other decomposition products – No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

**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**
No data available
No data available

**Carcinogenicity**

<table>
<thead>
<tr>
<th>IARC</th>
<th>2B – Group 2B: Possible carcinogenic to humans (Tetrasodium 3,3’-[3,3’-dimethyl[1,1’-biphenyl]-4,4’-diyl]bis(azo))bis[5-amino-4-hydroxynaphthalene-2,7-disulphonate])</th>
</tr>
</thead>
</table>

**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

**Potential health effects**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May be harmful by inhalation</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed</td>
</tr>
<tr>
<td>Skin</td>
<td>May cause skin irritation in susceptible persons</td>
</tr>
<tr>
<td>Eyes</td>
<td>May cause eye irritation with susceptible persons</td>
</tr>
<tr>
<td>Infection</td>
<td>May be harmful if injected</td>
</tr>
<tr>
<td>Carcinogenic effects</td>
<td>Possibly carcinogenic</td>
</tr>
<tr>
<td>Mutagenic effects</td>
<td>Substances which cause concern for man owing to possible mutagenic effects but for which the available information is not adequate for making a satisfactory assessment</td>
</tr>
</tbody>
</table>

**Additional Information**

RTECS: Not available

**12. ECOLOGICAL INFORMATION**

**Toxicity**
No data available

**Persistence and degradability**
No data available

**Bioaccumulative potential**
No data available

**Mobility in soil**
No data available

**Results of PBT and vPvB assessment**
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>UN number</th>
<th>ADR/RID: -</th>
<th>IMDG: -</th>
<th>IATA: -</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>ADR/RID: Not dangerous goods</td>
<td>IMDG: Not dangerous goods</td>
<td>IATA: Not dangerous goods</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>ADR/RID: -</td>
<td>IMDG: -</td>
<td>IATA: -</td>
</tr>
<tr>
<td>Packaging group</td>
<td>ADR/RID: -</td>
<td>IMDG: -</td>
<td>IATA: -</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>ADR/RID: no</td>
<td>IMDG Marine pollutant: no</td>
<td>IATA: no</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No data available

Chemical safety assessment
For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

Further information
Copyright 2014. Logos Biosystems, Inc. License granted to make unlimited paper copies for internal use only.
The above information is believed to be correct but does not purport to be all inclusive and shall be
used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Logos Biosystems, Inc. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See the reverse side of invoice or packing slip for additional terms and conditions of sale.

End of Safety Data Sheet