1. PRODUCT AND COMPANY IDENTIFICATION

Identification

Product Name X-CLARITY™ Hydrogel Solution
Product Number C13103

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
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin
Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Eye Irrit. 2A H319 Causes serious eye irritation.
Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.
Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.

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

Signal word Danger

Hazard statements
H302 + H332 – Harmful if swallowed or inhaled.
H315 – Causes skin irritation.
H317 – May cause an allergic skin reaction.
H319 – Causes serious eye irritation.
H340 – May cause genetic defects.
H350 – May cause cancer.
H361 – Suspected of damaging fertility or the unborn child.
H372 – Causes damage to organs through prolonged or repeated exposure if swallowed.
H402 – Harmful to aquatic life.

Precautionary statements
P201 – Obtain special instructions before use. (H340) (H350) (H361)
P202 – Do not handle until all safety precautions have been read and understood. (H340) (H350) (H361)
P260 – Do not breathe dust/fume/gas/mist/vapors/spray. (H372) (H3317, H332 – P261: omitted b/c of P260)
P264 – Wash skin thoroughly after handling. (H302) (H315) (H319) (H372)
P270 – Do not eat, drink, or smoke when using this product. (H302) (H372)
P271 – Use only outdoors or in a well-ventilated area. (H332)
P272 – Contaminated work clothing should not be allowed out of the workplace. (H317)
P273 – Avoid release to the environment. (H402)
P280 – Wear protective gloves, eyewear, and clothing. (H315) (H319) (H340) (H350) (H361)
P301 + P312 + P330 – IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. (H302)
P302 + P352 – IF ON SKIN: Wash with plenty of soap and water. (H315)
P304 + P312 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician immediately if you feel unwell. (H332)
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. (H319)
P308 + P313 – IF exposed or concerned: Get medical advice/attention. (H340) (H350) (H361) (H372 – P314: omitted b/c of P308 + P313 and other more specific precautionary statements)
P332 + P313 – If skin irritation or rash occurs: Get medical advice/attention. (H315)
P337 + P313 – If eye irritation persists: Get medical advice/attention. (H319)
P362 + P364 – Take off contaminated clothing and wash before reuse. (H315)
P405 – Store locked up. (H340) (H350) (H361)
P501 – Dispose of contents/container to an approved waste disposal plant. (H302) (H340) (H350) (H361) (H372) (H402)

Other hazards
None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures

<table>
<thead>
<tr>
<th>Synonyms</th>
<th>Formula</th>
<th>CAS No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylamide</td>
<td>C₃H₅NO</td>
<td>79-06-1</td>
<td>3.5-5.5%</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>NaCl</td>
<td>7647-14-5</td>
<td>0.5-1%</td>
</tr>
</tbody>
</table>

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<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potassium chloride</strong></td>
<td>KCl</td>
<td>7447-40-7</td>
<td>0.01-0.02%</td>
</tr>
<tr>
<td><strong>Sodium hydrogen phosphate</strong></td>
<td>Na₂HPO₄</td>
<td>7558-79-4</td>
<td>0.01-0.02%</td>
</tr>
<tr>
<td><strong>Potassium dihydrogen phosphate</strong></td>
<td>KH₂PO₄</td>
<td>7778-77-0</td>
<td>0.02-0.04%</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Description of first aid measures**

<table>
<thead>
<tr>
<th>In case of eye contact</th>
<th>Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In case of skin contact</td>
<td>Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Immediate medical attention is required.</td>
</tr>
<tr>
<td>After inhalation</td>
<td>Move to fresh air. If not breathing, give artificial respiration. Call a physician or Poison Control Centre immediately</td>
</tr>
<tr>
<td>After swallowing</td>
<td>Induce vomiting and call for medical help.</td>
</tr>
<tr>
<td>Indication of any immediate medical attention and special treatment needed</td>
<td>No further relevant information available</td>
</tr>
</tbody>
</table>

### 5. FIRE-FIGHTING MEASURES

**Extinguishing media**

**Suitable extinguishing media**
Use CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substances or mixture**
Carbon oxides, nitrogen oxide

**Advice of fire-fighters**

**Protective equipment**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**Further information**
No further relevant information available

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**
Avoid contact with skin, eyes and clothing. Use personal protective equipment

**Environmental precautions**
Do not allow to enter sewers/ surface or ground water.

**Methods and materials for containment and cleaning up**
Take up mechanically and collect in suitable container for disposal. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
7. HANDLING AND STORAGE

Precautions for safe handling
Always wear recommended Personal Protective Equipment (mask, glove).

Conditions for safe storage, including any incompatibilities
Keep away from sources of ignition, direct sunlight, and high temperature.

Specific end use(s)
No further relevant information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters
Components with workplace control parameters

Exposure controls

Appropriate engineering controls
Avoid contact eyes, skin. Wash hands immediately after handling

Personal protective equipment

<table>
<thead>
<tr>
<th>Protection Type</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory protection</td>
<td>Hood</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Protective gloves</td>
</tr>
<tr>
<td>Eye protection</td>
<td>Safety glasses</td>
</tr>
<tr>
<td>Skin and Body protection</td>
<td>Handle with Protective gloves and wear lab clothing</td>
</tr>
<tr>
<td>Control of Environmental exposure</td>
<td>Hood</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Form: liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>[7.6]</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>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity/Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Fully miscible</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol / water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Stability**

Stability: Stable under recommended storage conditions

**Possibility of hazardous reactions**

No further relevant information available

**Conditions to avoid**

No further relevant information available

**Incompatible materials**

No further relevant information available

**Hazardous decomposition products**

Carbon monoxide

### 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

Neuro toxic

**Skin corrosion/irritation**

Irritant to skin and mucous membranes

**Serious eye damage/eye irritation**

Irritant to eye

**Respiratory or skin sensitization**

2

**Germ cell mutagenicity**

1B

**Carcinogenicity**

1B

**Reproductive toxicity**

No further relevant information available

**Specific target organ toxicity – single exposure**

No further relevant information available
Specific target organ toxicity – repeated exposure
Peripheral nervous system

Aspiration hazard
No further relevant information available

Potential health effects
No further relevant information available

Additional Information
No further relevant information available

12. ECOLOGICAL INFORMATION

Toxicity
No further relevant information available

Persistence and degradability
No further relevant information available

Bioaccumulative potential
No further relevant information available

Mobility in soil
No further relevant information available

Results of PBT and vPvB assessment
No data available

Other adverse effects
No further relevant information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product
Hand over to hazardous waste disposer

Contaminated packaging
Accord to official regulations

14. TRANSPORT INFORMATION

IMDG
UN number: 3426 Class: 6.1 Packing group: III, EMS Number: F-A, S-A
Proper shipping name: ACRYLAMIDE, LIQUID
Marine pollutant: No

IATA
UN number: 3426 Class: 6.1 Packing group: III
Proper shipping name: Acrylamide, Liquid
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
Water hazard class: class 3, Substances of very high concern: acrylamide (79-06-1)

Chemical safety assessment
A chemical safety assessment has not been carried out

16. OTHER INFORMATION

Further information
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End of Safety Data Sheet