1. PRODUCT AND COMPANY IDENTIFICATION

Product name: CELLINK Xanthan Gum
Product number: VL800000
Brand: CELLINK

General use: Thickener of hydrogels and bioinks for research applications such as cell culture, cell encapsulation and delivery, tissue engineering and regenerative medicine, biomedical devices, drug delivery. For research use only. Not for human use.

Company address:
CELLINK LLC
100 Franklin St.
Boston, MA 02110
USA

CELLINK AB
Arvid Wallgrens backe 20
SE41346 Göteborg
Sweden

Emergency telephone number:
US:  +1(833) 235-5465
EU:  +46 31-128-700
support@cellink.com
www.cellink.com

2. HAZARDS IDENTIFICATION

Potential health effects: Not a hazardous substance or mixture.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS#</th>
<th>EC No.</th>
<th>EC Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xanthan gum</td>
<td>11138-66-2</td>
<td>-</td>
<td>Not classified as hazardous</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

In case of eye contact: Flush eyes with water as a precaution.

In case of skin contact: Wash with water.

If swallowed: Rinse mouth with water and drink 1 to 2 glasses of water. If discomfort occurs, obtain medical attention. Never give anything by mouth to an unconscious person.

If inhaled: Move person into fresh air. If any breathing difficulty or discomfort occurs and persist, medical attention is required.

Notes to medical doctor: This product has low oral and inhalation toxicity. It is not a skin sensitizer and is non-irritating to skin and eyes.

5. FIREFIGHTING MEASURES

Extinguishing media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Fire/explosion hazards: No data available.

Firefighting procedures: Wear self-contained breathing apparatus for firefighting if necessary.

Flammable limits: No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Avoid dust formation. Avoid breathing vapors, mist or gas.

Environmental precautions: No data available.

Methods and materials for containment and cleaning up: Sweep up and dispose as non-hazardous waste.

7. HANDLING AND STORAGE

Precautions for safe handling: Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Exposure limits: N/A

Personal protection equipment

**Eyes and face:** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Respiratory:** Respiratory protection is not required. Where protection from nuisance levels of dusts is required, use type N95 (US) or P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Protective clothing:** The type of protective clothing and equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Gloves:** 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 contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Full contact**

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Breakthrough time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

**Splash contact**

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Breakthrough time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail: sales@kcl.de, test method: EN374.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist.
and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

9. PHYSICAL AND CHEMICAL PROPERTIES.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White to off-white powder</td>
</tr>
<tr>
<td>Upper/lower flammability</td>
<td>N/A</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor density</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>6.5-7.4</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Boiling point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash point</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Flammability</td>
<td>N/A</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition temp</td>
<td>N/A</td>
</tr>
<tr>
<td>Decomposition temp</td>
<td>N/A</td>
</tr>
<tr>
<td>Viscosity (2% in PBS)</td>
<td>52±3 Pa·s</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Condition</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions to avoid</td>
<td>Moist environments</td>
</tr>
<tr>
<td>Reactivity</td>
<td>No data available</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable under advised storage conditions.</td>
</tr>
</tbody>
</table>
Possibility of hazardous reactions: No data available
Incompatible materials: No data available
Hazardous decomposition products: No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral LD50: No data available.
Inhalation: No data available.
Dermal: No data available.

Skin corrosion/irritation: No data available.

Serious eye damage/eye irritation: No data available.

Germ cell mutagenicity: No data available.

Carcinogenicity:

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.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated 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.

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: 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

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:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**Other adverse effects:** No data available.

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### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods:**

**Product:** The product is regarded as non-hazardous waste.

**Contaminated packaging:** Dispose as an unused product.

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### 14. TRANSPORT INFORMATION

**U.S. Department of Transportation (DOT):** Not dangerous goods

**International Maritime Dangerous Goods (IMDG):** Not dangerous goods

**ADR – European agreement concerning the international carriage of dangerous goods by road**

**Additional information:** Not regulated.

**Other information:** N/A

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### 15. REGULATORY INFORMATION

**SARA 302 Components:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards:** No SARA Hazards.

**Massachusetts Right to Know Components:** No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components:** No components are subject to the Pennsylvania Right to Know Act.

**New Jersey Right to Know Components:** No components are subject to the New Jersey Right to Know Act.
California Prop. 65 Components:
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Rating
Health hazard: 0
Chronic Health Hazard: 0
Flammability: 0
Physical Hazard: 0

NFPA Rating
Health hazard: 0
Fire Hazard: 0
Reactivity Hazard: 0