

Safety Data Sheet

CELLINK Bioink

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: CELLINK® Bioink
Product Number: IK-102000
Brand: CELLINK
General use: For use as bioink in 3D Bioprinting, cell encapsulation and delivery, tissue engineering and regenerative medicine, biomedical devices, drug delivery for research. Not for human use, for research only.

Company Address:

CELLINK LLC
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Boston, MA 02110
USA

CELLINK AB
Arvid Wallgrens backe 20
SE41346 Göteborg
Sweden

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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: No significant health effects expected.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS#	EC No.	EC Class
Nanofibrillar Cellulose	9004-34-6	None	Not classified as hazardous
Sodium Alginate	9005-38-3	None	Not classified as hazardous
D-mannitol	69-65-8	200-711-8	Not classified as hazardous

HEPES buffer solution	7365-45-9	230-907-9	Not classified as hazardous
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4. FIRST AID MEASURES

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

In case of skin contact: Wash with soap and plenty of water.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water.

If inhaled: If breathed in, move person into fresh air. If any breathing difficulty or discomfort occurs and persists, obtain medical attention.

Notes to Medical Doctor: This product has low oral and inhalation toxicity. It is not skin sensitizer and is non-irritating to the skin and eyes.

5. FIRE FIGHTING MEASURES

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

Fire/Explosion Hazards: No data available.

Fire Fighting 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: Do not let product enter drains.

Methods and materials for containment and cleaning up: Sweep up and shovel. Keep in suitable, closed containers for disposal.

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 are desired, 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: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective 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 of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

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

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through 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.

Appearance:	Opaque gel
Upper/lower flammability:	N/A
Odor:	Odorless
Vapor Pressure:	N/A
Odor Threshold:	N/A
Vapor Density:	N/A
pH:	6.5-7.4
Relative Density:	1 g/mL
Melting Point:	N/A
Solubility in Water:	Water dispersion and solution
Boiling Point:	Around 100°C
Flash Point:	N/A
Evaporation Rate:	N/A
Flammability:	N/A
Partition Coefficient:	N/A
Auto-ignition Temp:	> 200 °C
Decomposition Temp:	N/A
Viscosity:	1-20 000 Pa·s

10. STABILITY AND REACTIVITY

Conditions to avoid:	Freezing
Reactivity:	No data available
Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	No data available.
Incompatible materials:	Strong oxidizing agents, strong acids, strong bases
Hazardous decomposition products:	Under fire conditions, carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral LD50: No data for the formulation, Sodium Alginate: >5000 mg/kg (rat)

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 Aldrich - W201502 Page 5 of 6 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.

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.

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.

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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

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