

**REGEMAT** 



***Biomaterials · Scaffolds and Bioinks***

*Living Tissues Technologies*

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*BIOINKS READY  
FOR YOUR APPLICATION*

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# 1· THERMOPLASTICS

PLA - REGEMAT3D



**COLOUR: Multiple Colours**



**DIAMETER: 1.75mm (+- 0.03mm)**

**QUANTITY: (1000g, 500g, 250g)**

**Multiple Colours TEMPERATURE: 200°C-220°C**

## Instructions to use:



1. Insert the filament into the 3D Bioprinter FDM extruder.
2. Heat up at the reference temperature and drive the T3 stepper motor to start the filament flow.
3. Once the printing is finished, keep the filament in the spool inside the bag, in a dry place.

## Storage conditions:

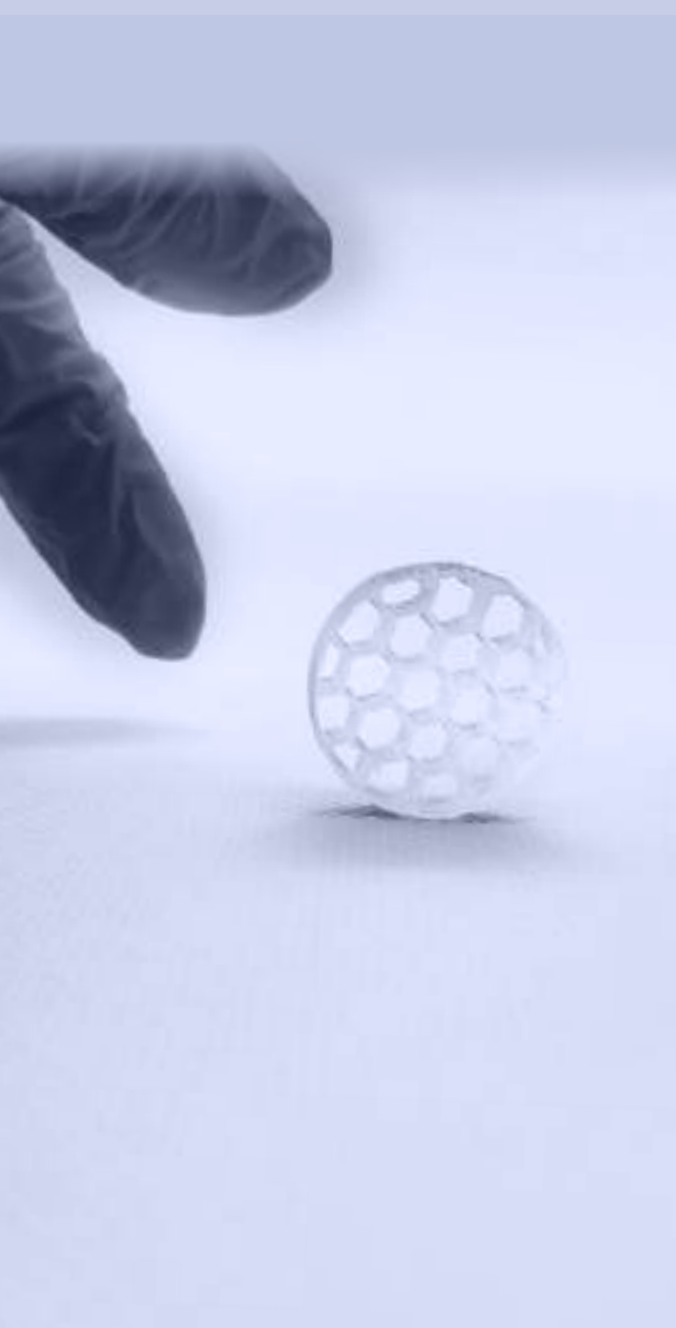


- Keep in a dry place
- Protect from direct sunlight
- Store between 10°C - 40°C



# 1• THERMOPLASTICS

PCL - REGEMAT3D



**DIAMETER: 1.75mm (+- 0.03mm)**

**QUANTITY: (1000g, 500g, 250g)**

**TEMPERATURE: 90°C-145°C**



## Instructions to use:

1. Insert the filament into the 3D Bioprinter FDM extruder.
2. Heat up at the reference temperature and drive the T3 stepper motor to start the filament flow.
3. Once the printing is finished, keep the filament in the spool inside the bag, in a dry place.



## Storage conditions:

- Keep in a dry place
- Protect from direct sunlight
- Store between 10°C - 40°C



# 1· THERMOPLASTICS

CUSTOM - REGEMAT3D

*In REGEMAT we can manufacture thermoplastics for FDM on demand with a wide range of properties and compositions*



**COLOUR: Multiple colours**



**DIAMETER: 1.75mm (+- 0.03mm)**



**QUANTITY: (1000g, 500g, 250g) Also smaller quantities available**



**TEMPERATURE: 50°C-300°C (depending on the final composition)**

## Instructions to use:



1. Insert the filament into the 3D Bioprinter FDM extruder.
2. Heat up at the reference temperature and drive the T3 stepper motor to start the filament flow.
3. Once the printing is finished, keep the filament in the spool inside the bag, in a dry place.

## Storage conditions



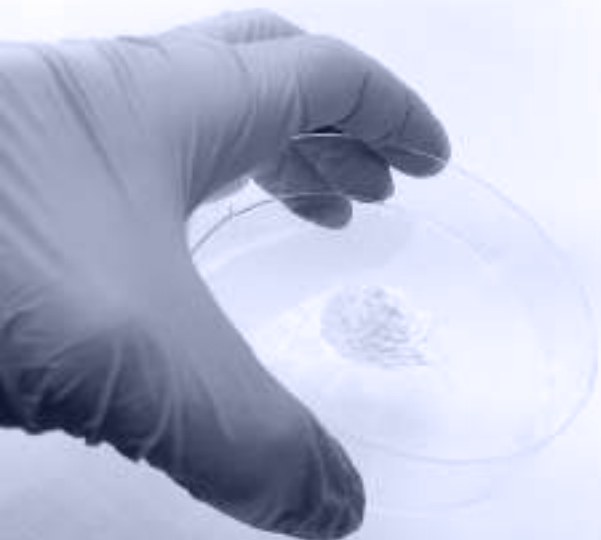
- Keep in a dry place
- Protect from direct sunlight
- Store between 10°C - 40°C



# 1 · THERMOPLASTICS

FILAMENT ABS MEDICAL  
(BIOCOMPATIBLE) - REGEMAT3D

*High quality filament specially designed for medical applications. This material has the UPS Class VI or ISO 10993-1 certification. This allow you to make components that can be in touch with the human body.*



**AVAILABLE COLOURS:** *Translucid.*



**DIAMETER:** 1.75mm (+- 0.03mm)

**QUANTITY:** (750g)

**PRINTING TEMPERATURE:** 240 ± 10 °C

**CHEMICAL NAME:** Acrylonitrile Butadiene Styrene



## Instructions to use:

1. Insert the filament into the 3D Bioprinter FDM extruder.
2. Heat up at the reference temperature and drive the T3 stepper motor to start the filament flow.
3. Once the printing is finished, keep the filament in the spool inside the bag, in a dry place.



## Storage conditions:

- Keep in a dry place
- Protect from direct sunlight
- Store between 10°C - 40°C





# 1• THERMOPLASTICS

## FILAMENT PETG – REGEMAT3D

*Copolyester with 91% transparency in its natural state, it is very glass like, with high chemical resistance. Accepted for use with food products (FDA). It is very easy to print, as it has very low shrinkage and requires no warm bed.*



**AVAILABLE COLOURS:** *Translucid, Black.*



**DIAMETER:** 1.75mm (+- 0.03mm)

**QUANTITY:** (750g)

**PRINTING TEMPERATURE:** 235 ± 10 °C

**CHEMICAL NAME:** *Polyethylene Terephthalate Glycol*



### Instructions to use:

1. Insert the filament into the 3D Bioprinter FDM extruder.
2. Heat up at the reference temperature and drive the T3 stepper motor to start the filament flow.
3. Once the printing is finished, keep the filament in the spool inside the bag, in a dry place.



### Storage conditions:

- Keep in a dry place
- Protect from direct sunlight
- Store between 10°C - 40°C



# 1• THERMOPLASTICS

FILAMENT FLEX  
(FLEXIBLE AND BIOCOMPATIBLE)  
REGEMAT3D

*Thermoplastic elastomer it has a special additive to obtain a filament which allows printing flexible objects, elastic and with a high-quality printing.*



**AVAILABLE COLOURS:** Multiple Colours



**DIAMETER:** 1.75mm (+- 0.03mm)



**QUANTITY:** (750g)



**PRINTING TEMPERATURE:** 225 ± 10 °C

**CHEMICAL NAME:** Poliurethane



## Instructions to use:

1. Insert the filament into the 3D Bioprinter FDM extruder.
2. Heat up at the reference temperature and drive the T3 stepper motor to start the filament flow.
3. Once the printing is finished, keep the filament in the spool inside the bag, in a dry place.



## Storage conditions:

- Keep in a dry place
- Protect from direct sunlight
- Store between 10°C - 40°C

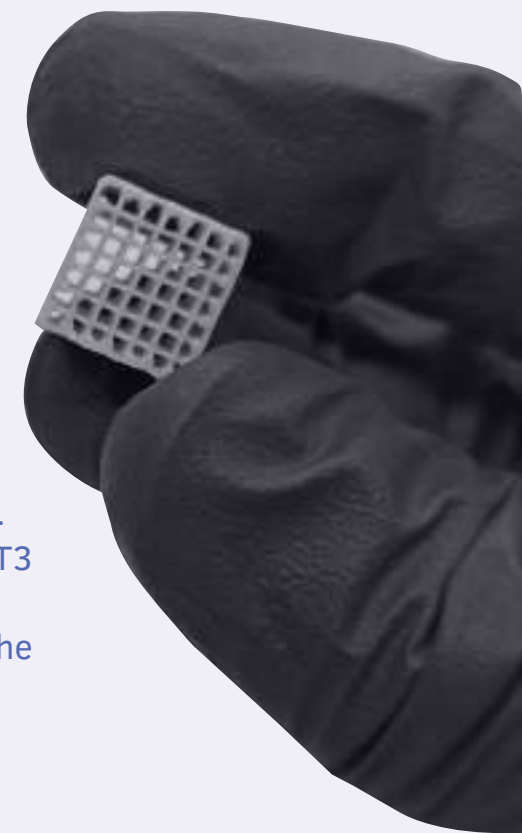


## Tips:

Printing with this kind of material can be hard at the beginning because of its flexibility. It is important to keep the material flow as continuous as possible and with little variations in the printing parameters.

Pay special attention to find an optimal temperature in your 3D printer. We recommend using 225°C. Setting higher values may help you to reduce blockage probability as it eases the material flow, but be careful it is not too high, so you could get printing defects. This filament does not work as PLA or ABS with high velocities, that is why we suggest slowing down your printing speed. In addition, it is advisable to print your piece (perimeters, infill, etc) at the same speed. This way you can avoid the irregular material flow and you will get better finishes.

If possible, disable retractions in order to avoid obstructions in the extruder.





# 1· THERMOPLASTICS

FILAMENT PVA (WATER-SOLUBLE)  
REGEMAT3D


*Filament PVA or polyvinyl alcohol is a water-soluble filament used as support material in 3D printing. It is especially recommended to use for PLA pieces to reach those points where the support structure is complex or inaccessible. Later, it can be removed by putting the piece in water, It is also a biodegradable filament, non-toxic and odorless.*



 **AVAILABLE COLOURS:** *Natural.*



 **DIAMETER:** 1.75mm (+- 0.03mm)

 **QUANTITY:** (750g & 350g)

 **PRINTING TEMPERATURE:** 190 - 210 °C

**CHEMICAL NAME:** PolyVinyl Alcohol

**SOLUBILITY:** Soluble in water

## Instructions to use:



1. Insert the filament into the 3D Bioprinter FDM extruder.
2. Heat up at the reference temperature and drive the T3 stepper motor to start the filament flow.
3. Once the printing is finished, keep the filament in the spool inside the bag, in a dry place.

## Storage conditions:



- Keep in a dry place
- Protect from direct sunlight
- Store between 10°C - 40°C



# 1· THERMOPLASTICS

FILAMENT PP (POLYPROPYLENE)  
REGEMAT3D

*Polypropylene with special additives to improve its adhesion to the printing surface. Very versatile material, transparent, light and flexible. It also has excellent mechanical and chemical resistance making it ideal for industrial applications.*

 **AVAILABLE COLOURS:** *Natural, White, Black.*



 **DIAMETER:** 1.75mm (+- 0.03mm)

 **QUANTITY:** (700g)

 **PRINTING TEMPERATURE:** 220 ± 10 °C

**CHEMICAL NAME:** Polypropylene

**SOLUBILITY:** Soluble in water

## Instructions to use:



1. Insert the filament into the 3D Bioprinter FDM extruder.
2. Heat up at the reference temperature and drive the T3 stepper motor to start the filament flow.
3. Once the printing is finished, keep the filament in the spool inside the bag, in a dry place.

## Storage conditions:



- Keep in a dry place
- Protect from direct sunlight
- Store between 10°C - 40°C



# 1 • THERMOPLASTICS

## OTHER BIORESORBABLE 3D PRINTING FILAMENTS



“For personalized, high resolution bioresorbable 3D printed implants”

A line of high-quality filaments with tight specifications Ideal for high-resolution printing with Fused Filament Fabrication (FFF)/Fused Deposition Modeling (FDM) systems. PLLA, PLGA, PCL, and PDO-based grades are available with tight specifications including a 1.75 mm diameter size and precise processing temperatures for the nozzle, bed and chamber.

All Filament grades are provide

**APPLICATIONS:** Orthopedic | cardiovascular | wound healing

**STERILIZATION:** Y-irradiation | e-beam | gas sterilization (EO)

### BIORESORBABLE POLYMERS

### KEY PROPERTIESRS

<b>POLY(L-LACTIDE)</b>	<ul style="list-style-type: none"><li>▶ Semi-crystalline polymer</li><li>▶ Good mechanical properties</li><li>▶ Easy to process</li><li>▶ Long degradation time (&gt; 4 years)</li></ul>
<b>POLY(L-LACTIDE-CO-D,L-LACTIDE)</b> 70:30	<ul style="list-style-type: none"><li>▶ Amorphous polymer</li><li>▶ Good mechanical properties</li><li>▶ Easy to process</li><li>▶ Intermediate degradation time (2 - 3 years)</li></ul>
<b>POLY(L-LACTIDE-CO-GLYCOLIDE)</b> 85:15	<ul style="list-style-type: none"><li>▶ Amorphous polymer</li><li>▶ High initial strength</li><li>▶ Fast degradation (~ 1.5 years)</li></ul>
<b>POLY(L-LACTIDE-CO-ε-CAPROLACTONE)</b> 70:30	<ul style="list-style-type: none"><li>▶ Semi-crystalline polymer with very low crystallinity</li><li>▶ Medium strength</li><li>▶ Intermediate degradation time</li><li>▶ At body temperature in the rubbery state</li></ul>
<b>POLY(DIOXANONE)</b>	<ul style="list-style-type: none"><li>▶ Semi-crystalline polymer with low crystallinity</li><li>▶ Low strength, is not sufficient for load bearing implants</li><li>▶ Short degradation time (6 months)</li><li>▶ At body temperature in the rubbery state</li></ul>
<b>POLY(CAPROLACTONE)</b>	<ul style="list-style-type: none"><li>▶ Semi-crystalline polymer</li><li>▶ High elongation</li><li>▶ Long degradation time (3 – 4 years)</li></ul>
<b>POLY (L-LACTIDE-CO-TRIMETHYLENE CARBONATE)</b>	<ul style="list-style-type: none"><li>▶ Soft and flexible polymer</li><li>▶ At body temperature in the rubbery state</li><li>▶ Can be used in blends to modify the properties of other polymers</li></ul>

# 1 • THERMOPLASTICS

## FILAMENT (IN RODS)



**DIAMETER:** 1.75mm (+- 0.05mm)  
**QUANTITY:** from 5 g to higher batches  
**Print TEMPERATURE:** 150 -170°C

- Replace the pastes usually applied for bone regeneration.
- Has in vitro validated biodegradation and bioactivity.
- Has improved hydrophilic properties, i.e. it could be impregnated in the patient plasma prior to implantation.
- Can lead to 100% inorganic part after proper thermal treatment.
- Can be sterilized by UV-light

### FILAMENT- OSS



#### DESCRIPTION

Bioactive inorganic materials supported by a biodegradable polymer matrix for personalized bone regeneration

#### FEATURES

Allows obtaining multidirectional and customized interconnected porous structure with a specific consistence

#### PLA VS INORGANIC

**PHASE VOL.%**  
Up to 50 Vol %  
(HA,  $\beta$ -TCP, Mg, Ti, etc.)

### FILAMENT- TILE



#### DESCRIPTION

Glaze and pigments for ceramic decoration with volume

#### FEATURES

Allows designing coloured 3D decorations by printing glazes incorporating inorganic pigments

#### PLA VS INORGANIC

**PHASE VOL.%**  
Up to 40 Vol.% (glazes and ceramic pigments)

### FILAMENT- ECO



#### DESCRIPTION

Photo- and electroactive inorganic materials supported by a biodegradable polymer matrix for catalytic and energy applications

#### FEATURES

Allows obtaining multidirectional and customized interconnected structure with specific photo and electrochemical activity

#### PLA VS INORGANIC

**PHASE VOL.%**  
Up to 40 vol.% of inorganic charge (TiO<sub>2</sub>, ZnO, carbonaceous particles, etc.)



## PRODUCT OVERVIEW

Our standard bioink: a synthetic peptide hydrogel bioink that forms a nanofibrous network, mimicking the extracellular matrix. It has been specifically developed for bioprinting and advanced 3D cell culture applications. This bioink is biocompatible and has been designed to provide versatility to support different printing applications as the mechanical properties can be adapted.



## PRODUCT FEATURES

The recommended preparation will provide a printable bioink, capable of producing mechanically stable 3D structures. However, preparation can be modified by users to suit their needs and printer type.

- Reproducibility: no batch to batch variation.
- Mechanical tuneability.
- Excellent printability at room temperature.
- Gelation is independent of temperature and pH.



## STORAGE AND HANDLING

Research grade only – Not intended for clinical use.

The product is shipped as lyophilised powder at room temperature and should be stored in a freezer at  $-20^{\circ}\text{C}$  until ready to rehydrate. The product is stable up to 12 months when stored under these conditions.

Where a solution is provided for the purpose of Pre-Gel preparation (e.g. 'Preparation Solution A'), this will be shipped at room temperature and should be stored at  $4^{\circ}\text{C}$  until ready to use. Rehydrated bioink is stable for a maximum of 1 month when stored at  $4^{\circ}\text{C}$ , prior to media (or salt solution) addition.

Bioink that has been prepared with media must be incubated for a 2-hour period at  $37^{\circ}\text{C}$  to achieve its maximum viscosity.

# 2 · NOVEL SYNTHETIC BIOINKS

## SYNTHETIC PEPTIDE BIOINK





## PRODUCT OVERVIEW

Our fibronectin-functionalised synthetic peptide hydrogel bioink that forms a nanofibrous network, mimicking the extracellular matrix. It has been specifically developed for Bioprinting and advanced 3D Cell Culture applications. This bioink is biocompatible and has been designed to provide versatility to support different printing applications as the mechanical and chemical properties can be adapted.



## PRODUCT FEATURES

The recommended preparation will provide a printable bioink, capable of producing mechanically stable 3D structures. However, preparation can be modified by users to suit their needs and printer type.

- Reproducibility: no batch to batch variation.
- Mechanical tuneability.
- Excellent printability at room temperature.
- Gelation is independent of temperature and pH.



## STORAGE AND HANDLING

Research grade only – Not intended for clinical use.

It is provided as a lyophilised powder with a solution used to prepare the final ink formulation.

The bioink powder is stable for 1 year when stored at -20°C.

# 2 · NOVEL SYNTHETIC BIOINKS

FIBRONECTIN-FUNCTIONALISED  
SYNTHETIC PEPTIDE BIOINK







## PRODUCT OVERVIEW

Our collagen functionalised synthetic peptide hydrogel bioink that forms a nanofibrous network, mimicking the extracellular matrix. It has been specifically developed for Bioprinting and advanced 3D Cell Culture applications. This bioink is biocompatible and has been designed to provide versatility to support different printing applications as the mechanical and chemical properties can be adapted.



## PRODUCT FEATURES

The recommended preparation will provide a printable bioink, capable of producing mechanically stable 3D structures. However, preparation can be modified by users to suit their needs and printer type.

- Reproducibility: no batch to batch variation.
- Mechanical tuneability.
- Excellent printability at room temperature.
- Gelation is independent of temperature and pH.



## STORAGE AND HANDLING

Research grade only – Not intended for clinical use.

It is provided as a lyophilised powder with a solution used to prepare the final ink formulation.

The bioink powder is stable for 1 year when stored at -20°C.

# 2 · NOVEL SYNTHETIC BIOINKS

COLLAGEN-FUNCTIONALISED  
SYNTHETIC PEPTIDE BIOINK



## 2 · NOVEL SYNTHETIC BIOINKS

XHYDROMELT  
HYDROGEL PRINTING  
HAS NEVER BEEN EASIER



### PRODUCT OVERVIEW

X HYDROMELT is a synthetic hydrogel based on our patented CURASOL® technology. It processing from melt rather than from solution. After swelling, a very strong and robust hydrogel obtained.



It is non-biodegradable and biologically inert, but can be coated with the provided coating to allow cells to adhere and proliferate on the scaffold

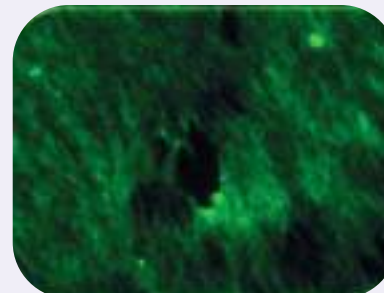


### PRODUCT FEATURES

- X HYDROMELT is provided as a white solid in a prefilled 3 ml cartridge, Can be printed from melt after heating
- X HYDROMELT COAT: cell interactive coating to be applied after printing. Supplied as a clear solution
- UV-crosslinkable

### STORAGE AND HANDLING

- Melting temperature:  $30\text{ }^{\circ}\text{C} < T_m < 60\text{ }^{\circ}\text{C}$
- Viscosity: 5 – 50 Pa.s @  $40\text{ }^{\circ}\text{C}$
- Stable for 3 months at  $4 - 8\text{ }^{\circ}\text{C}$



## 2 · NOVEL SYNTHETIC BIOINKS

XSTABLE  
STABILITY FOR LONG  
LASTING SUPPORT

### PRODUCT OVERVIEW

X STABLE is a synthetic shear thinning, bio-interactive scaffold ink. It allows for easy printing due to its shear thinning behaviour.

It is cell interactive and non-biodegradable. Therefore, it can provide long lasting support to the cells. After photo-crosslinking, a very robust hydrogel is obtained.

### PRODUCT FEATURES

- X STABLE is provided as a clear hydrogel in a prefilled 3 ml cartridge
- Can be printed at room temperature
- UV-crosslinkable

### STORAGE AND HANDLING

- Shear thinning: Storage modulus : 5 – 500 Pa  $\rightarrow$  < 1 Pa under shear
- Viscosity : < 5 Pa.s @ 25 °C (under shear)
- Stable for 3 months at 4 – 8 °C



## 2 · NOVEL SYNTHETIC BIOINKS

XSOLID  
NO NEED FOR HEAT



### PRODUCT OVERVIEW

X SOLID is a photo-crosslinkable synthetic biodegradable polyester based on our patented CURASOL® technology. It combines the benefits of conventional stiff polyester materials with low temperature (< 60 °C) processability.

It is biologically inert, but can be coated with the provided coating to allow cells to adhere and proliferate on the scaffold.



### PRODUCT FEATURES

- X SOLID is provided as a white solid in a prefilled 3 ml cartridge
- Can be printed after heating above 40 °C
- UV-crosslinkable



### STORAGE AND HANDLING

- Melting point: 30 °C < T<sub>m</sub> < 50 °C
- Viscosity : 10 – 30 Pa.s (@ 60 °C)
- Stable for 3 months at 4 – 8 °C



# 3 · ALGINATES

## SODIUM ALGINATE



### PRODUCT OVERVIEW

Sodium alginate is the sodium salt of alginic acid, a natural polysaccharide found in brown algae. It is generally used as a stabilizer and thickener in the food industry. Sodium alginate may undergo cross-linking in the presence of divalent cations such as  $\text{Ca}^{2+}$  to form biodegradable stable gels, which finds applications as a material for cell encapsulation and immobilization.



### PRODUCT FEATURES

Sodium alginate is a naturally derived biomaterial that can be chemically crosslinked with calcium chloride to create cell-laden hydrogels. These reagents are used in a variety of applications including bioprinting. The recommended preparation yields a streamlined matrix bioink that supports 3D printed cell-laden constructs.

Soluble in common solvents (THF, Chloroform,  $\text{diH}_2\text{O}$ ). Upgraded thermal stability (very stable until  $250^\circ\text{C}$ ). Rapid crystallization from melt and proper processing with thermoplastic techniques ( $T > 100^\circ\text{C}$ ). They may contain bismuth residues but in vitro compatibility studies demonstrated that these materials are not cytotoxic and provide a valid substrate for cells to attach and proliferate.



### STORAGE AND HANDLING

Keep container tightly closed in a dry and well-ventilated place and Sodium Alginate should be stored between  $5^\circ\text{C}$  and  $8^\circ\text{C}$  in an airtight container. For research use only. Not for human use. Sodium alginate has powder form.





# 4 · NANOCELLULOSES

## NANOCELLULOSE



### PRODUCT OVERVIEW

Cellulose nanofiber is a material isolated from the cell wall of plants by the deconstruction of the cellulose. It presents high viscosity at low material concentration due to their great specific surface and its high content in carboxyl groups.



### PRODUCT FEATURES

Cellulose nanofiber is a naturally derived biomaterial that can be chemically crosslinked with calcium chloride to create cell-laden hydrogels. These reagents are used in a variety of applications including bioprinting. In addition, it can be used with as a universal rheological modifier to allow printability of many biomaterials or as sacrificial material to form complex structures, being removed by washing away. The recommended preparation yields a streamlined matrix bioink that supports 3D printed cell-laden constructs.

- Eucalyptus cellulose pulp obtained by TEMPO oxidation. 5 mmols / g cellulose.
- The consistency of the suspension is  $1,099 \pm 0.002\%$ , meaning 1 g of NFC dries for every 100 g of suspension.
- It can be diluted in water by using homogenizer.



### STORAGE AND HANDLING

The sample should be stored between 4°C - 8°C. Ensure container tightly closed to prevent drying. Freezing of the sample should be avoided as it may affect its physicochemical properties. The shelf life of the product is six months.





# 5 · GELATINS

## GELATIN



### PRODUCT OVERVIEW

Gelatin is a heterogeneous mixture of water-soluble proteins of high average molecular masses, present in collagen. The proteins are extracted by boiling skin, tendons, ligaments, bones, etc. in water. Type A gelatin is derived from acid-cured tissue and Type B gelatin is derived from lime-cured tissue.



### PRODUCT FEATURES/APPLICATIONS

As a biocompatible polymer, gelatin has been used as a delivery vehicle for the release of bioactive molecules and in the generation of scaffolds for tissue engineering applications. Gelatin is also used as a suspending agent, encapsulating agent, and tablet binder.



### STORAGE AND HANDLING

Dry gelatin stored in airtight containers at room temperature remains unchanged for many years. For research use only. Not for human use. Gelatin has powder form.



# 5 · GELATINS

## GelMA (GELATINMETHACRYLOYL)



### PRODUCT OVERVIEW

Gelatin methacrylate (GelMA) is a gelatin-based bioink that provides mammalian cells with the essential properties of their native environment. GelMA is modified with methacryloyl groups to crosslink with a photoinitiator or exposure to UV light.



### PRODUCT FEATURES

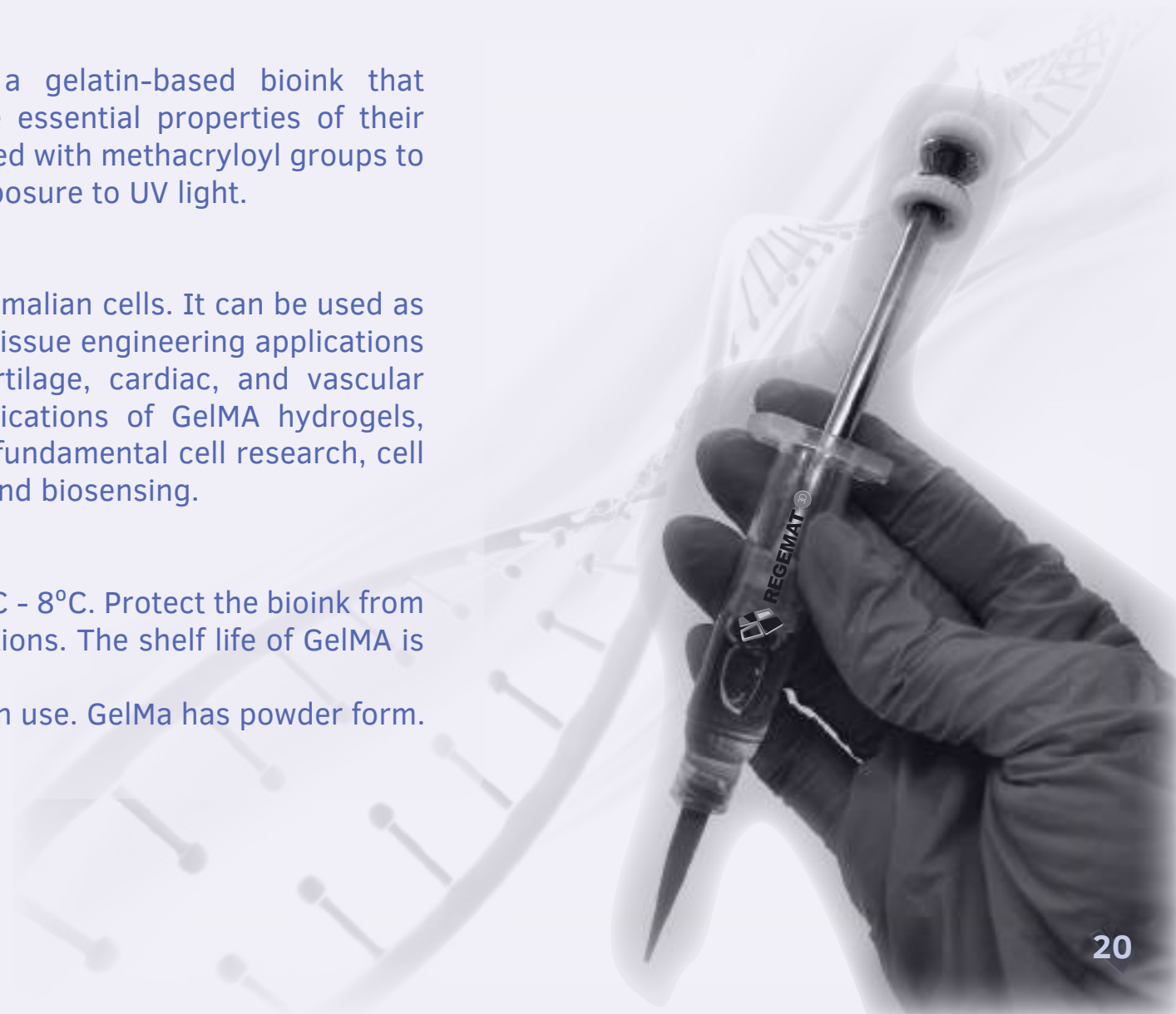
GelMA is compatible with most mammalian cells. It can be used as a base material for a wide range of tissue engineering applications including engineering of bone, cartilage, cardiac, and vascular tissues, among others. Other applications of GelMA hydrogels, besides tissue engineering, include fundamental cell research, cell signalling, drug and gene delivery, and biosensing.



### STORAGE AND HANDLING

GelMA should be stored between 4°C - 8°C. Protect the bioink from light and avoid temperature fluctuations. The shelf life of GelMA is three months.

For research use only. Not for human use. GelMa has powder form.



# 5 · GELATINS

## X GelMA (GELATINMETHACRYLOYL)



### PRODUCT OVERVIEW

Gelatin methacrylate (GelMA) is a gelatin-based bioink that provides mammalian cells with the essential properties of their native environment. GelMA is modified with methacryloyl groups to crosslink with a photoinitiator or exposure to UV light.

X GEL-MA has emerged as one of the gold standards in tissue engineering and biofabrication worldwide. Is based on gelatin derived from natural collagen which has been modified with photopolymerizable functional groups which allow crosslinking of hydrogel after printing.



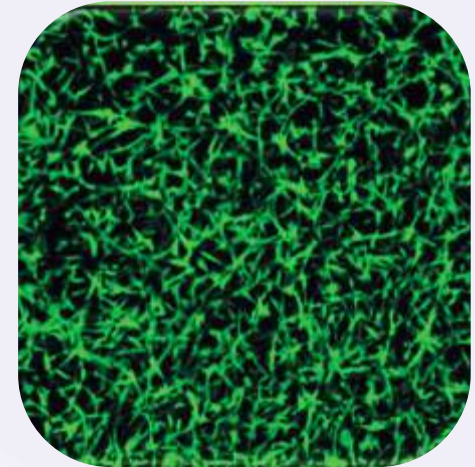
### PRODUCT FEATURES

- Product is provided as a clear hydrogel in a prefilled cartridge of 3 ml
- Can be printed immediately after heating
- UV-crosslinkable



### STORAGE AND HANDLING

- PH: 7 – 8
- Viscosity: 0.05 – 1000 Pa.s @ 25 °C
- Stable for 3 months at 4 – 8 °C



# 5 · GELATINS

## X-FAST



### PRODUCT OVERVIEW

Faster crosslinking = higher cell viability.

X FAST provides all the benefits of gelatin while benefitting from our patented CURADUO® technology. This results in up to 33 % faster UV crosslinking, and therefore a reduced printing time. Based on gelatin derived from natural collagen which is modified with photo-crosslinkable functional groups. In the presence of the supplied XL crosslinker, it can be crosslinked with unprecedented efficiency. It resembles the natural ECM even more, and is characterized by high cell viabilities



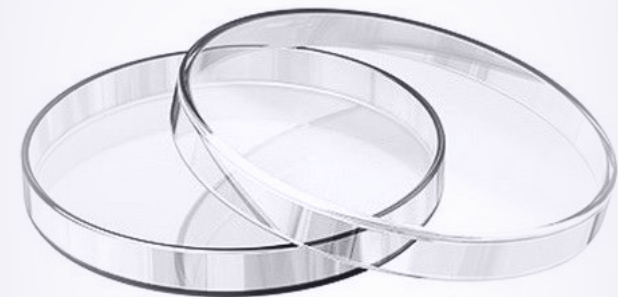
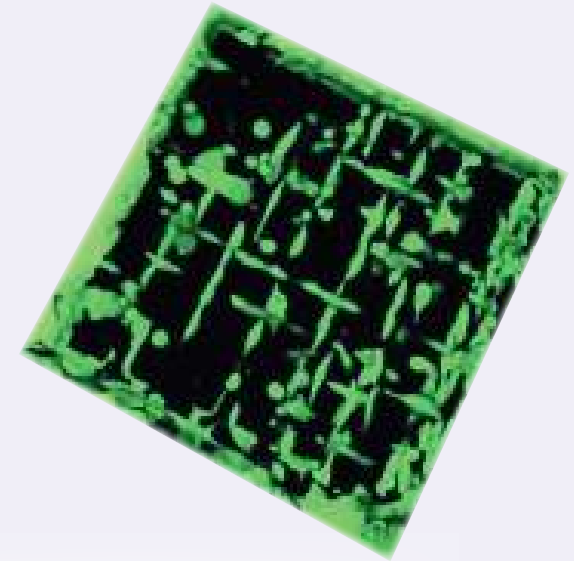
### PRODUCT FEATURES

- X FAST is provided as a clear hydrogel in a prefilled cartridge of 3 ml
- X FAST XL crosslinker is provided as a lyophilized white powder
- X FAST PREP is provided as a clear solution to dissolve XL prior to mixing
- Can be printed after heating and mixing
- UV-crosslinkable



### STORAGE AND HANDLING

- pH: 7 – 8
- Viscosity: 0.05 – 1000 Pa.s @ 25 °C



# 6 · POLYSACCHARIDE

## AGAROSE



### PRODUCT OVERVIEW

Agar belongs to the galactan polysaccharides, which make up the intracellular matrix in red seaweeds/marine algae belonging to class Rhodophyta. Agar is naturally slightly sulphated, and is a complex mixture of polysaccharides. Agarose is a neutral polymer component of agar. Heating of agarose gives rise to solution form which on cooling sets into gel form. Gel formation occurs due to double helical formation from molecular chains, which forms a water-immobilizing network.



### PRODUCT FEATURES

As a gelling agent, agarose is used to separate nucleic acids electrophoretically because its gels have larger pore sizes than polyacrylamide gels at low concentrations. Unlike polyacrylamide, the consistency of the gels is more solid (but also less elastic). Agarose is also used to make gel plates or overlays for cells in tissue culture and to form a gel matrix (either beaded and/or crosslinked) which can be used in chromatographic separations.



### STORAGE AND HANDLING

Keep container tightly closed in a dry and well-ventilated place and Agarose should be stored between 5°C and 8°C in an airtight container

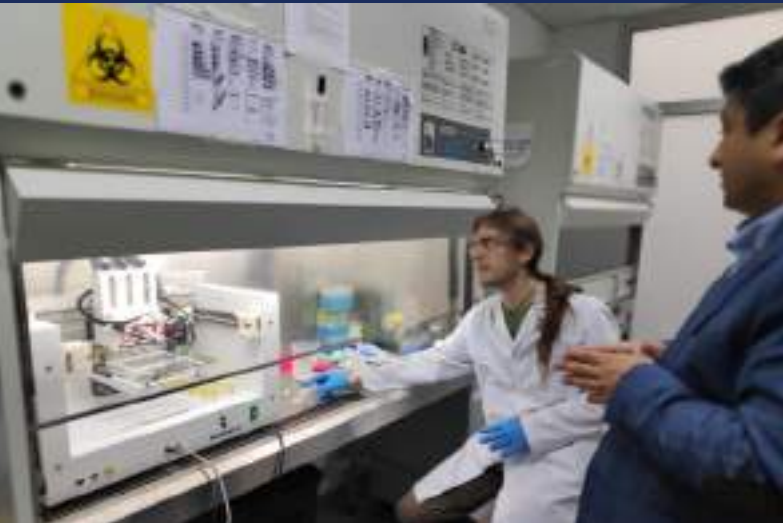
For research use only. Not for human use. Agarose has powder form.







## 7 · ABOUT US

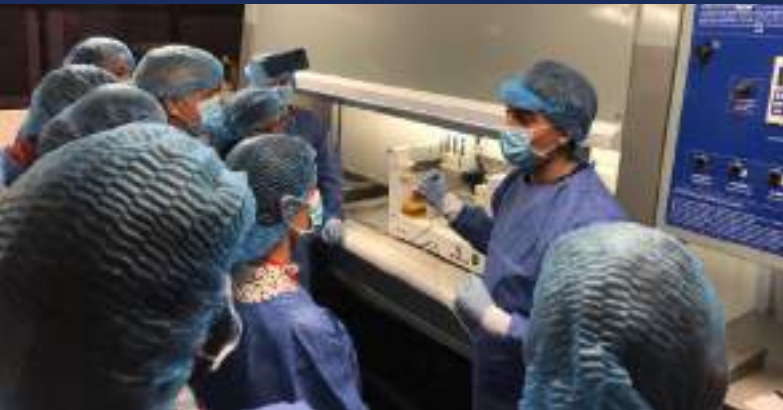


**REGEMAT 3D**, we are a biotech company pioneering since 2015 on the development of bioprinting systems and bioreactors to create living tissues in regenerative medicine.

· *Our experience in custom made medical devices with our sister company BRECA Health care, leads us to provide a big support to researchers in the clinical application. We work closely with the research groups during all the stages, our group of engineers and biologists support you within your application and support you bringing results from lab to bed.*

· *We work with many research teams that develop biomaterials helping to develop the systems for your printing process. In addition, we include their biomaterials in our catalogue and offer them to our community.*

· *Collaborating with us means working with highly qualified engineers, experienced biologists, direct access to the clinical application and proximity to the biggest Spanish hospitals*







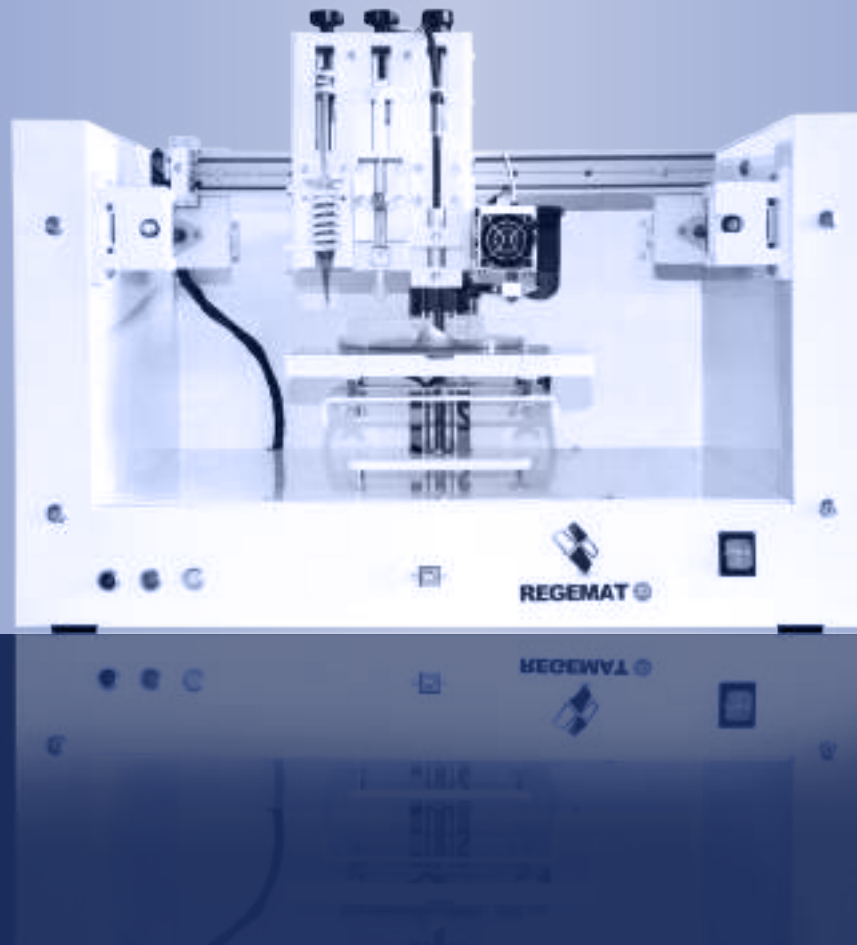
## 7 • ABOUT US

We are currently collaborating with different Institutions in more than 28 countries; Each **Regemat 3D** bioprinting system is fully adapted to the requirements of each scientific investigation: head configuration, syringe quantity, temperature control.

“Our goal is not only to provide bioprinters and bioreactors and its consumables, but helping researchers worldwide to get new results”

Bioprinting technology offers a huge potential  
for bringing new solutions





CONTACT US

+34 958 637 124 +34 685 489 097  
info@regemat3d.com



@REGEMAT3D



@REGEMAT3D



linkedin/REGEMAT3D



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[www.regemat3d.com](http://www.regemat3d.com)