



bioimplon GmbH  
*Biotech Innovation Pioneers*

Company & Soft-Tissue Regeneration Products

We develop, manufacture and market

patented, unique, natural bovine biomaterials

for regenerative medicine and haemostasis.

## Agenda

The Company

Unique Features

Products

Product Safety and Certifications



# The Company

## History

1992

Global market launch

2011

Bioimplon GmbH founded  
2011 in Germany; took over  
the business activities of  
Cardiophil Ltd.

(active in biomaterials since 1998)

Today

Today our products are  
distributed in more than 60  
countries worldwide

## Leading Biomaterial Innovations

**Focused expertise:** worldwide leading innovations in bovine Atelo-Collagen Type I biomaterials for natural bone & soft tissue regeneration (GBR & GTR)

**Unique patented technologies:** unique processing of bovine materials maintaining the natural structure and properties of collagen and all its advantages by highest biocompatibility

**Future-oriented innovations:** own scientific department – constantly developing innovative up-to-date products for enhancing therapeutical results and a better quality of life



## Our Goals

We strive to improve the quality of life.

We...

...invest continuously in the development of  
state-of-the-art Atelo-Collagen Type I biomaterial products.

...want everybody to enjoy safe and high quality treatment.

...are planning to expand our business into new markets.

The Biggest Portfolio Worldwide

in Atelo-Collagen Type I  
bioregenerative materials

Our Atelo-  
Collagen Type I  
products

**Patented bovine Bone Substitute Material**

Hypro-Oss®

**Membranes for GBR / GTR**

Hypro-Sorb® M

Hypro-Sorb® F

**Matrices for GTR**

Hypro-Sorb® M Matrix

**Alveolar Ridge Preservation**

Hypro-Sorb® X

Hypro-Sorb® Z

**Wound Healing Dressings**

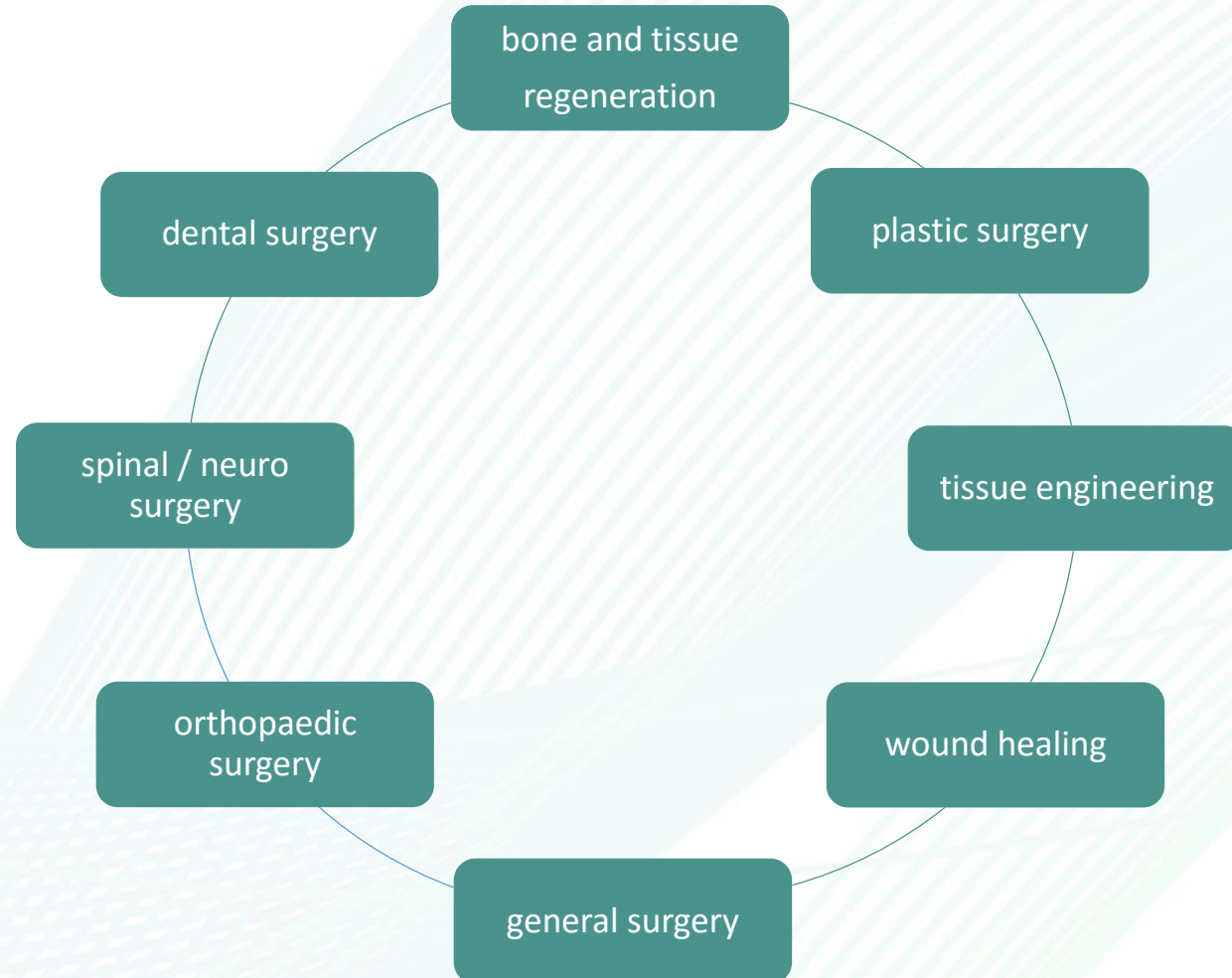
Hypro-Flex®

**Sponges & Haemostatics**

Hypro-Sorb® R, NT, O



## Fields of Application



# Unique Features

## Unique Features

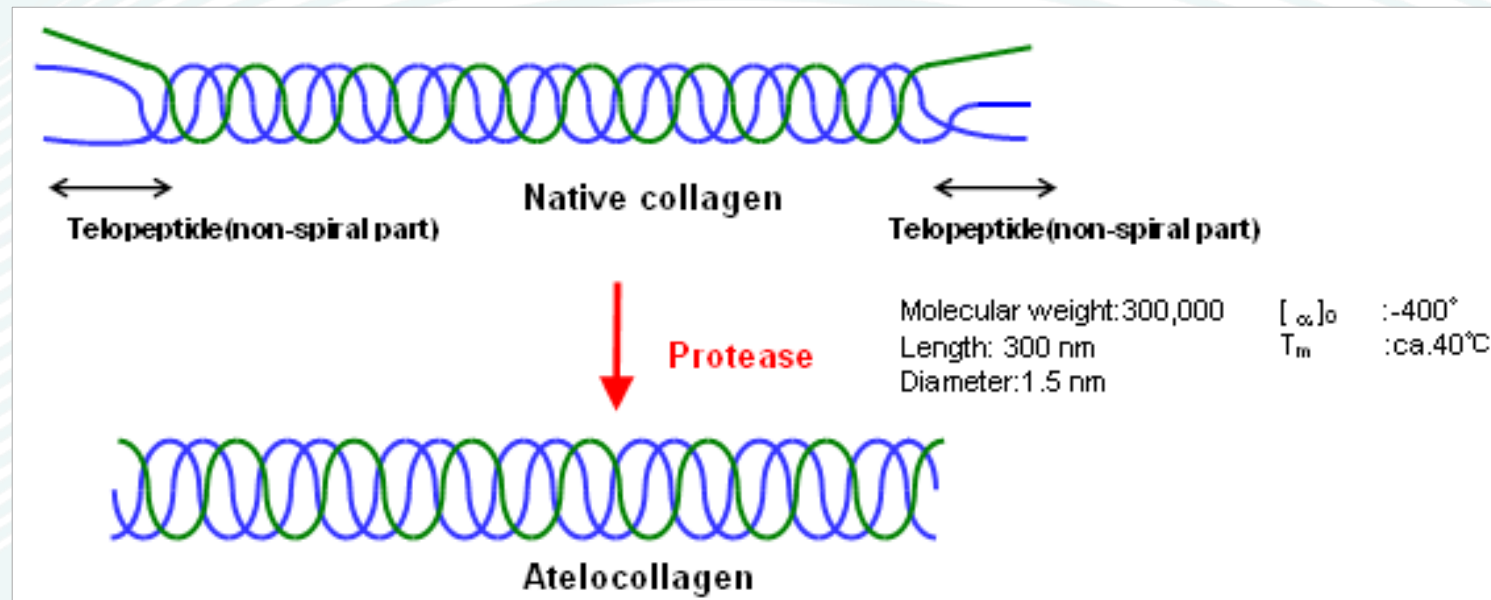
All of our products are atelopectidized and lyophilized





## Atelopeptidation

Patented, enzymatic manufacturing procedure



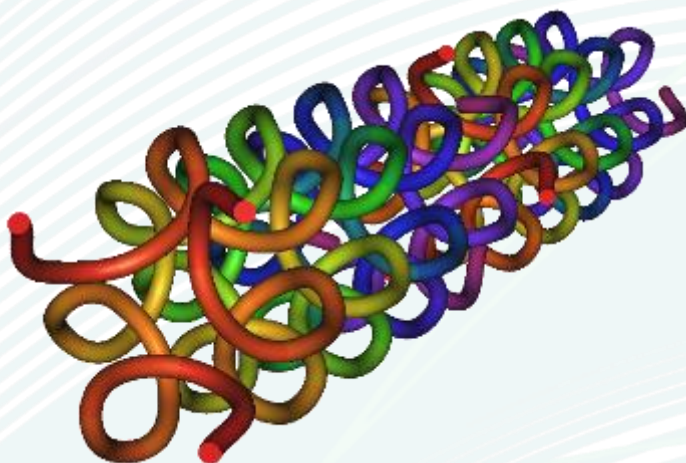
Physicochemical deletion of the antigenic terminal peptide sequence in a collagen molecule



Result: modified collagen called Atelo-Collagen Type I – a safe, bio-compatible, non-immunogenic collagen

## Atelopeptidation

### Atelo-Collagen Type I



Biocompatible

Non-immunogenic

Telopeptide free

Natural structure

Most effective haemostatic

Bacteriostatic effect

No swelling or haematoma complications

Safe and sterile

Easy Handling

## Lyophilization

### Process of Freeze-Drying

Freeze-drying removes water from the material by sublimation

Sublimation is directly converting ice to water vapor, without passing through the intermediary stage of liquid

Freeze-dried materials become highly absorbent and can be stored at room temperature



# Lyophilization

## Advantages of lyophilized products

Preservation of the natural molecular structure of the biomaterials

Conservation of all unique properties that collagen and hydroxyapatite own

Powerful hydrophilicity

Long shelf-life

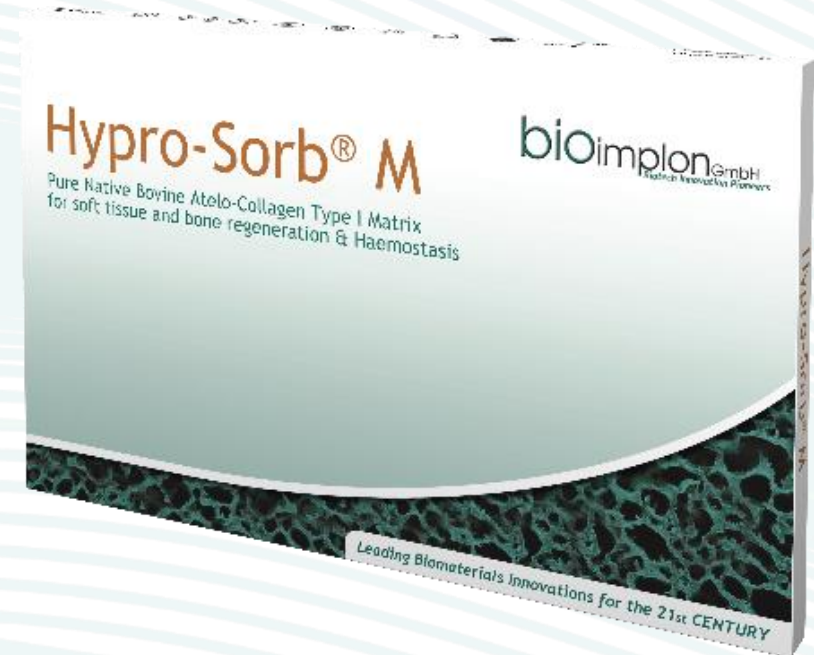
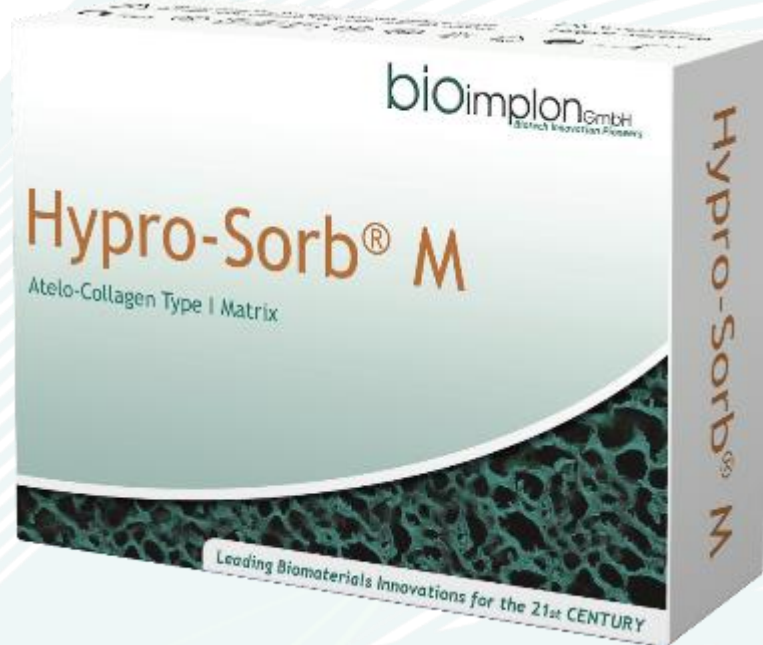
Storage at room temperature



# Products

# Hypro-Sorb<sup>®</sup> M Matrix

The purest natural Atelo-Collagen Type I Matrix





## Hypro-Sorb<sup>®</sup> M Matrix

Multilayer / Bilayer , biphasic, native, resorbable

99.9% pure, crystalline Atelo-Collagen Type I, non-crosslinked

Material origin: bovine Achilles tendon

Bacteriostatic effect

Contains growth factors for accelerated soft-tissue regeneration

## Hypro-Sorb<sup>®</sup> M Matrix

No need for autograft harvesting – high patient acceptance

Complete remodelling into patient's own tissue within six months

Excellent barrier function, lasting for 14 to 16 weeks

Rapid neovascularization and integration

Control of capillary and parenchymatous bleeding



20 x 25 x 2 mm



25 x 25 x 2 mm



25 x 50 x 2 mm



75 x 75 x 2 mm

## Hypro-Sorb® M Matrix

Excellent cutting up and fixation; can be attached with pins and suturing material

Tear-proof fibrous tissue structure

Does not stick to surgical instruments

Adheres very well to the operation site

Complete resorption, no reopening necessary

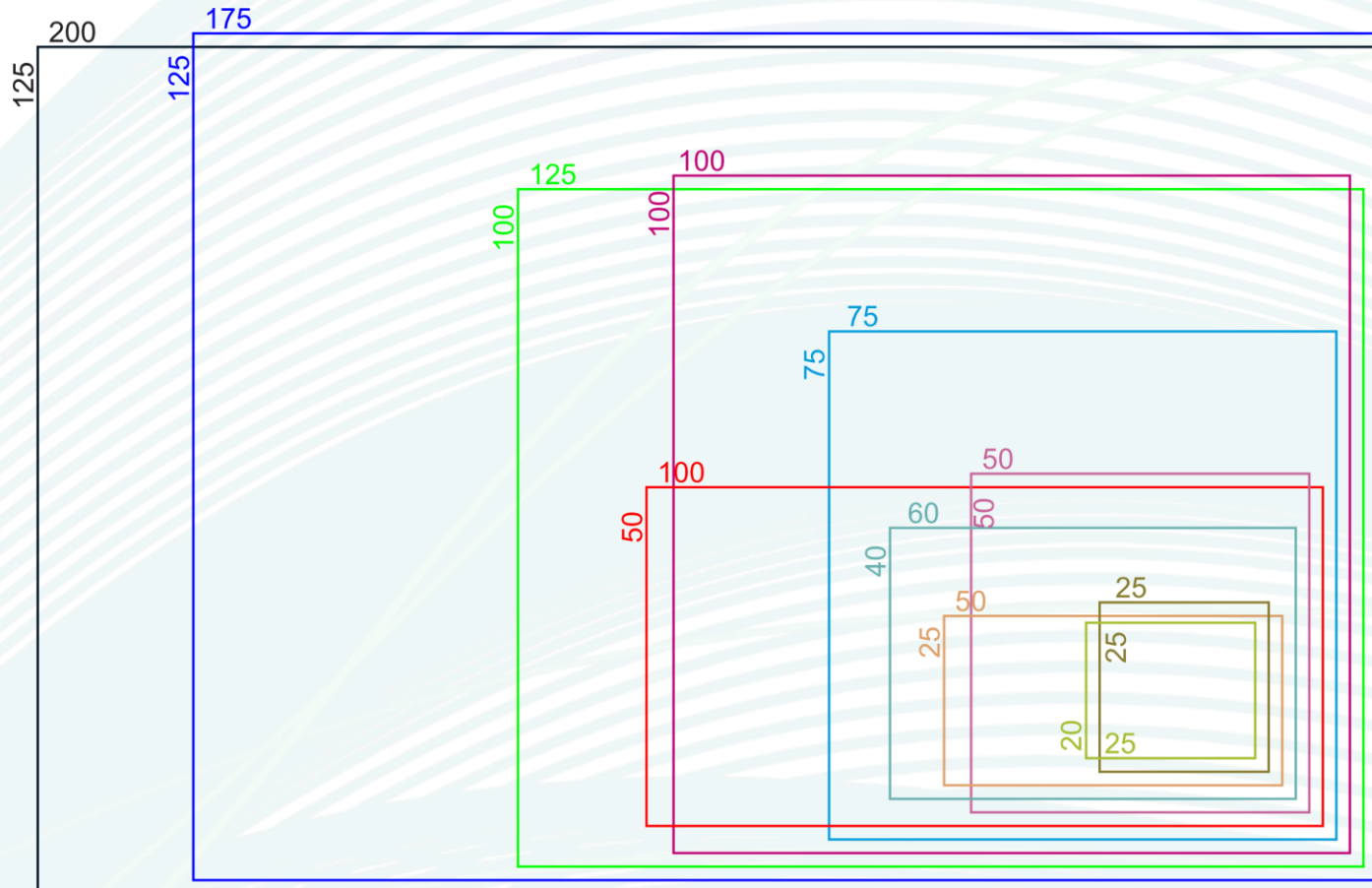
Sterile and safe for 5 years after production

Available in various sizes in 0.8 mm and 2 mm thicknesses



## Hypro-Sorb<sup>®</sup> M Matrix

Sizes up to 125 x 200 mm in both available thicknesses 0.8 mm and 2.0 mm



*Rough side of Hypro-Sorb<sup>®</sup> M Matrix*



*Smooth side of Hypro-Sorb<sup>®</sup> M Matrix*

## Hypro-Sorb<sup>®</sup> M Matrix

### Fields of application



Hypro-Sorb<sup>®</sup> M Matrix  
20 x 25 x 2 mm



Hypro-Sorb<sup>®</sup> M Matrix  
25 x 50 x 2 mm

Body soft-tissue repair

Dura substitute

Joint and cartilage reconstruction

Gingival reconstruction

Adhesion prophylaxis



Hypro-Sorb<sup>®</sup> M Matrix  
50 x 50 x 2 mm



Hypro-Sorb<sup>®</sup> M Matrix  
100 x 100 x 2 mm

## Hypro-Sorb<sup>®</sup> M Matrix

### Fields of indications

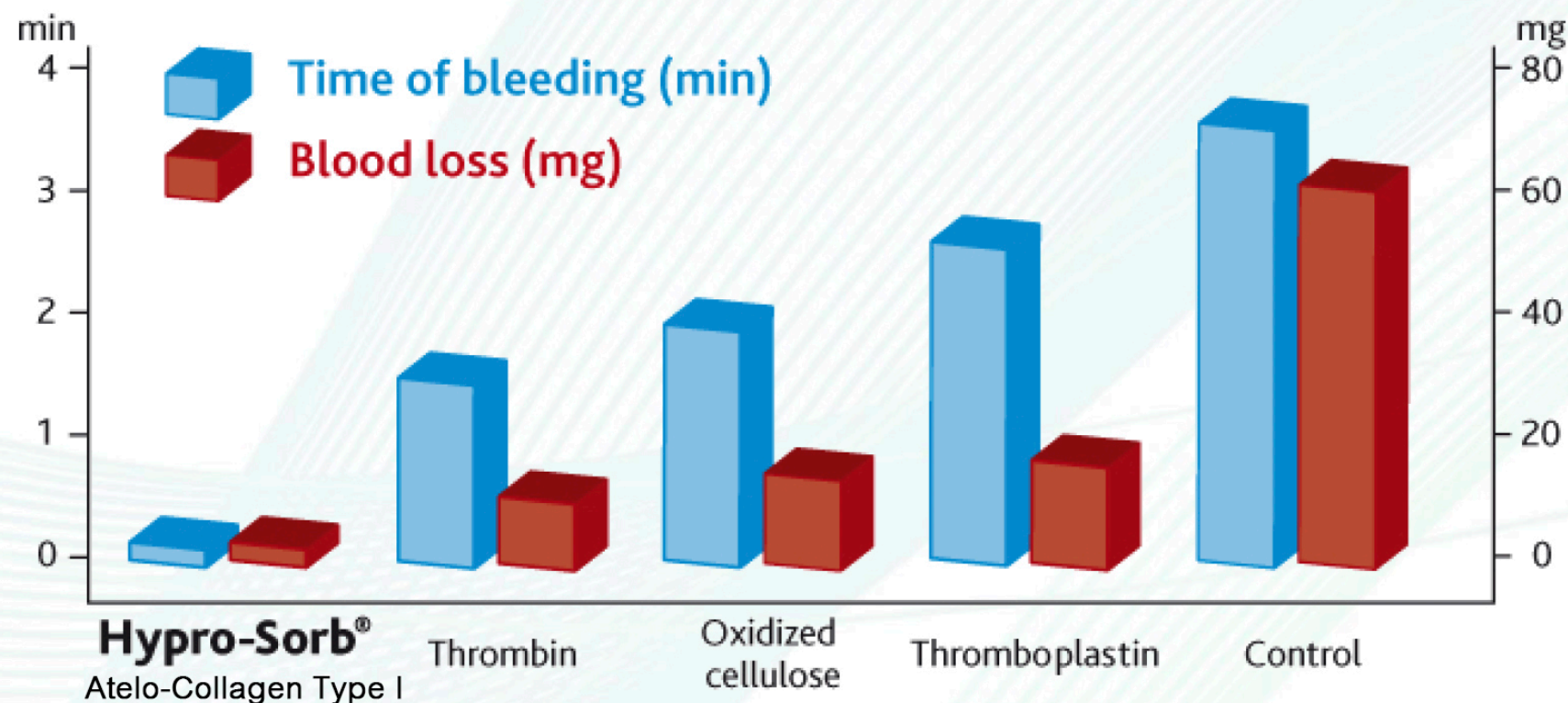
- Orthopaedic
- Spinal & Neurosurgery
- Plastic
- Maxillofacial & Periodontal surgery
- Dental
- Obstetrics & Gynaecology
- Urological
- General surgery



# Atelo-Collagen Type I Sponges & Haemostatics

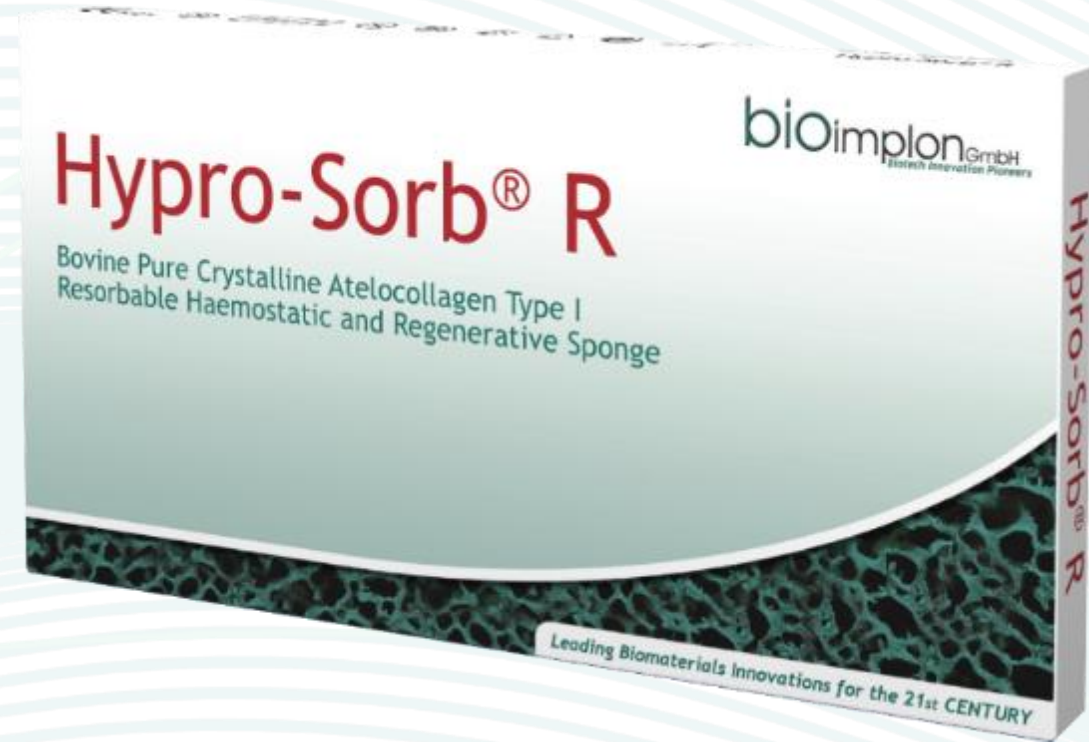
## Haemostasis by Atelo-Collagen Type I

Atelo-Collagen Type I haemostatics are the fastest in helping to achieve haemostatic, reduce blood loss substantially and are better than other haemostatic materials in stopping parenchymatous bleeding. Atelo-Collagen Type I is simply the most effective haemostatic



# Hypro-Sorb<sup>®</sup> R

Our special Atelo-Collagen Type I  
sponge for effective haemostasis and  
accelerated wound regeneration





## Hypro-Sorb<sup>®</sup> R

99.9% pure, crystalline Atelo-Collagen Type I, non-crosslinked

Highest degree of tissue biocompatibility

Excellent wound healing characteristics

Most effective haemostatic properties

Bacteriostatic effect

Completely absorbable within two to four weeks

## Hypro-Sorb<sup>®</sup> R

Adheres very well to the operation site but does not stick

Can be removed from wound site without damaging new tissue or causing bleeding

Can be cut to desirable size without loss of haemostatic or wound healing properties

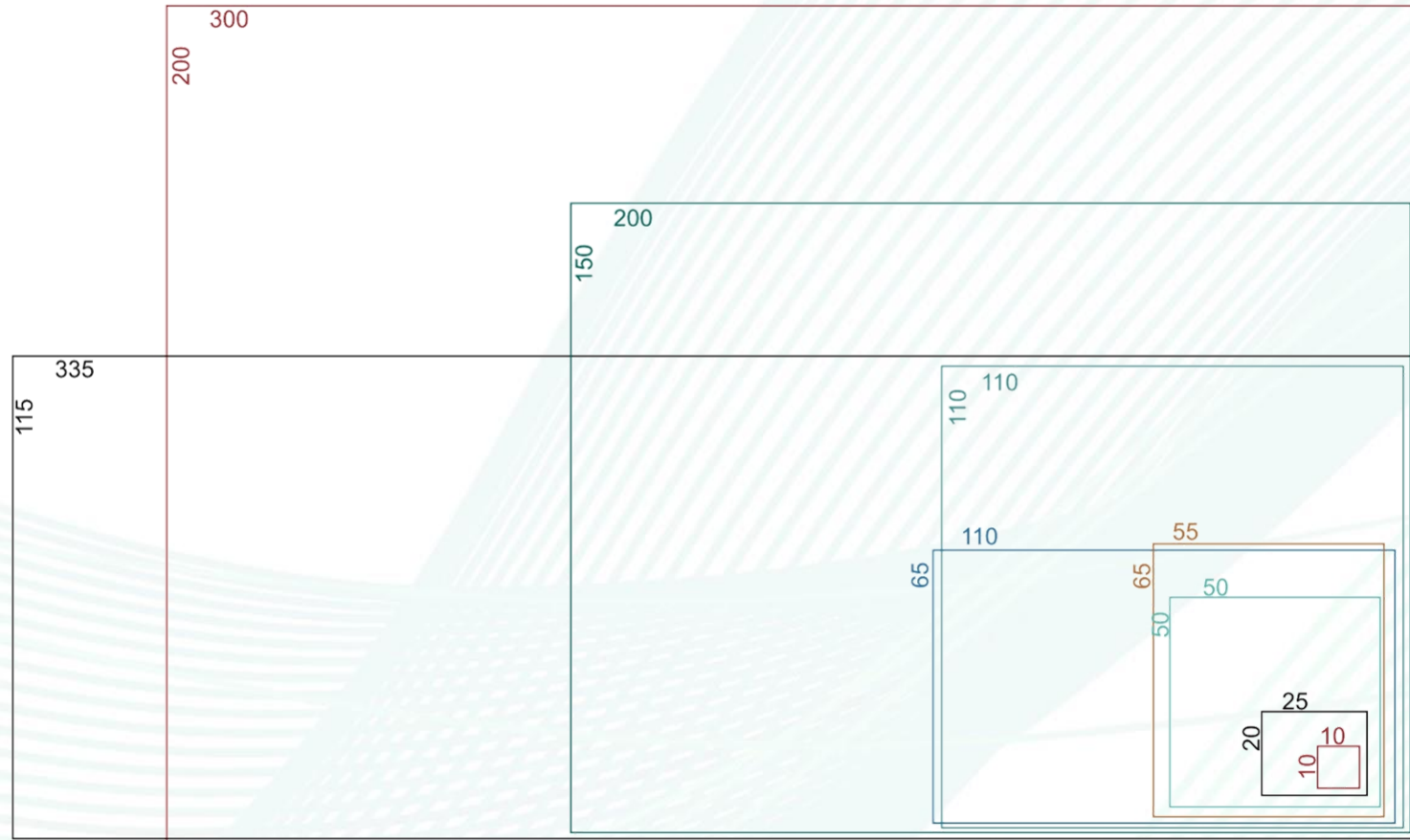
Usable in infected wounds or by medically compromised patients

Safe and sterile for five years after production

Available in various sizes

## Hypro-Sorb<sup>®</sup> R

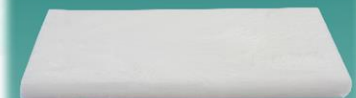
Available Sizes up to 200 x 300 mm



20 x 25 X 4 mm



55 x 65 x 4 mm



65 x 110 x 4 mm



## Hypro-Sorb<sup>®</sup> R

### Fields of application



Hypro-Sorb<sup>®</sup> R  
20 x 25 x 4 mm



Hypro-Sorb<sup>®</sup> R  
65 x 110 x 4 mm

Control of capillary and parenchymatous bleeding

1<sup>st</sup> and 2<sup>nd</sup> degree burns

Complicated wound treatment

Decubitus treatment



Hypro-Sorb<sup>®</sup> R  
55 x 65 x 4 mm



Hypro-Sorb<sup>®</sup> R  
55 x 65 x 4 mm

## Hypro-Sorb<sup>®</sup> R

### Fields of indications

- General surgery
- Plastic surgery & Dermatology
- Urology
- ENT surgery
- Obstetrics & Gynaecology
- Orthopaedic
- Spinal & Neurosurgery
- Maxillofacial & Implantology
- Cardiac Surgery

Local haemostatic

bioimplon<sup>GmbH</sup>  
*Biotech Innovation Pioneers*

# Hypro-Sorb<sup>®</sup> NT

Local haemostatic made of pure  
Atelo-Collagen Type I





## Hypro-Sorb<sup>®</sup> NT

99.9% pure, crystalline Atelo-Collagen Type I, non-crosslinked

Material origin: bovine Achilles tendon

Highest degree of tissue biocompatibility with effective haemostasis and excellent wound healing characteristics

Bacteriostatic effect

Complete resorption within two to four weeks

## Hypro-Sorb<sup>®</sup> NT

Does not stick, can be easily removed from the nose or wound

Can be cut to size without loss of haemostatic properties

Usable in infected wounds or with medically compromised patients

Sterile and safe for five years after production

Available size: 10 × 10 x 30 mm

Local haemostatic

## Hypro-Sorb® NT

### Fields of indications

- Epistaxis
- ENT surgery
- Plastic surgery

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Local haemostatic

bioimplon<sub>GmbH</sub>  
*Biotech Innovation Pioneers*

# Hypro-Sorb<sup>®</sup> O

Triangular, local haemostatic  
made of pure Atelo-Collagen  
Type I



## Hypro-Sorb<sup>®</sup> O

99.9% pure, crystalline Atelo-Collagen Type I, non-crosslinked

Material origin: bovine Achilles tendon

Highest degree of tissue biocompatibility with excellent wound healing characteristics

Bacteriostatic effect

Complete resorption within two to four weeks

## Hypro-Sorb<sup>®</sup> O

Comfortable triangular shape (10 × 30 mm); placeable in hard reachable areas

Provides good drying and efficient haemostasis during surgery

Can be cut to size without loss of haemostatic properties

Usable in infected wounds or by medically compromised patients

Sterile and safe for five years after production



## Hypro-Sorb<sup>®</sup> O

For drying and stopping bleeding of the incision area in:

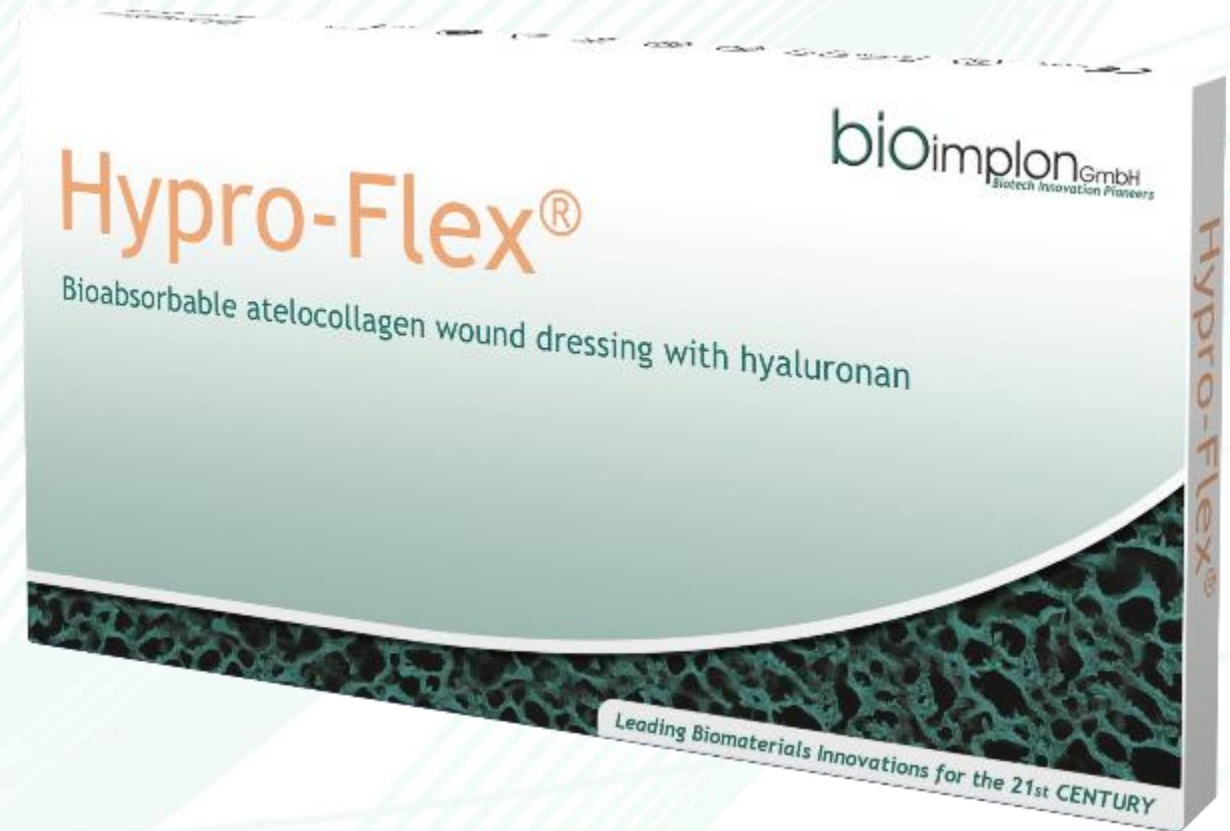
- Ophthalmology
- Neurosurgery



# Wound Healing

# Hypro-Flex<sup>®</sup>

Unique absorbable dermatological  
wound dressing of pure Atelo-Collagen  
Type I and hyaluronate





## Hypro-Flex<sup>®</sup>

99.9% pure, crystalline Atelo-Collagen Type I and 5% hyaluronate

Highest degree of tissue biocompatibility

Excellent wound healing characteristics

Bacteriostatic effect

Complete resorption within two to seven weeks, depending on the wound conditions

## Hypro-Flex®

Easy to apply and place; does not stick to the wound, surgical site or instruments

Easy to shape, can be adapted to the shape of the wound

Less re-bandaging necessary; keeps the wound moist

High absorption capacity

Can be formed into the desired shape after moistening

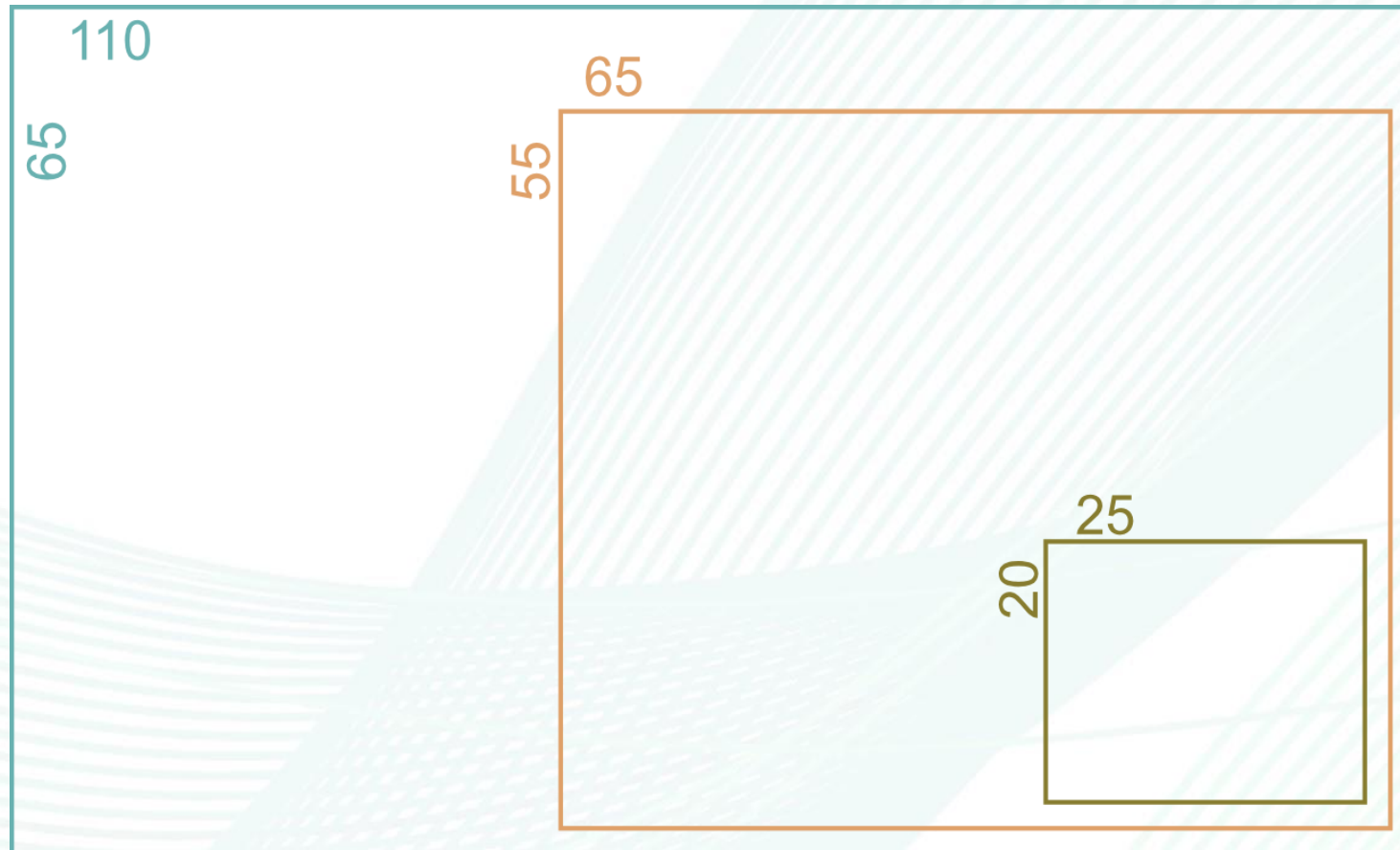
Can be used on its own or in combination with other medicinal products and / or antibiotics

Sterile and safe for five years after production

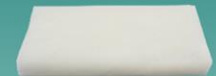
Hypro-Flex®

Available in 3 sizes

bioimplon GmbH  
Biotech Innovation Pioneers



20 x 25 x 4 mm



55 x 65 x 4 mm



65 x 110 x 4 mm



## Hypro-Flex<sup>®</sup>

### Fields of application



Hypro-Flex<sup>®</sup>  
65 x 110 x 4 mm



Hypro-Flex<sup>®</sup>  
55 x 65 x 4 mm

Complicated wounds

Decubitus

Varicose ulcers

Neuropathic defects

1<sup>st</sup> and 2<sup>nd</sup> degree burns

Chronic skin diseases

Bone and joint damage



Hypro-Flex<sup>®</sup>  
20 x 25 x 4 mm

Hypro-Flex®

Fields of indications

- Dermatology
- Plastic surgery

# Product Safety and Certifications



# Sterilization & BSE Safety

Strict control of animal feeding (EN 12442-2)

Historical documentation and decent traceability of cattle

Cattle younger than three years, appropriate for human nutrition

Cattle under veterinary control, BSE tested

# Sterilization & BSE Safety

Controlling the risk of contamination (bacteria, viruses, yeasts) by treating raw materials with:

- bactericidal solutions (sodium chloride, peracetic acid)
- saturated solution of calcium hydroxide (alkaline PH 12.5)

Gamma Irradiation of the final products

These procedures induce structural changes resulting in irreversible, non-toxic conformation of the prion protein.

## Certifications

All our products are CE and ISO certified.

Quality management : ISO 13485:2012, ISO 9001:2009



## Contact US

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