TachoSil SEALANT MATRIX

Basics

corzamedical

The reliable partner
for your team

TachoSil® collagen matrix with human fibrinogen and thrombin.[1]

Pre-rolled TachoSil

Human thrombin (2 IU/cm²)

Human fibrinogen (5.5 mg/cm²)

Collagen honeycombs

Base matrix

Yellow active side
Human fibrinogen + thrombin
(colouring agent: riboflavin)

# Can reduce
air and fluid leakages

- Reduction of air and fluid leakage[4]
- Can be applied when wet or dry[1]
- No increase in volume
- The collagen matrix consists of
  5—8 honeycomb layers

**Tests to demonstrate air
and liquid-tight seal****
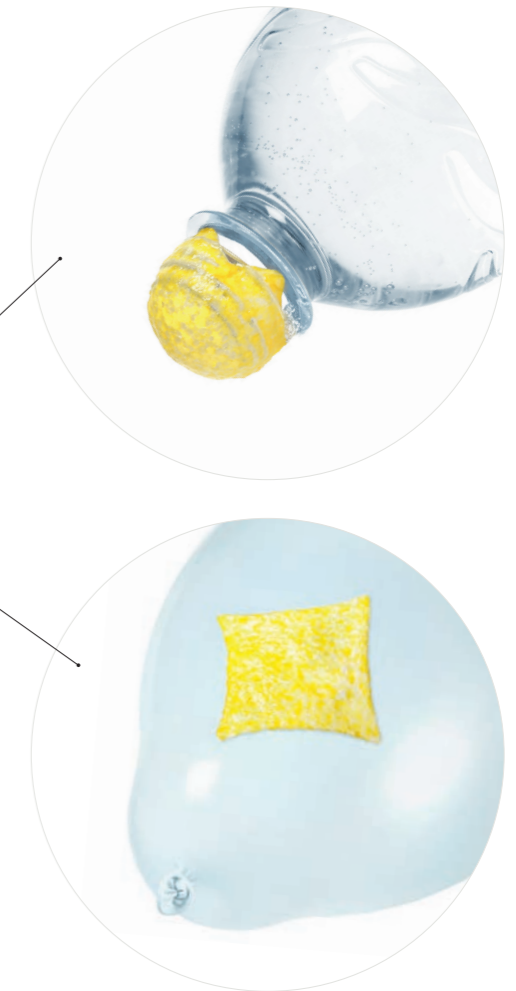
Electron Microscope Image
The scanning electron microscope
image shows the honeycomb
structure of the collagen base
matrix and the adhesive layer
of fibrinogen and thrombin.

Active side
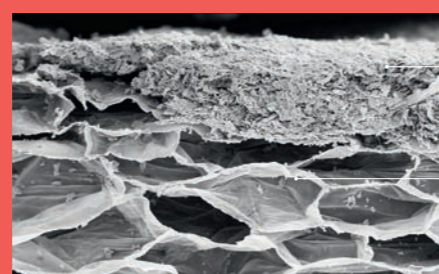
Base matrix

Mag = 100 X
EHT = 20.00 kV
1 mm
Detector = SE1
Date: 9 Aug. 2004

Hemostasis and sealing
- Ready-to-use fixed combination
- Hemostasis regardless of
  coagulation status[2,3]
- Interacts with all physiological fluids
- The fibrin network binds the collagen
 matrix firmly to the wound surface[1,*]

Collagen matrix

Fibrin network

Wound surface

[1] Summary of Product Characteristics TachoSil® sealant matrix, current status.

[2] Haas S. Clin Appl Thromb Hemostat 2006; 12(4): 445—450. [3] Maisano F et al. European Journal of Cardio-thoracic Surgery 2009; 36: 708—714.
[4] Colombo G et al. Vascular Health and Risk Management 2014 10: 569—576. * After pressing onto the wound surface for 3—5 minutes.
** An air and liquid-tight seal with TachoSil® can be demonstrated using simple tests on a water bottle and balloon.

Unique collagen structure

Application:

The time it is pressed in place is decisive.
After 3—5 minutes of pressing it on,
a stable fibrin network is formed.[1]

3 - 5 min.
press gently in place

Collagen base matrix

Fibrin network

Tissue
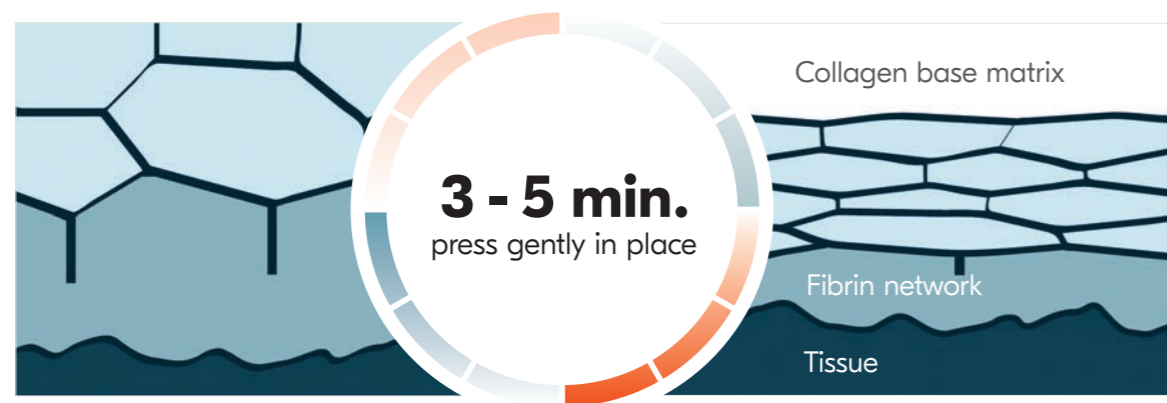
Characteristics of a foamed equine collagen base matrix:
- Physiologically compatible base substance, tested in animal experiments[2]
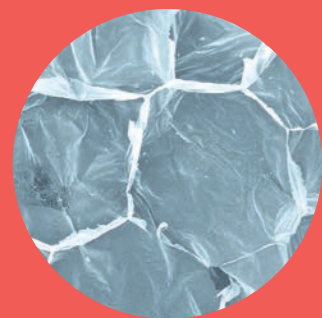- Low risk of zoonosis or infection[3], e.g. BSE

Elastic and flexible[4,*]

The honeycomb structure of the collagen matrix ensures high elasticity.
- Up to 2.5 times more elastic when moistened than when dry[4]
- When moistened, adapts to organ movements
- Easy to shape even to irregular surfaces

Up to 2.5 times more elastic
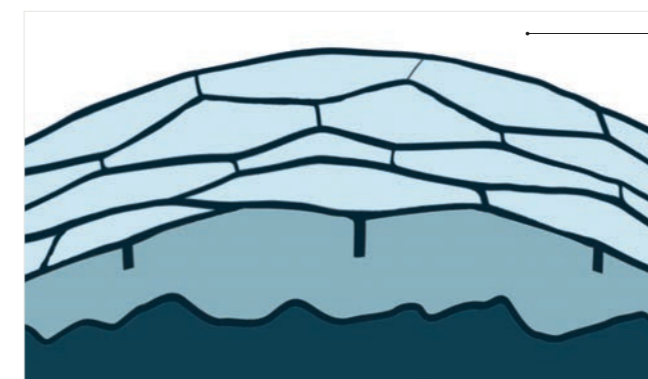
Foamed equine collagen (TachoSil®)

1 mm

Mag = 100X
EHT = 20.00 kV

Detector = SE[1]
Date: 9 Aug 2004

Lyophilised bovine collagen

10 µm
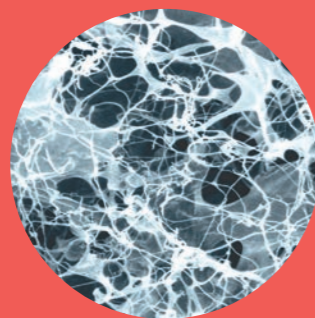
10.0 kV
≥45/08 19/02 KR

1.01 E3

Cellulose
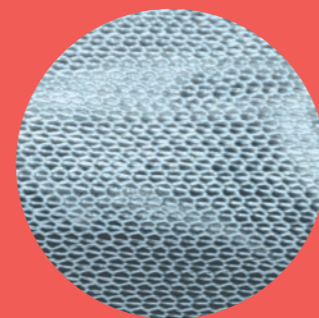
10 mm

Adheres firmly and reliably[4, *]
- Withstands pressure of 61.4 hPa (approx. 46 mmHg, A cough reaches a pressure of up to 60 hPa.)[4]
- Adheres twice as firmly as a manually coated patch and 6 times more firmly than liquid adhesives[4]

The fibrin network is anchored in the honeycomb surface and binds the collagen matrix firmly to the wound surface.
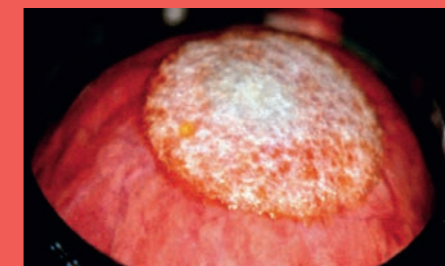
Pressure chamber test with TachoSil®[4]

Firmness of adhesion (stringiness)[4]

[1] Summary of Product Characteristics TachoSil® sealant matrix, current status.
[2] Adelmann-Grill BC and Otto K. Drug Research 1987; 37(II) 7: 802—805.
[3] Toro A et al. J Blood Med. 2011; 2: 31—36.

[4] Carbon RT et al. Tissue Management with Fleece-Bound Sealing. 6th World Congress on Trauma, Shock, Inflammation, and Sepsis — Pathophysiology, Immune Consequences, and Therapy, Munich, March 2—6, 2004, by Medimond International Proceedings, Bologna, 257—267.
* Determined using in vitro material and animal experiment tests.

Compatible with tissue
and absorbable[1,*]

after 4 weeks

Situs
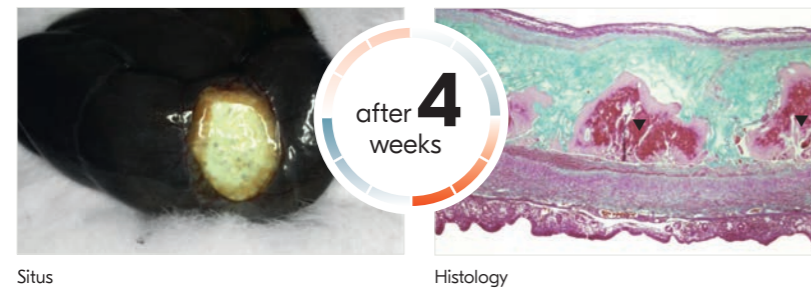
Histology

The collagen patch (here TachoComb® H) is completely coated with serosa containing dense connective tissue with blood vessels among the mesothelial cells.

(Black tissue: appendix serosa, rabbit. In the histological presentation, patch residues are marked by ▼)

after 12 weeks

Situs

Histology

Increasing resorption of the patch by granulation tissue.

Serosa
Granulation tissue
Mucosa
Submucosa

Figures mod. from Schneider A et al.[2] in an animal experiment

Illustrated
in original size

Four versions, three sizes.

Maxi	9.5 x 4.8 cm
Mide	4.8 x 4.8 cm
Pre-rolled	4.8 x 4.8 cm
Mini	3.0 x 2.5 cm

Safety.
Essential and proven.

- TachoSil® has been approved by the EMA and the FDA as a medicinal product with proven efficacy and tolerability
- No bovine components
- Complies with the requirements for medicinal product specification and safety

TachoSil. Efficacy in
hemostasis and sealing.

Ready-to-use fixed combination of collagen matrix and active coagulation factors, used in adults:
- To improve hemostasis
- To promote tissue sealing
- To support sutures in vascular surgery
- To support sealing of the dura mater

Medicinal product, batch documentation required.
Shelf life & storage: 3 years, do not store above 25 °C

[1] Summary of Product Characteristics TachoSil® sealant matrix, current status.
[2] Schneider A et al. Digestive Disease and Sciences 2006; 51(3): 566—570.
* In animal experiments, TachoSil® is biodegraded after application to a wound surface with little residue after 13 weeks. [...] No evidence of local intolerance was observed in animal experiments.

A STRONG CONNECTION.

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