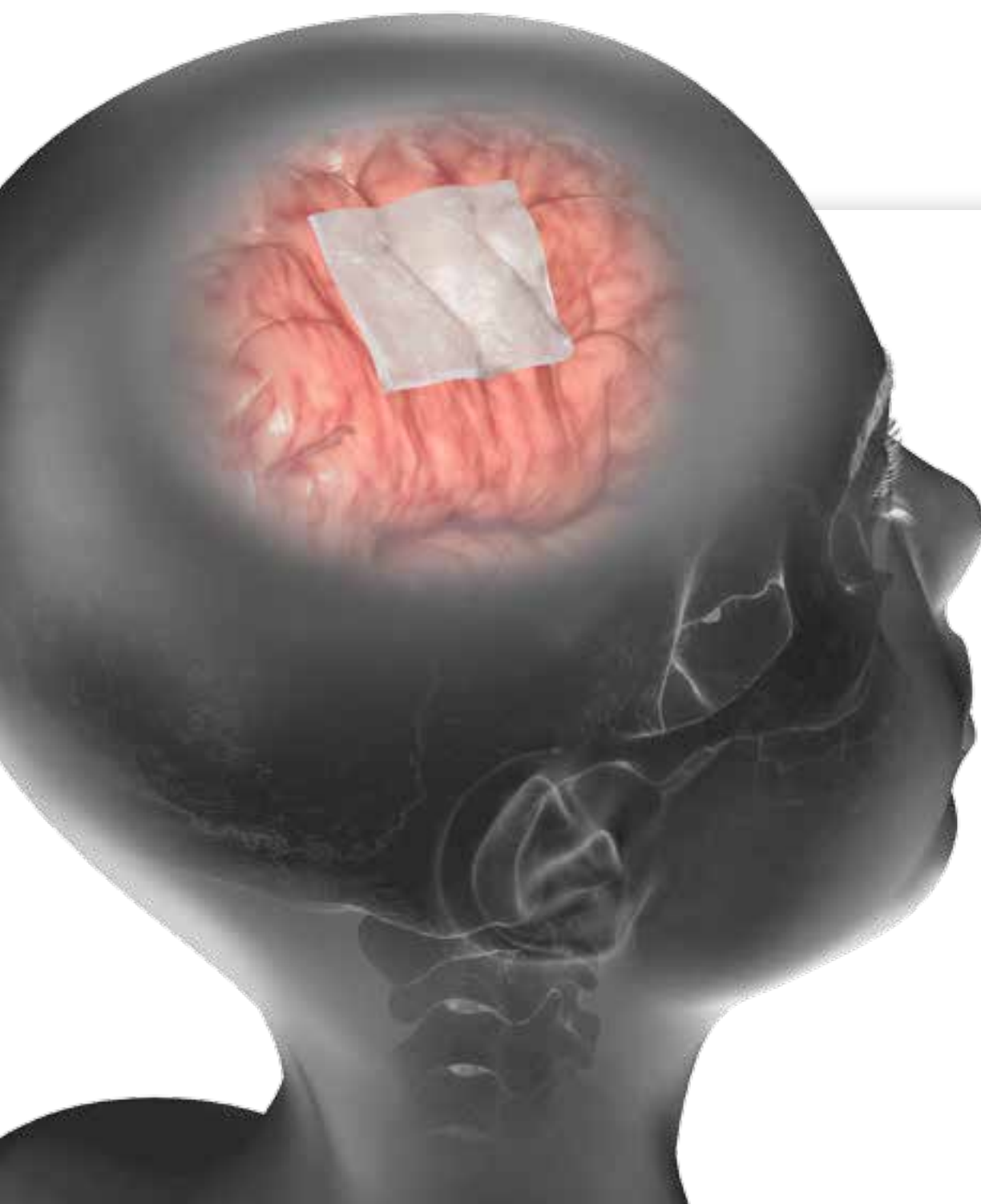


**stryker**



# **DuraMatrix**<sup>®</sup> portfolio

Manufactured by Collagen Matrix

# History

Since 2003, Stryker has partnered with Collagen Matrix, Inc. to provide our customers with quality products for the restoration of the dura mater.

Collagen Matrix, founded in 1997 by Shu-Tung Li, Ph.D., who has over 40 years of experience in connective tissue research and collagen based implant development, delivers a full line of high quality collagen and mineral based medical devices that support the body's natural ability to regenerate. The Company currently produces finished medical devices in the areas of Dental, Neurosurgical, Spine, Orthopaedic and Nerve Repair Surgery.

DuraMatrix line products are comprised of Type I collagen and intact dermis tissue derived from a bovine source.

# DuraMatrix-Onlay PLUS

Collagen dura regeneration matrix  
highly conformable and sutureless restoration

**DuraMatrix-Onlay PLUS** is derived from purified, bovine Achilles tendon. It is intended for use as a dura substitute for the repair of dura mater.

In addition to the thick, spongy texture, this fourth generation DuraMatrix product has a non-porous, collagen layer. This layer helps produce a lower liquid permeability rate compared to a competing dura substitute.<sup>1,3</sup>

DuraMatrix-Onlay PLUS offers a balanced resorption profile that occurs over approximately 8 weeks.<sup>2,3</sup>

## Liquid permeability (ml/min/cm<sup>2</sup>)<sup>1,3</sup>

DuraMatrix-Onlay PLUS

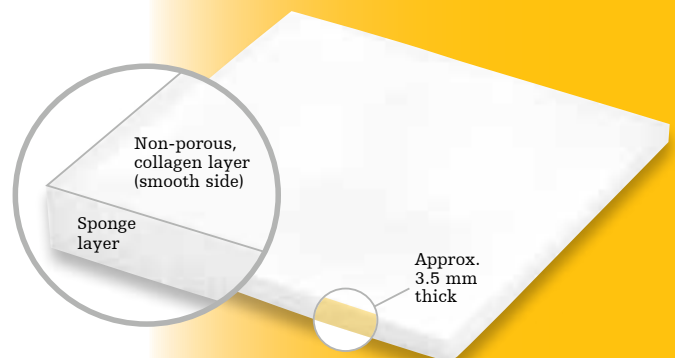
**0.011 ± 0.007**

Comparison substitute

**0.558 ± 0.091**

# 50x<sup>1,2,3</sup>

lower liquid permeability rate when compared to a competing dura substitute



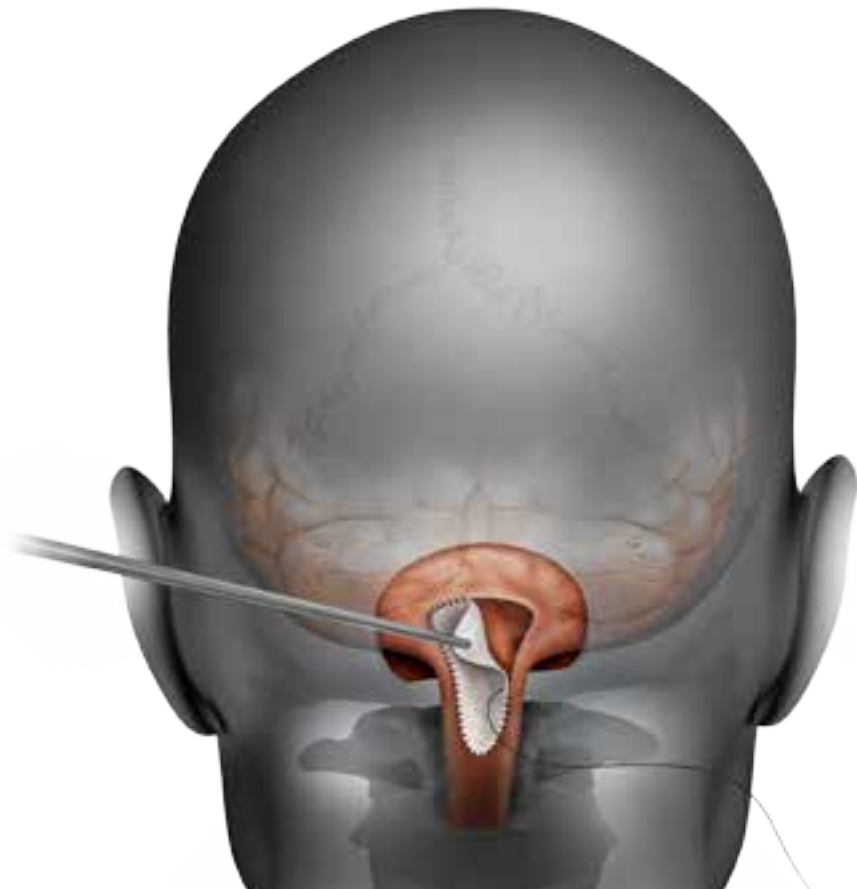
# DuraMatrix Suturable

## Collagen dura membrane reinforced and reliable

**DuraMatrix Suturable** is a collagen dura membrane from purified intact bovine dermis tissue. It is intended for use as a dura substitute for the repair of dura mater.

The natural crosslinks inherent in the native bovine collagen are further biochemically reinforced through a proprietary cross-linking process to provide suturable strength. Furthermore, this results in a resorption time of 38-40 weeks based on the results of a rabbit duraplasty model,<sup>2,3</sup> while new dura mater is regenerated to replace the membrane.

DuraMatrix Suturable shows high suture pull out strength.<sup>1,3</sup> This permits the graft to be firmly anchored to surrounding tissue with minimal risk of membrane tear or detachment.



**The total resorption time (defined as <5% implant remaining) is approximately 38-40 weeks for DuraMatrix Suturable.<sup>2,3</sup>**

## Suture pull out strength (N)<sup>1,3</sup>

DuraMatrix Suturable

**20.40 ± 1.54 N**

Comparison substitute

**11.67 ± 4.12 N**



# 74.8%

greater suture pullout strength when compared to a competing dura substitute.<sup>1,3</sup>

## DuraMatrix-Onlay

**Collagen dura membrane, onlay conformable and versatile**

**DuraMatrix-Onlay** is a purified, type I collagen membrane derived from bovine Achilles tendon. It is intended for use as a dura substitute for the repair of dura mater.

With a thickness of about 0.6mm, DuraMatrix-Onlay serves as a thinner onlay option than DuraMatrix-Onlay PLUS. DuraMatrix-Onlay can also be applied with minimal tension sutures if desired.

DuraMatrix-Onlay offers a balanced resorption that occurs over 6-9 months. <sup>2,3</sup>



## DuraMatrix

**Collagen dura substitute membrane strong and conformable**

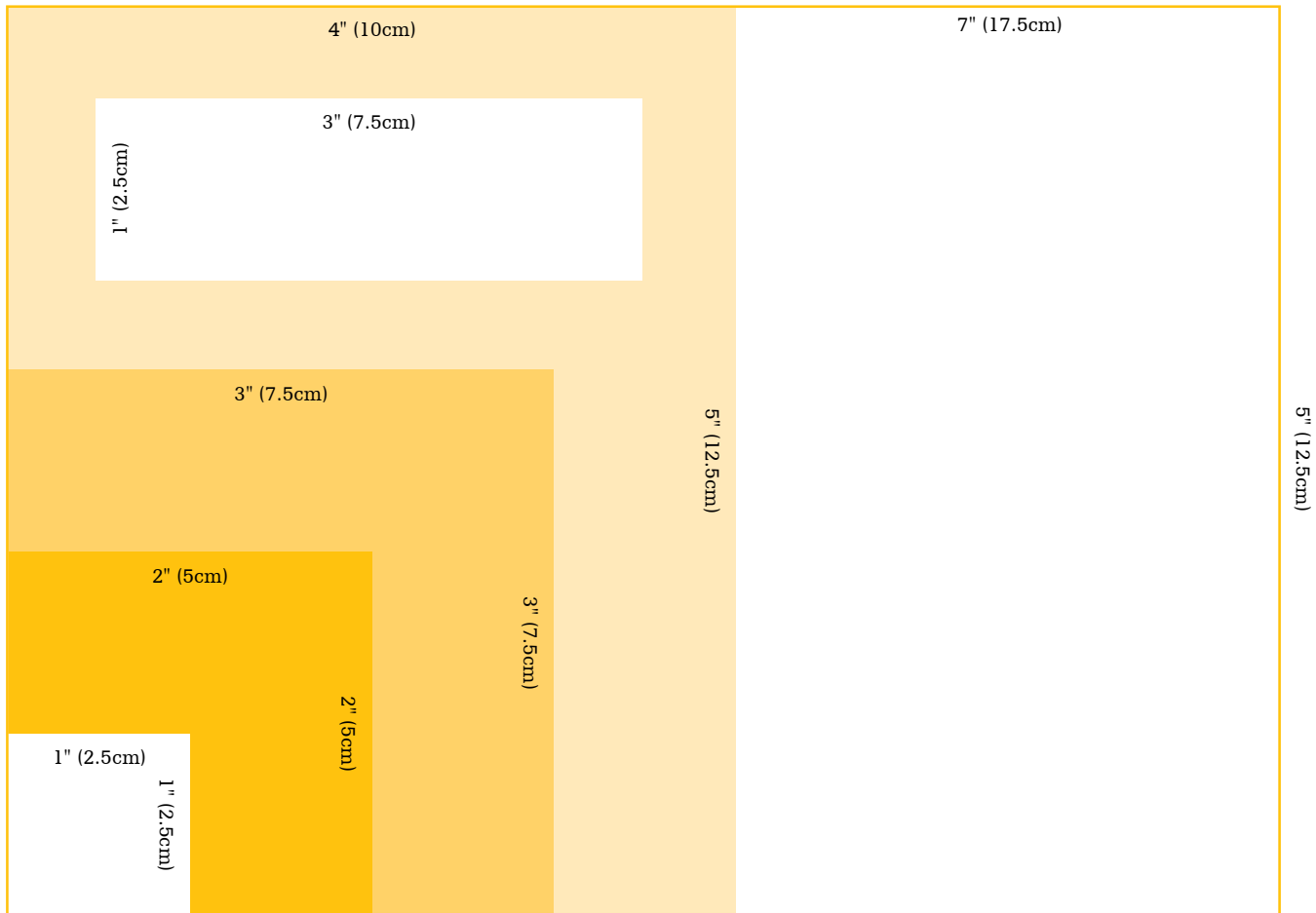
**DuraMatrix** is a purified, type I collagen membrane derived from bovine Achilles tendon. It is intended for use as a dura substitute for the repair of dura mater.

DuraMatrix has a thickness of approx. 0.3 mm which can be considered similar to the thickness of native dura.

The conformability properties of the membrane combined with its mechanical strength allow DuraMatrix to be applied as either an onlay membrane or sutured in place.

DuraMatrix offers a balanced resorption that occurs over 6-9 months. <sup>2,3</sup>





## DuraMatrix-Onlay PLUS



## DuraMatrix-Suturable



## DuraMatrix-Onlay



## DuraMatrix



Part number	Size	Units per	Part number	Size	Units per	Part number	Size	Units per	Part number	Size	Units per
DMOP11	1 in x 1 in (2.5 cm x 2.5 cm)	1	DMS11	1 in x 1 in (2.5 cm x 2.5 cm)	1	CDSL11	1 in x 1 in (2.5 cm x 2.5 cm)	1	CDSM11	1 in x 1 in (2.5 cm x 2.5 cm)	1
DMOP13	1 in x 3 in (2.5 cm x 7.5 cm)	1	DMS13	1 in x 3 in (2.5 cm x 7.5 cm)	1	CDSL13	1 in x 3 in (2.5 cm x 7.5 cm)	1	CDSM13	1 in x 3 in (2.5 cm x 7.5 cm)	1
DMOP22	2 in x 2 in (5 cm x 5 cm)	1	DMS22	2 in x 2 in (5 cm x 5 cm)	1	CDSL22	2 in x 2 in (5 cm x 5 cm)	1	CDSM22	2 in x 2 in (5 cm x 5 cm)	1
DMOP33	3 in x 3 in (7.5 cm x 7.5 cm)	1	DMS33	3 in x 3 in (7.5 cm x 7.5 cm)	1	CDSL33	3 in x 3 in (7.5 cm x 7.5 cm)	1	CDSM33	3 in x 3 in (7.5 cm x 7.5 cm)	1
DMOP45	4 in x 5 in (10 cm x 12.5 cm)	1	DMS45	4 in x 5 in (10 cm x 12.5 cm)	1	CDSL45	4 in x 5 in (10 cm x 12.5 cm)	1	CDSM45	4 in x 5 in (10 cm x 12.5 cm)	1
DMOP57	5 in x 7 in (12.5 cm x 17.5 cm)	1				CDSL57	5 in x 7 in (12.5 cm x 17.5 cm)	1			

**References:** 1. In vitro data on file at Collagen Matrix, Inc. 2. Rabbit duraplasty study. Data on file at Collagen Matrix inc. 3. The results of preclinical in vitro studies may not be indicative of human clinical outcomes 4. In vivo evaluation of resorption in a rabbit duraplasty model. Data on file.

## Craniomaxillofacial

**This document is intended solely for the use of healthcare professionals.**

A healthcare professional must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that healthcare professionals be trained in the use of any particular product before using it in surgery. The information presented is intended to demonstrate the breadth of Stryker product offerings. A healthcare professional must always refer to the package insert, product label and/or instructions for use before using any Stryker product.

Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your Stryker representative if you have questions about the availability of Stryker products in your area.

Stryker Corporation or its divisions or other corporate affiliated entities own, use or have applied for the following trademarks or service marks: Stryker. All other trademarks are trademarks of their respective owners or holders.

The products depicted are CE marked in accordance with applicable EU Regulations and Directives.

This material is not intended for distribution outside the EU and EFTA.

DuraMatrix-Onlay PLUS and DuraMatrix-Suturable are trademarks of Collagen Matrix, Inc.

DuraMatrix-Onlay and DuraMatrix are registered trademarks of Collagen Matrix, Inc.

DuraMatrix-Onlay PLUS, DuraMatrix-Suturable, DuraMatrix-Onlay and DuraMatrix are manufactured by Collagen Matrix, Inc., Oakland, New Jersey USA.

CMFBR75EN\_Rev. None\_12764

SDL 07/2020

2019-23407

Copyright © 2020 Stryker

stryker.com



Collagen Matrix, Inc.  
15 Thornton Road Oakland,  
NJ 07436 USA



2797



MDSS GmbH  
Schiffgraben 41  
D-30175 Hannover  
Germany

**Distributed by:**  
Stryker Leibinger GmbH & Co. KG  
Bötzingen Straße 41  
79111 Freiburg  
Germany