OsseoGuard® & OsseoGuard Flex®

Guided Bone & Tissue Regeneration

OsseoGuard Membrane

OsseoGuard Flex Membrane

Manufactured by Collagen Matrix, Inc.
Distributed by:
OsseoGuard® & OsseoGuard Flex® Resorbable Membranes – Easy To Use For Site Protection

Today, clinicians are treating an increased number of patients using Guided Bone Regeneration (GBR) in conjunction with implant therapy, which has led to an increased use of resorbable membranes. In addition to providing graft material containment and a barrier to soft-tissue cell invasion, studies have shown that using a membrane in most GBR procedures can positively affect the outcome of those procedures.\(^1,2\) Cases in which a membrane was used, have been linked to higher implant survival rates, as well as an increased percentage of vital bone formation in sinus grafts when compared to sinuses grafted without a membrane.\(^1,2\)

In response to the growing need for a resorbable collagen membrane, BIOMET 3i offers OsseoGuard and OsseoGuard Flex Membranes for site protection. Clinicians have the opportunity to select a membrane based on their particular handling characteristic preferences. If a clinician prefers a membrane that has more space maintenance capability, OsseoGuard may be the membrane of choice. On the other hand, if a clinician prefers a membrane that has less memory and therefore a higher degree of conformance to a defect, OsseoGuard Flex may be the membrane of choice.

These membranes can be trimmed and placed dry or hydrated, and do not require side-specific placement. These membranes also have a pore size that allows them to be occlusive to gingival and epithelial cells, while still permeable to essential nutrients and gases.


†Dr. Tarnow has a financial relationship with BIOMET 3i LLC resulting from speaking engagements, consulting engagements and other retained services.
Long-Term Yet Fully Resorbable

OsseoGuard® Membranes
Posterior Mandible Recent Extraction Defects

- The OsseoGuard Membrane is designed for optimal strength, resorption and handling.
- Made of highly purified Type I collagen, derived from bovine Achilles Tendon.

This provides:
- Optimal strength to support suturing and good handling characteristics.
- A suture pull-out strength that is significantly higher than that of BioMend® due to its unique fibrillar matrix structure.
- A long resorption profile (6-9 months) suited for the healing time required in many GBR procedures.

Fig. 1: Clinical appearance of the surgical site at the time of implant placement four weeks after tooth extraction.

Fig. 2 & 3: The osseous defects were grafted with autogenous bone and Endobon® Xenograft Small Granules. The surgical site was covered with an OsseoGuard 20x30mm Resorbable Collagen Membrane.

Fig. 4: The surgical site was closed with sutures.

Fig. 5: Clinical appearance one month post-implant placement showing epithelialization of the soft tissue.

Fig. 6: Three months post-implant placement, the soft tissue has healed completely. The implants are ready for second stage surgery and healing abutment connection.

Fig. 7: Placement of the definitive restoration five months post-surgery.

Fig. 8: Clinical appearance nine months post-surgery. Note the healthy soft tissues.

Fig. 9: Periapical radiograph nine months post-surgery. Note the regenerated bone and graft integration.

Clinical images provided by Dr. Francisco Enrike, Huelva, Spain.


**Flexibility Meets Strength**

**OsseoGuard Flex® Membranes**

Maxillary Molar Post-Extraction Defect

*Cross section of the OsseoGuard Flex Membrane at 100x magnification.*

- The OsseoGuard Flex Membrane is designed for optimal strength and drapability, resorption and handling.
- Made of Type I and Type III collagen membranes, highly purified from intact bovine dermis.

**This provides:**

- Optimal flexibility to drape over the defects.
- A long resorption profile (6-9 months) suited for the healing time required in many GBR procedures.
- The ability to aid in gingival healing even when left exposed in a posterior molar extraction site.

**Fig. 1:** Extraction socket of maxillary first molar.

**Fig. 2:** Extraction socket grafted with Endobon® Xenograft Small Granules and covered with an OsseoGuard Flex Membrane.

**Fig. 3:** The edges of the membrane were positioned under the soft tissue and were secured with resorbable sutures.

**Fig. 4:** Healing was uneventful. The soft tissue was epithelializing over the OsseoGuard Flex Membrane two weeks postoperatively.

**Fig. 5:** The site was completely covered four weeks after the extraction.

**Fig. 6:** At four months postoperatively, a radiograph of the graft site showed excellent containment of the graft material.

**Fig. 7:** At four months postoperatively, the socket was healed and ready for implant placement.

**Fig. 8:** A 6mm diameter BIOMET 3i Implant with a 5mm platform was placed four months postoperatively.

**Fig. 9:** The implant was left submerged for two months of healing.

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*Primary closure is recommended. If exposed, resorption time will be shorter.

Manufacturer: Collagen Matrix, Inc., Oakland, NJ

Clinical images provided by Dr. del Castillo, FL, USA.


†Dr. del Castillo has a financial relationship with BIOMET 3i LLC resulting from speaking engagements, consulting engagements and other retained services.
Verified Lot-to-Lot Strength

In order to evaluate the strength of the OsseoGuard® Membrane, a suture pull-out test is conducted by the manufacturer (Collagen Matrix, Inc.) on every lot of membranes produced.

A 3.0 suture is passed through the membrane at approximately 3mm from the edge of the membrane. A knot is tied in the suture, leaving a loop to hook the suture onto a force gauge. The other end of the membrane is secured in a clamp. The suture is pulled at a rate of one inch per minute until the suture pulls out of the membrane. The average force required to pull a suture out of the OsseoGuard Membrane from ten suture pull-out tests is: 0.286kg, +/- 0.090kg. This consistently verifies the mechanical strength necessary to support suturing the membrane for stability.

OsseoGuard & OsseoGuard Flex®

Indications for Use

- Extraction sockets
- Coverage of sinus window and sinus membrane perforations
- Localized ridge augmentations
- Alveolar ridge reconstruction
- Guided bone regeneration in dehiscence defects
- Guided bone regeneration in periodontal defects

Ordering Information

Both OsseoGuard® and OsseoGuard Flex® are available in three sizes with double sterile packaging.

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<tr>
<th>Size</th>
<th>OsseoGuard</th>
<th>OsseoGuard Flex</th>
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Want A Membrane That Is Easy To Use? Try An OsseoGuard Or OsseoGuard Flex Membrane Today!

VISIT: www.biomet3i.com

For More Information, Please Contact Your Local BIOMET 3i Sales Representative