

# **NeoGen®** Non-resorbable Membranes

A new generation of Ti-reinforced and non-reinforced PTFE membranes

Intelligent Simplicity

# NeoGen® – a new generation of Ti-reinforced and non-reinforced

NeoGen<sup>®</sup> is a new generation of non-resorbable PTFE membranes combining the handling and tissue interactions of expanded PTFE with the enhanced barrier function offered by dense PTFE. The Ti-reinforced membrane has a three-layer design. The outer, soft tissue friendly, PTFE layer has a tight texture to resist bacteria permeability; the middle layer is a strong and highly shapeable titanium mesh; and the inner PTFE layer has an expanded texture that enables predictable hard tissue integration. This combination results in a membrane that is easy to handle and protects the augmentation site in a predictable manner. A non-reinforced membrane is available for coverage of smaller bone defects where the surrounding bone provides sufficient stability.

# Design principle

# Soft tissue side

The soft tissue side of the membrane has a tight texture. This enables soft tissue interaction which leads to membrane stability. It also creates a barrier function which minimizes the risk of infection.



Membrane surface demonstrating a tight texture with fibrils stretched in one direction.



Surface topography on the submicrometer scale demonstrating a smooth texture.

# Titanium mesh

The titanium mesh configuration constitutes a strong and highly shapeable reinforcement that retains its shape throughout the healing period.



Easy to shape in three dimensions



# Hard tissue side

The hard tissue side has an expanded texture that enables predictable hard tissue integration. In combination with the firm mesh configuration complete bone fill can be achieved.



Membrane surface demonstrating an expanded texture with fibrils stretched in multiple directions.



Surface topography on the submicrometer scale demonstrating an open and significantly rougher texture.

# **PTFE** membranes

Scientific evidence Histology courtesy of Prof. Christer Dahlin, University of Gothenburg, Sweden

# Soft tissue side



Human fibroblasts cultured on the soft tissue side of the membrane. Healthy fibroblast morphology (cell spread on surface) indicating tissue friendly material.



Higher magnification of a fibroblast demonstrating multiple attachments to the membrane surface.



Membrane implanted in rabbit maxilla site for 4 months. A cross section of the soft tissuemembrane interface shows excellent tissue integration.

# Titanium mesh



The mesh design increases the shapeable area of the titanium by 50– 60% compared to the corresponding surface in a conventional finger type reinforced membrane offered by competition.<sup>1</sup>

A higher resistance to external forces can be achieved by utilizing a mesh design instead of conventional finger type reinforcement.<sup>1</sup>

1. Data on file



# Hard tissue side



Membrane implanted in rabbit maxilla site for 4 months. A cross section of the bone-membrane interface shows new bone formation (violet) in direct contact with the membrane (blue).



Higher magnification of the bone-membrane interface shows bone tissues in direct contact with membrane and mineral deposits (dark spots) into the membrane.



Elemental analysis of the bone-membrane interface shows calcium deposits (green) into the membrane (red). This indicates a close interaction between bone and membrane.

The history of PTFE membranes began in the late 1980s with W.L. Gore and Associates, Inc. developing an expanded PTFE membrane. In the 1990s a dense type of PTFE membrane, designed to better withstand exposure, was developed. NeoGen<sup>®</sup> non-resorbable membrane is a new generation of PTFE membrane that combines the beneficial properties (handling, tissue interaction) of expanded PTFE with the enhanced barrier function of dense PTFE, all in one membrane.

# Clinical performance Case courtesy of Dr. Norbert Haßfurther, Germany

# Soft tissue side



The anatomical membrane shape provides coverage in most situations without trimming the mesh. The easily shapeable mesh maintains its shape for the entire treatment period.



The stability of the membrane leads to uneventful healing without exposure.



The membrane is easy to remove from soft tissue after healing.

# **Titanium mesh**



Membrane configuration for augmentation of vertical defect.

The mesh is shapeable in multiple directions. It provides a stable tenting function and minimizes membrane folds.



Membrane configuration for augmentation of large buccal defect.

# Hard tissue side



The initial clinical situation. An implant is placed to replace a missing central incisor. Several threads are exposed due to missing buccal wall.



Radiographs directly after membrane placement and directly after membrane removal showing vertical bone fill above the implant platform.



Successful case conclusion with complete fill of the void with regenerated bone.

NeoGen® Ti-reinforced membrane is surgically placed under the oral mucosa to aid in the regenerative healing of bone defects. The membrane stops the soft tissue from growing into the defect and creates space for complete fill of the defect with regenerated bone.



# Design principle



# Assortment

NeoGen® Ti-Reinforced membrane is available in six different anatomical shapes to cover all main indications from single anterior defects to larger multiple site defects. NeoGen® Non-Reinforced membrane is available in three different shapes.



Art. No. 64010 NeoGen® PTFE Membrane, Ti-Reinforced – S I (Small Interproximal) 29 × 14 mm



Art. No. 64011 NeoGen® PTFE Membrane Ti-Reinforced – M (Medium Interproximal) . 30 × 19 mm



Art. No. 64012 NeoGen® PTFE Membrane Ti-Reinforced (Large Interproximal) 36 × 21 mm



Art. No. 64013 NeoGen® PTFE Membrane Ti-Reinforced (Medium) 32 × 22 mm

Accessories



Art. No. 64014

NeoGen® PTFE Membrane, Ti-Reinforced – L

(Large)

34 × 25 mm

Art. No. 64015 NeoGen® PTFE Membrane Ti-Reinforced – XL (Extra Large) 46 × 32 mm



Art. No. 64019 NeoGen® PTFE Membrane, Non-Reinforced 18 × 12 mm



NeoGen\* PTFE Membrane, Non-Reinforced 29 × 14 mm



Art. No. 64021 NeoGen® PTFE Membrane, Non-Reinforced 34 × 25 mm

Art. No.	Description
64036	Membrane Tack 3 mm – 10 pcs
64031	Tack Positioning Instrument
64033	Tack Mallet
64034	Tack and Screw Cassette
64037	Membrane Screw 3 mm – 10 pcs
32.Z4401.00	Neoss PTFE Suture 60 cm 4/0 – Reverse Cutting 16 mm 3/8 (12 pcs)
32.Z4408.00	Neoss PTFE Suture 60 cm 6/0 – Reverse Cutting 12 mm 3/8 (12 pcs)
All products might not be available in all markets	

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