

REFERENCES:

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ASSURE™ AND REVIVE™

SURGICAL MESHES FOR HERNIA REPAIR

EXCEPTIONAL RESULTS

REVOLUTIONARY TECHNOLOGY



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Synthetic Strength. Biologic Design.

TWO NEW MESHES THAT COMBINE THE BEST SYNTHETIC AND BIOLOGIC FEATURES

Surgical meshes are typically made with either a biologic or a synthetic material, each offering its own set of benefits.

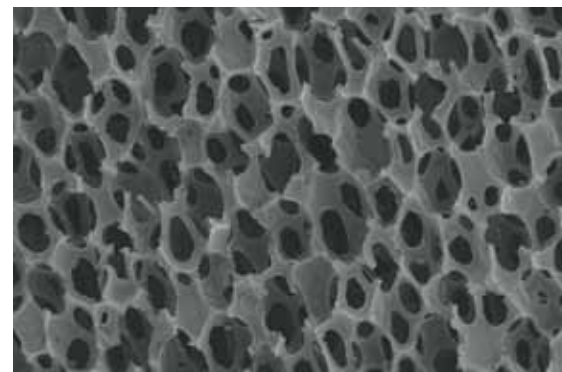
Biologic meshes

- Advanced lattice framework
- Provides support for tissue ingrowth and formation

Synthetic meshes

- Often associated with providing strong mechanical support
- More economical price

Both ASSURE and REVIVE surgical meshes feature a layer of our proprietary **Polyurethane Biomaterial**, a revolutionary biointegrative synthetic tissue scaffold. This advanced “biomimetic” material consists of an open-cell, three-dimensional, interconnected **macroporous structure** designed to play a role similar to an extracellular matrix (ECM).



Macroporous structure with 90-95% void content (23x magnification).

With Medline's ASSURE and REVIVE surgical meshes, you get all these benefits and more.

- **ASSURE™**
FOR THE REPAIR OF VENTRAL HERNIAS
- **REVIVE™**
FOR THE REPAIR OF INGUINAL HERNIAS



The proprietary Polyurethane Biomaterial, found in both REVIVE and ASSURE, is pliable, conformable and trimmable for easy handling. (REVIVE pictured)



Superb resiliency facilitates an open or laparoscopic approach.

The Polyurethane Biomaterial enables the meshes to provide key elements of a high-quality soft-tissue repair:

Optimal Tissue Ingrowth

- An ideal scaffold to support predictable, organized fibrovascular tissue ingrowth^{1,2}
- Highly permeable (average of 393, Darcy's permeability constant)³

Free Access to Surrounding Tissue

- Up to 95 percent void content for exceptional cellular infiltration and vascularization^{1,2}

Biocompatibility

- Derived from biomedical polyurethanes with more than three decades of use in implantable medical devices
- Long-term biocompatibility

Easy Handling

- Resilient – enabling delivery, positioning and fixation without significant manipulation, either through an open or laparoscopic approach
- Soft and pliable – conforming well to various anatomical structures
- Trimmable – for modifying perioperatively to ideally fit each clinical application^{4,5}

ASSURE™

FOR THE REPAIR OF VENTRAL HERNIAS

ASSURE surgical mesh features three layers:

1 Polyurethane Biomaterial

- Supports optimal tissue ingrowth by facilitating a high-quality repair throughout the healing process
- Safe and biocompatible with a base chemistry derived from polyurethanes with a long history of use in implantable medical devices

2 Knitted Polypropylene Monofilament Fibers

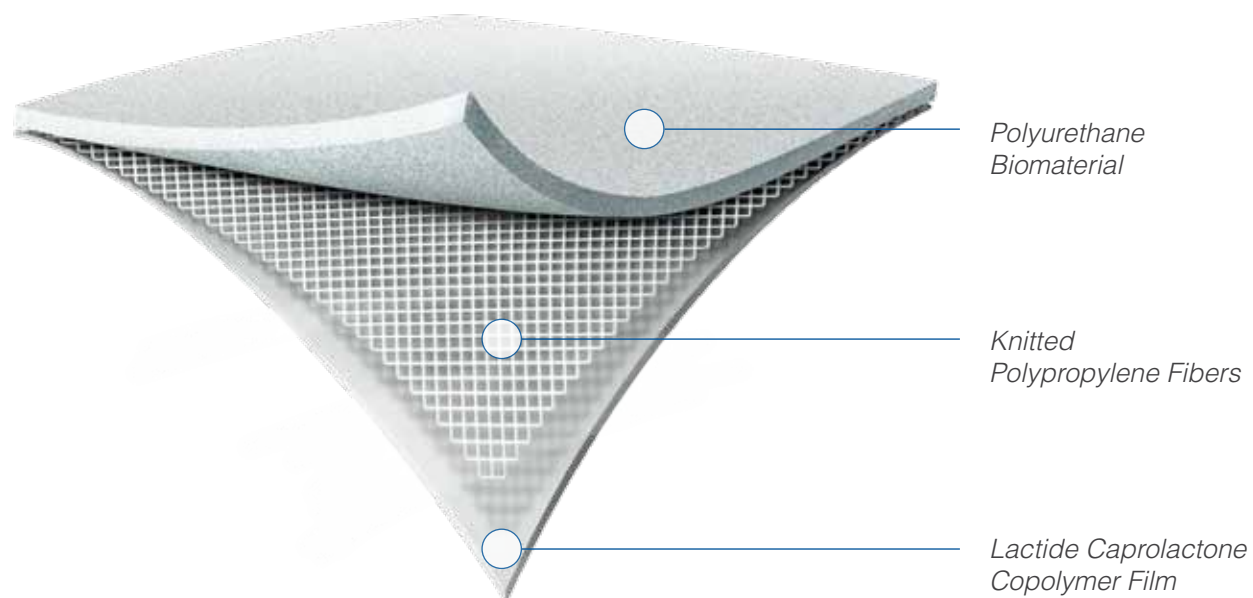
- Provides long-lasting mechanical, tensile and burst strength.⁶

3 Lactide Caprolactone Copolymer Film

- Helps prevent tissue attachment to the device⁷
- Fully resorbable
- Remains intact throughout the critical stages of healing.^{1,7}



ASSURE™ — A safe, implantable biomedical material for the repair of ventral hernias.



ASSURE PRECLINICAL STUDY

Studies were conducted in a rat abdominal wall – a site-appropriate, small animal model commonly used for the evaluation of hernia repair devices.

ASSURE demonstrated a well-tolerated histomorphologic response characterized by high levels of mononuclear cell infiltration, well-organized fibrovascular tissue ingrowth and high degree of angiogenesis. At the 6-month timepoint, ASSURE showed minimal shrinkage.¹

The study showed that the lactide caprolactone copolymer layer remains intact for up to sixteen weeks after implantation, during the critical stages of the healing process. **The study concludes that ASSURE supports good integration with the surrounding host tissue.**^{1,8}

ASSURE Technical Characteristics

Composition: Polycarbonate polyurethane, knitted polypropylene monofilament fibers, and lactide caprolactone copolymer layer

CHARACTERISTICS	ASSURE	TEST METHOD
Cell size	250 - 500 µm	N/A
Thickness	1.1 mm or 0.043"	N/A
Ball burst	294 N	ASTM D 3787
Tensile strength normal	214 N	ASTM D 638
Suture retention normal	34 N	N/A
Tear resistance	24 N	ASTM D 3574

Ordering Information

ITEM NUMBER	DESCRIPTION	PKG
SMS1015L	Assure 10 x 15 cm, Rectangle	1/bx
SMS1015LO	Assure 10 x 15 cm, Oval	1/bx
SMS1520L	Assure 15 x 20 cm, Rectangle	1/bx
SMS1520LO	Assure 15 x 20 cm, Oval	1/bx
SMS2025L	Assure 20 x 25 cm, Rectangle	1/bx
SMS2030L	Assure 20 x 30 cm, Rectangle	1/bx

REVIVE™

FOR THE REPAIR OF INGUINAL HERNIAS

REVIVE surgical mesh features three layers:

1 Top Layer of Polyurethane Biomaterial

- Supports optimal tissue ingrowth by facilitating a high-quality repair, throughout the healing process
- Safe and biocompatible with a base chemistry derived from polyurethanes with a long history of use in implantable medical devices

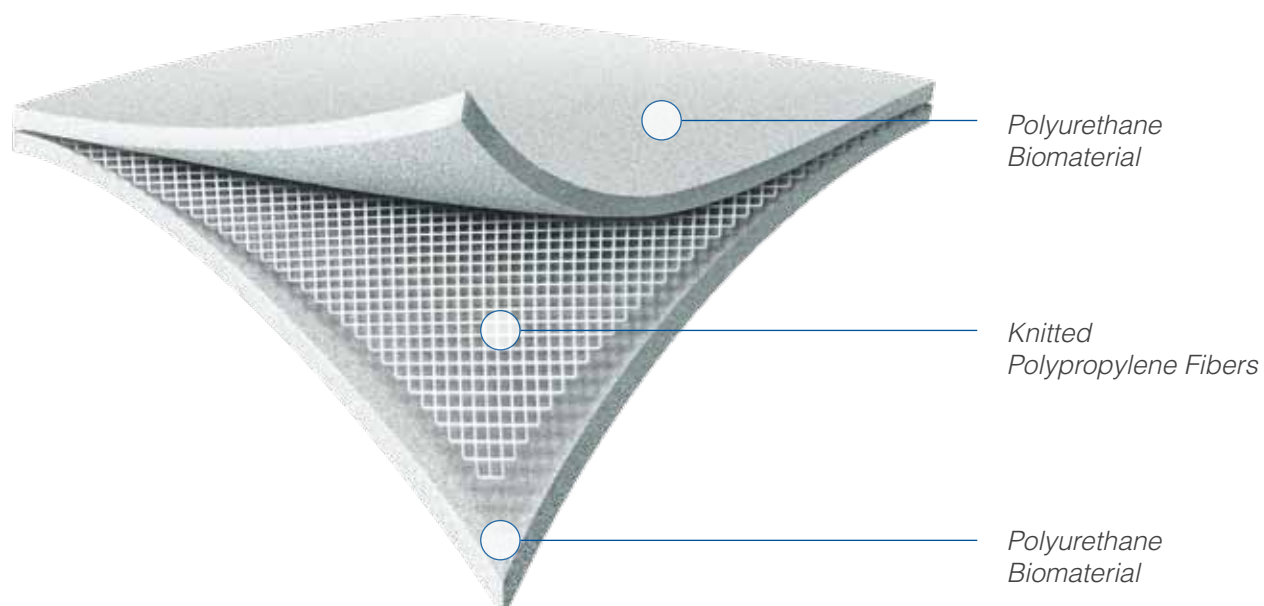
2 Knitted Polypropylene Monofilament Fibers

- For long-lasting mechanical, tensile and burst strength.⁹

3 Bottom Layer of Polyurethane Biomaterial



REVIVE™ — A safe, implantable biomedical material for the repair of inguinal hernias.



REVIVE PRECLINICAL STUDY

Studies were conducted in a rat abdominal wall – a site-appropriate, small animal model commonly used for the evaluation of hernia repair devices.

REVIVE demonstrated a well-tolerated histomorphologic response characterized by site appropriate fibrovascular connective tissue and the growth of a robust vascular bed supporting tissue formation throughout the mesh and surrounding host tissue. At the 6-month timepoint, REVIVE showed minimal shrinkage.^{2,10}

The preclinical study demonstrates that REVIVE provides an environment to support a high-quality soft tissue repair.

REVIVE Technical Characteristics

Composition: Polycarbonate polyurethane, knitted polypropylene monofilament fibers

CHARACTERISTICS	REVIVE	TEST METHOD
Cell size	250 - 500 µm	N/A
Thickness	2 mm or 0.078"	N/A
Ball burst	342 N	ASTM D 3787
Tensile strength normal	210 N	ASTM D 638
Suture retention normal	30 N	N/A
Tear resistance	18 N	ASTM D 3574

Ordering Information

ITEM NUMBER	DESCRIPTION	PKG
SMS510U	Revive 5 x 10 cm, Rectangle	3/bx
SMS510UH	Revive 5 x 10 cm, Rectangle	1/bx
SMS1215U	Revive 12 x 15 cm, Rectangle	3/bx
SMS1215UH	Revive 12 x 15 cm, Rectangle	1/bx