

## INGUINAL HERNIA

- Filaprop Mesh
- Filaprop Mesh Soft
- Merigrow
- Absomesh
- Mericron Mesh
- Contacto Mesh

## MESH FIXATION DEVICE

- Profound A
- Profound N

## VENTRAL HERNIA

- Merineum

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# Infrastructure

Situated on 180 acres of land and built over a 300,000 sq.ft. area, Meril's ISO 13485 & cGMP certified ultra-modern manufacturing facility is constructed to satisfy the stringent needs of our cardiovascular, orthopedics, diagnostics and endo-surgery businesses, as well as our R&D endeavors.

Fully integrated manufacturing systems ensure backward integration, flawless man-material movement and complete control over processes to eliminate production errors. All manufacturing and sterilization processes are conducted in-house, in addition to the analytical and microbiological QA/QC tests required to meet the world-class production standards.

Meril Park, Vapi



# Talent

Meril's 4500 + personnel are a strong, experienced team comprising designers, engineers, chemists, microbiologists, regulatory affair experts, R&D scientists, clinical affairs experts, legal, finance, sales and marketing professionals with innovative capabilities. The team is continuously striving towards improving and saving lives every day by providing revolutionary solutions for diagnosis, prevention and treatment.

Currently Meril has direct sales & representative offices in India, Germany, Turkey, USA, China and Brazil, and a strong distribution network spread over an additional 102 countries in 6 continents.



# Meril Academy

While innovations and advancements in medical technology play a vital role in contributing to the betterment of a healthy society, a larger role also lies in educating and imparting practical training to doctors, clinicians and other members of the medical fraternity. This initiative will help bridge the gaps between the available technology, its adoptions and its implementation for superior patient care.





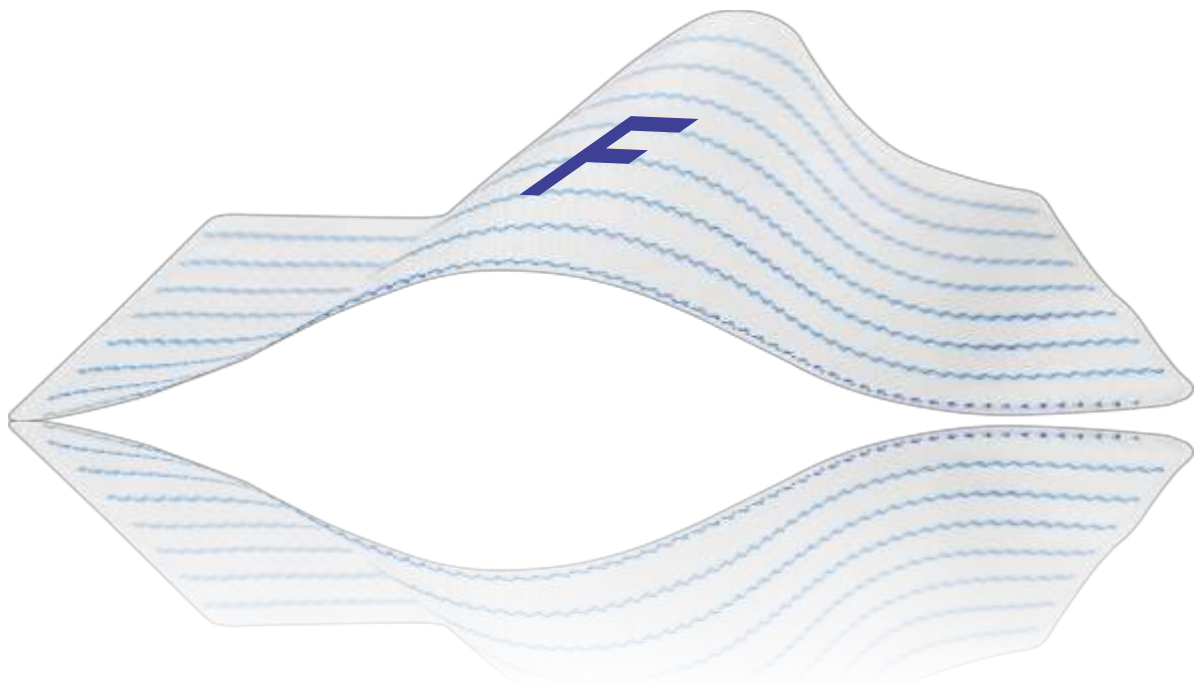
When you can work  
through a **KEYHOLE**,  
why open the door?



Tissue separating dual layered mesh with optimized  
design for strength and performance

## MERINEUM™

Polypropylene / Polylactide-Caprolactone Mesh

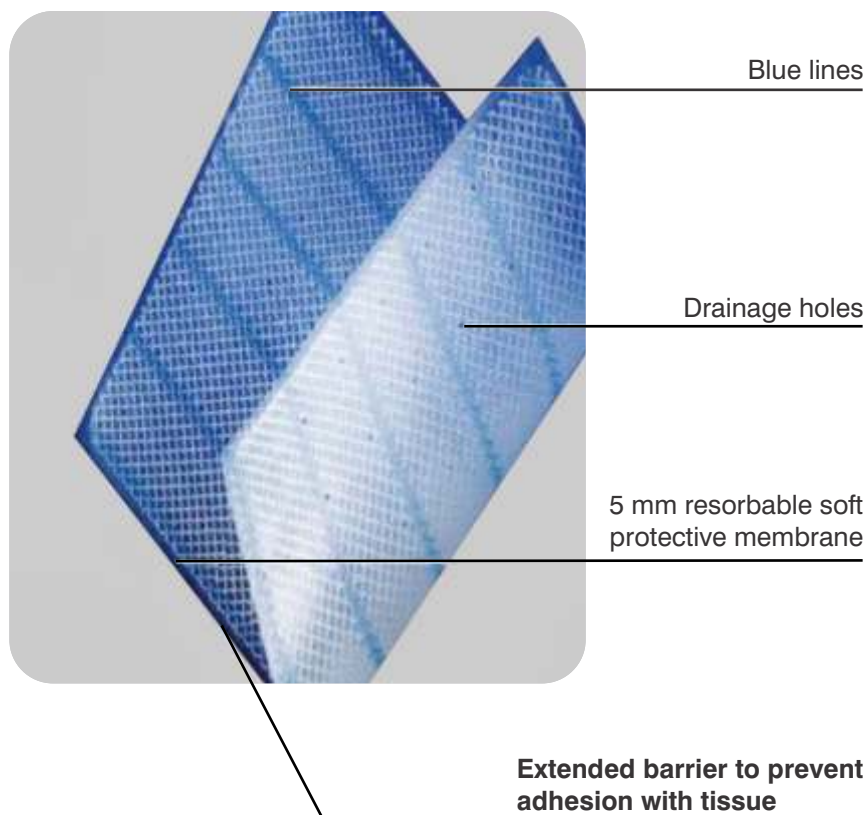


### Indications

- ◆ Laparoscopic Ventral Hernia Repair
- ◆ Incisional Hernia Repair
- ◆ Umbilical Hernia Repair



## 4 Unique Features Multiple Benefits



### Blue Lines

- Improved visibility
- Ease of mesh distinguish during laparoscopy
- Ease of mesh orientation

### Well Proportioned Drainage Hole

- Ensure seroma drainage in time
- Facilitates fibroblast growth
- Ease of taking transfascial suture

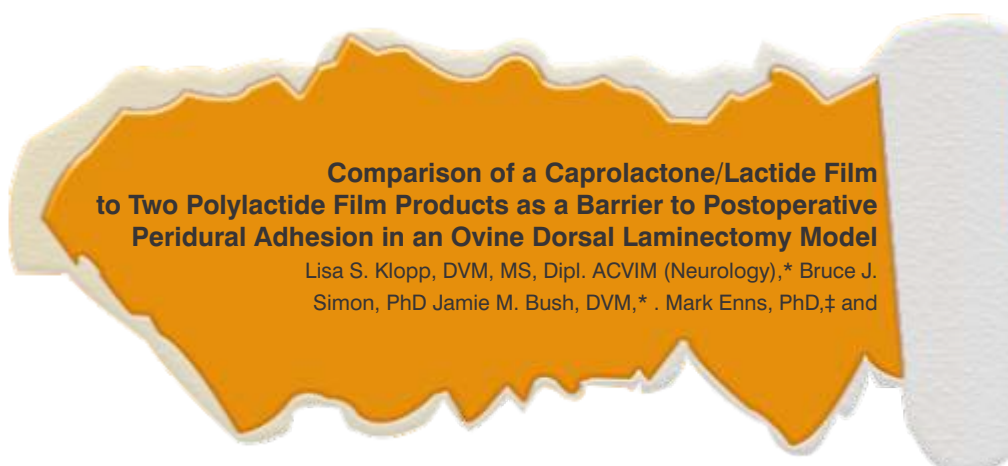
### Transparent Synthetic Absorbable Anti-adhesive Barrier

- Strong barrier - More resistant to damaged during deployment through trocar
- Protection against adhesion formation during critical period
- PLCL barrier resorbs between 90-120days



**Poly lactide-caprolactone composite mesh for ventral hernia repair: a prospective, randomized, single-blind controlled trial.**

Shen YM1, Li Q1, Chen J2, Sun L1, Chen Fq1.



**Comparison of a Caprolactone/Lactide Film to Two Polylactide Film Products as a Barrier to Postoperative Peridural Adhesion in an Ovine Dorsal Laminectomy Model**

Lisa S. Klopp, DVM, MS, Dipl. ACVIM (Neurology),\* Bruce J. Simon, PhD Jamie M. Bush, DVM,\* . Mark Enns, PhD,‡ and

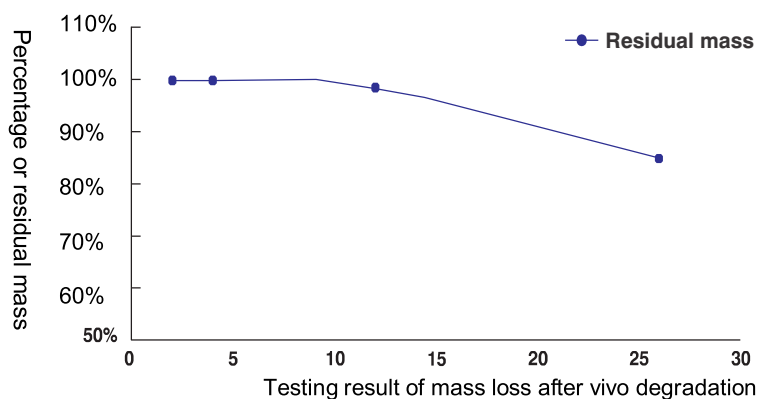
## PLCL Degradation Study - Swine Abdominal Cavity Implantation Study

### Objective of Study

- ◆ To estimate the complete absorption period for PLCL

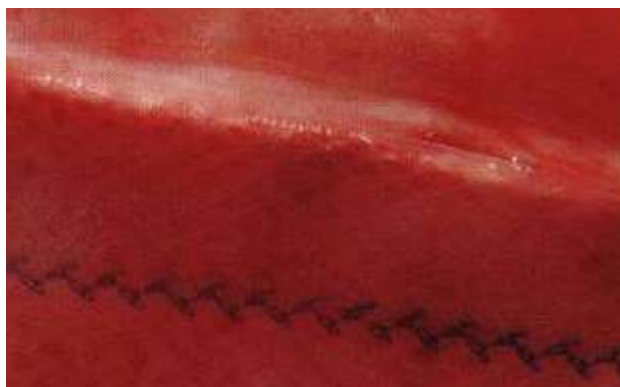
### Observations

- ◆ The surface and structure of PLCL film is complete and without obvious degradation pore in a week after implantation of composite mesh.
- ◆ When implanted after a month, the PLCL film has been covered completely by the pseudo peritoneum, the film is still integrate but it became brittle and can be removed after stripping the tissue.
- ◆ PLCL film was completely degraded after 3 months of implantation.



### Conclusion

- ◆ Merineum Mesh residual content is more than 98% when 12 weeks Post-Op



Merineum 1.. week Post OP




Merineum 1 month Post OP

## Technical Specifications



Pore Size	1.8 mm - 2.0 mm
Weight	185 gsm (Before Absorption) 40 gsm (After Absorption)
Thickness	0.5 - 0.6 mm
Burst Strength	350 N (Initial)
Burst Strength	330 N (After absorption)

Product Code	Shape	Description
TSM715RE		7.6 cm x 15 cm Rectangular
TSM1515SQ		15 cm x 15 cm Square
TSM1015OV		10 cm x 15 cm Oval
TSM1520RE		15 cm x 20 cm Rectangular
TSM1520OV		15 cm x 20 cm Oval
TSM2025OV		20 cm x 25 cm Oval





Appropriate tissue capture and penetration for secure fixation at multiple angles

## PROFOUND™ A

Poly (lactide-co-glycolide)

***Absorbable Mesh Fixation Device 5mm for Laparoscopic Hernia Repair.***

Tube Diameter 5.0 mm

Tube Length 36 cm



## 1. Patient Comfort, Delivered

Designed with patient comfort in mind

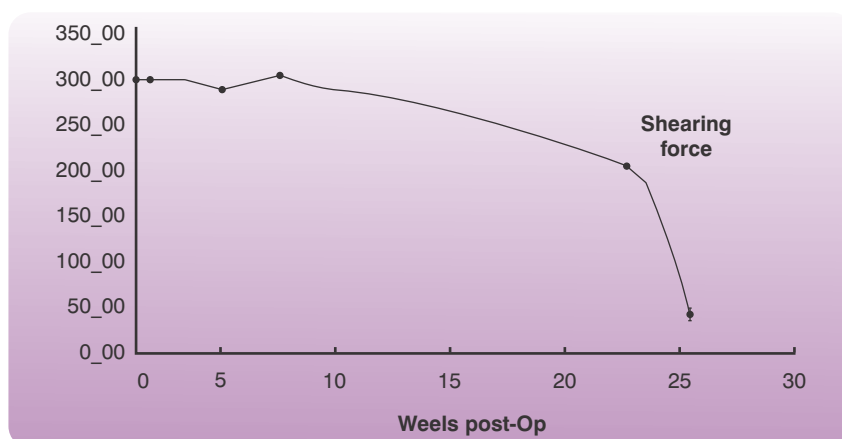
### POTENTIAL PAIN REDUCTION

- ◆ Mesh fixation can be associated with postoperative pain, possibly due to nerve entrapment.
- ◆ PROFOUND™ A being an absorbable fixation device offers patients potential pain reduction.



### RELIABLE STRENGTH

PROFOUND™ A retains 85% shearing force of the original at 12 weeks, providing secure fixation during the initial critical healing period.



Absorption of spike essentially complete between 52-54 weeks

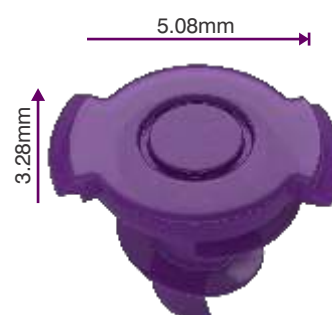
## 2. Trust, Delivered

Trusted from its design, to its delivery, to its easy to see color.  
Longer spike than the “gold standard” permanent fixation device



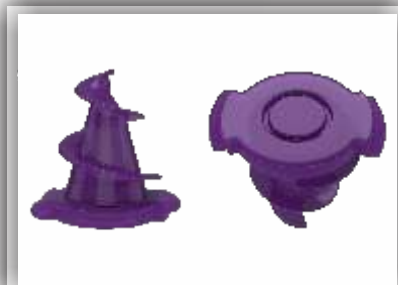
Screw design spikes with sharp exposed tip ensures minimal tissue damage.

Wide proximal wings holds larger pore size mesh as well as dual meshes securely, ensuring strong repair.



### 3. Optimal Visibility, Delivered

Violet spike



- Designed specifically to optimize visibility during surgery

### 4. Safety Delivered

Needle-less fixation

- Eliminates likelihood of inadvertent needle stick injuries
- Extra shaft thickness – Eliminates the risk of shaft bending especially during fixation of rectangular mesh edges.

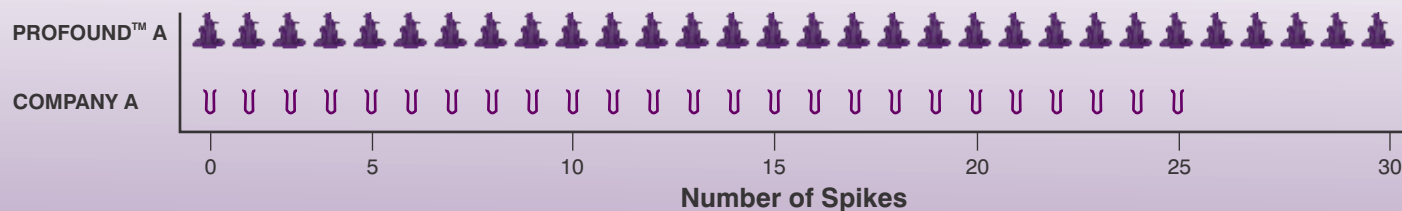


- Ratched mechanism for superior tactile feedback.

### 5. More Value, Delivered

More Spikes, More Choices

20% More Spikes



## PLGA Degradation Study – Rabbit Abdominal Cavity Implantation Study

### Objective of the Study :

To ascertain the strength of spikes over 74 weeks time period

### Observations :

1. One week after surgery, the PLGA spikes were covered by peritoneal membrane.
2. No adhesion were observed between spikes and intestine, no intestinal obstruction were observed.
3. The spikes kept integrated when 26 weeks, and broken when 34 weeks and solid body disappeared when 44 weeks.
4. After 52 weeks spikes degradation products were found to be disappeared totally.

### Conclusion :

1. The absorbable PLGA spikes can be kept integrated in the body until 26 weeks.
2. The spikes strength can be kept at least 12 weeks.



## Product Specifications

### Profound™ A - Absorbable Mesh Fixation Device

Sr. No.	Product Code	Brand Name	Description
1	MFD 15A	HERNIA FIXATION DEVICE	PLGA - ABSORBABLE (15)
2	MFD 30A	HERNIA FIXATION DEVICE	PLGA - ABSORBABLE (30)



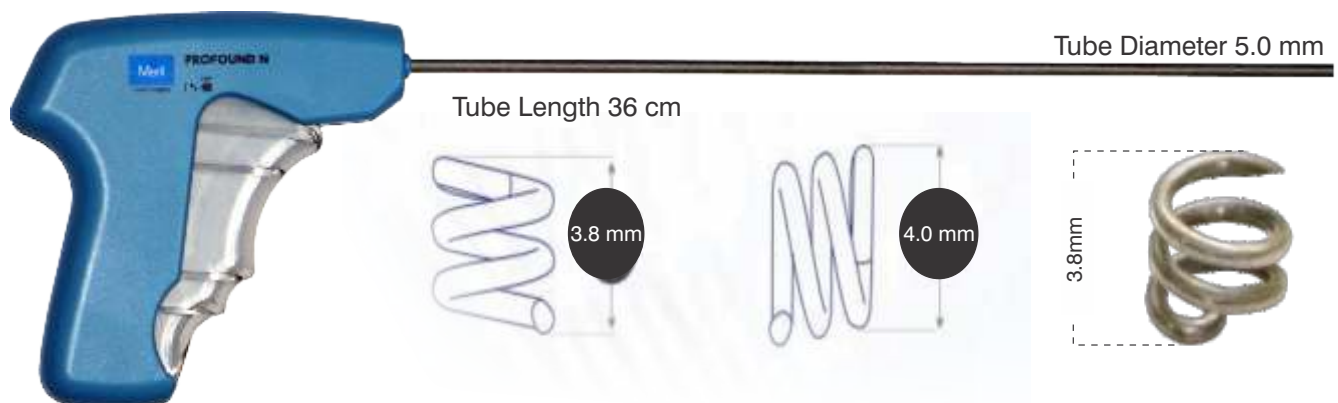
## TITANIUM REINFORCEMENT

Proven, Strong, Secured & Reliable  
fixation delivered

# PROFOUND<sup>TM</sup> N

Titanium

*Non-Absorbable Hernia Mesh Fixation Device*



## Product Overview

### ▲ INDICATIONS

*Profound N* Non- Absorbable Fixation Devices are intended for fixation of Hernia Meshes in Laparoscopic and Open Hernia Surgeries.



## Key Features

- ◆ Unsurpassed fixation strength.
- ◆ Fixates in coopers ligament and underlying structures.
- ◆ Excellent biocompatibility especially when direct contact with tissues.
- ◆ Eliminates likelihood of inadvertent needle stick injuries.
- ◆ Extra shaft thickness eliminates the risk of shaft bending especially during fixation of rectangular mesh edges.
- ◆ Ergonomically designed handle for better comfort.



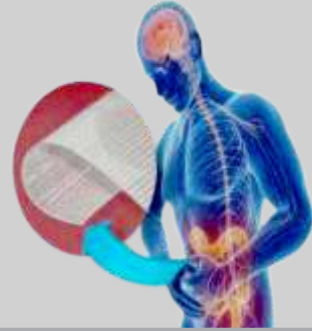
## Product Specifications

### Profound™ N - Non-Absorbable Mesh Fixation Device

Sr. No.	Product Code	Brand Name	Description
1	MFD 15N	HERNIA FIXATION DEVICE	TITANIUM - NON-ABSORBABLE (15)
2	MFD 30N	HERNIA FIXATION DEVICE	TITANIUM - NON-ABSORBABLE (30)

## QUADRIAXIAL TISSUE REINFORCEMENT SOLUTIONS

*with*



# FILAPROP MESH™

## Polypropylene Mesh

*Heavy Weight Non Absorbable Polypropylene Mesh*



### Indications

- ◆ Hernia Open Repair
- ◆ Fascial Deficiencies
- ◆ Chest wall reconstruction
- ◆ Laparoscopic Hernia Repair



## Key Features

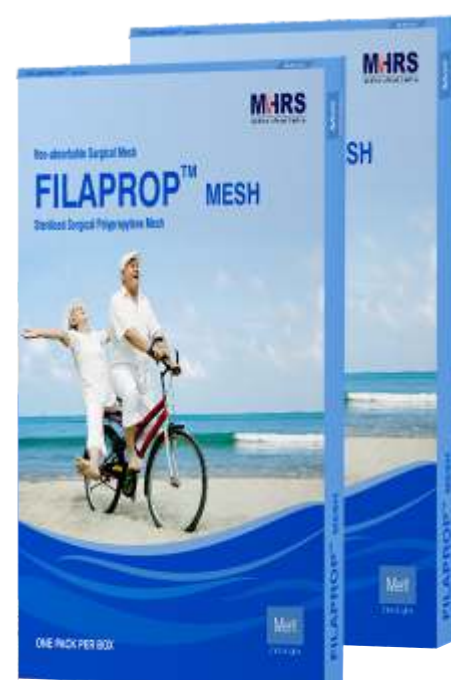
- ◆ Large pore size helps in elastic scar formation.
- ◆ High burst strength for strong repair.
- ◆ Filaprop Mesh is soft, elastic & pliable which aids the normal process of wound healing.



## Technical Specifications

Pore Size	1.0 mm - 1.2 mm
Weight	100 gsm
Thickness	0.48 mm
Burst Strength	106.30 N/cm
Sterilization Method	Ethylene Oxide

## Product Specifications



### Filaprop™ Mesh Non-Absorbable Surgical Mesh

Sr. No.	Product Code	Brand name	Description
1	PPM1015	FILAPROP MESH	POLYPROPYLENE MESH (10 CM X 15 CM)
2	PPM1515	FILAPROP MESH	POLYPROPYLENE MESH (15 CM X 15 CM)
3	PPM3030	FILAPROP MESH	POLYPROPYLENE MESH (30 CM X 30 CM)
4	PPM611	FILAPROP MESH	POLYPROPYLENE MESH (06 CM X 11 CM)
5	PPM715	FILAPROP MESH	POLYPROPYLENE MESH (7.6 CM X 15 CM)
6	PPM1530	FILAPROP MESH	POLYPROPYLENE MESH (15 CM X 30 CM)
7	PPM510	FILAPROP MESH	POLYPROPYLENE MESH (05 CM X 10 CM)

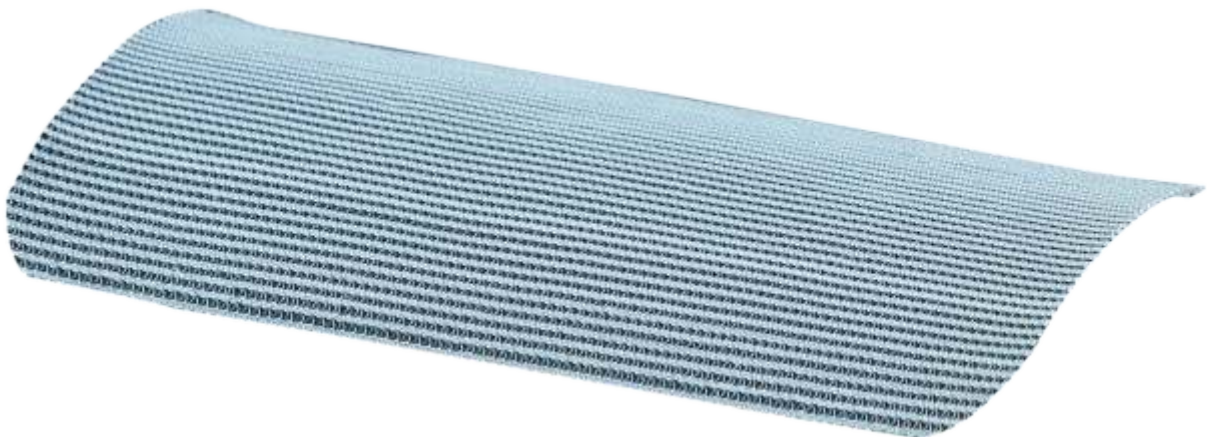




Hernia Repair and Soft Tissue Augmentation with Strength,  
Softness & Sustainability

## FILAPROP™ MESH Soft

*Non Absorbable Soft Polypropylene Mesh*



### Indications

- ◆ Open & Laparoscopic Inguinal Hernia
- ◆ Open Ventral Hernia Repair
- ◆ Fascial Deficiencies
- ◆ Chest Wall Reconstruction

## Key Features

- 60% lighter weight than conventional polypropylene mesh.
- Affords excellent strength, durability & fast tissue integration.
- Soft & pliable mesh with unique knitting which facilitates natural process of wound healing.



## Technical Specifications

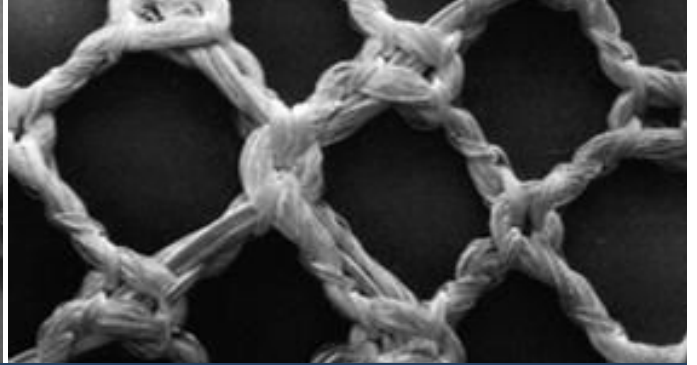
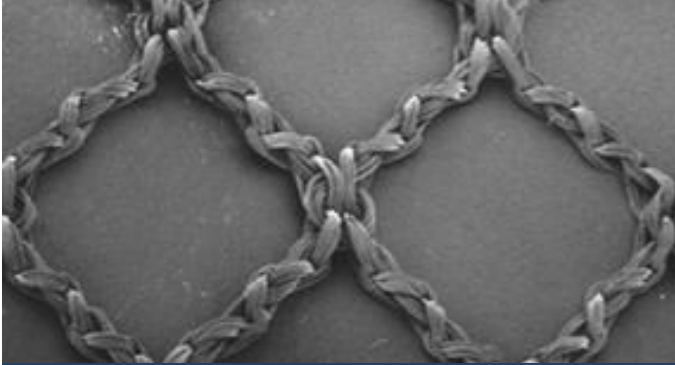
Pore Size	0.8 mm - 1.0 mm
Weight	45 gsm
Thickness	0.34 mm
Burst Strength	81.29 N/cm
Sterilization Method	Ethylene Oxide

## Product Specifications



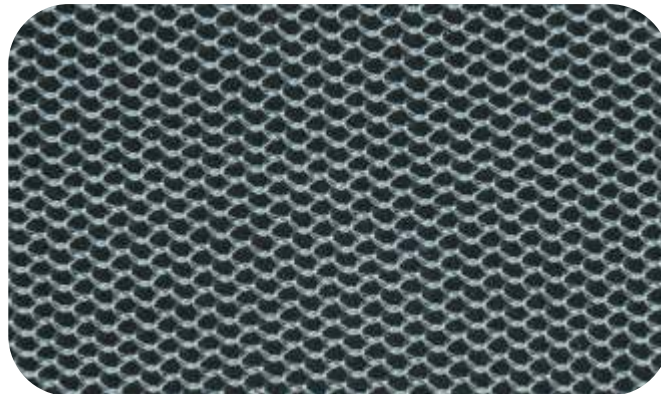
### Filaprop™ Mesh Soft Non-Absorbable Surgical Soft Mesh

Sr. No.	Product Code	Brand Name	Description
1	PPMS1015	FILAPROP MESH SOFT	POLYPROPYLENE MESH SOFT (10 CM X 15 CM)
2	PPMS1515	FILAPROP MESH SOFT	POLYPROPYLENE MESH SOFT (15 CM X 15 CM)
3	PPMS3030	FILAPROP MESH SOFT	POLYPROPYLENE MESH SOFT (30 CM X 30 CM)
4	PPMS611	FILAPROP MESH SOFT	POLYPROPYLENE MESH SOFT (06 CM X 11 CM)
5	PPMS715	FILAPROP MESH SOFT	POLYPROPYLENE MESH SOFT (7.6 CM X 15 CM)
6	PPMS1215	FILAPROP MESH SOFT	POLYPROPYLENE MESH SOFT (12 CM X 15 CM)



**Hernia Repair and Soft Tissue Augmentation with Strength,  
Softness & Sustainability**

## **MERIGROW<sup>TM</sup>** *( Polypropylene Macro Porous Mesh )*



### **Indications**

- ◆ Open & Laparoscopic Inguinal Hernia
- ◆ Open Ventral Hernia Repair

### **Key Features**

- ◆ Rounded Mesh Edges
- ◆ Unique interlocking knitting
- ◆ Extensibility across X & Y axis
- ◆ Macroporous thin walled elastic design for flexible scar formation, minimizing patient discomfort.



### Original Articles The lightweight and large porous mesh concept for hernia repair

Bernd Klosterhalfen, MD, Karsten Junge, MD & Uwe Klinge.

### Lightweight Macroporous Mesh vs. Standard Polypropylene Mesh in Lichtenstein Herioplasty

S. Bringman



## Technical Specifications

Pore Size	2.3 mm x 1.5 mm
Weight	55 gsm
Thickness	0.60 mm
Burst Strength	98.06 N/cm
Sterilization Method	Ethylene Oxide

## Product Specifications



### Merigrow™ Non Absorbable Surgical Macroporous Mesh

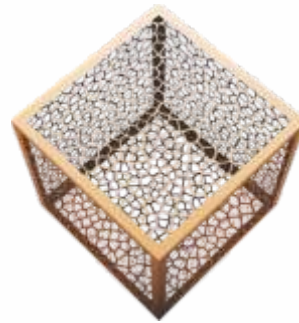
Sr. No.	Product Code	Brand Name	Description
1	PPMM611	MERIGROW	MACROPOROUS MESH (6 CM X 11 CM)
2	PPMM715	MERIGROW	MACROPOROUS MESH (7.6 CM X 15 CM)
3	PPMM1015	MERIGROW	MACROPOROUS MESH (10 CM X 15 CM)
4	PPMM1515	MERIGROW	MACROPOROUS MESH (15 CM X 15 CM)
5	PPMM3030	MERIGROW	MACROPOROUS MESH (30 CM X 30 CM)
6	PPMM1215	MERIGROW	MACROPOROUS MESH (12 CM X 15 CM)



# MERICRON™ MESH

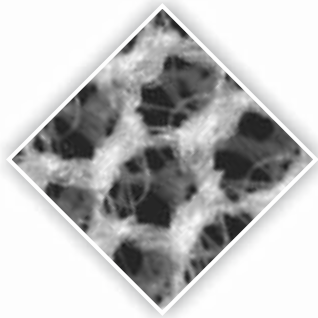
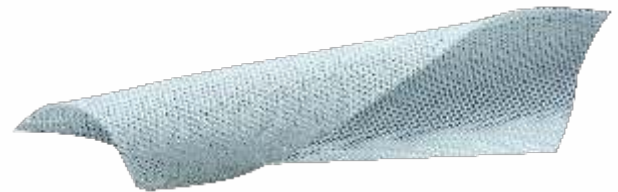
Polyester Mesh

**Advanced Architecture**  
**Faster Tissue Ingrowth**



## 3D Honeycomb Knitted Structure

- ▶ Excellent multidirectional elasticity
- ▶ Soft edges – reduce post-operative pain
- ▶ Improved patient compliance



## Macroporus Hydrophilic Material

- ▶ Contours well with the body structure
- ▶ Faster tissue ingrowth & colonization
- ▶ Lesser tendency to stick to the fat

## Superior Flexibility

- ▶ Soft and easy to handle
- ▶ Ease of mesh placement and flexible manipulation
- ▶ Shape memory for use via laparoscopic or open surgery

## Designed with Patient Comfort in mind

- ▶ Less long term shrinkage & contracture
- ▶ Less long term pain
- ▶ Lesser seroma formation

<b>Structure</b>	Tridimensional “honeycomb” knitted
<b>Colour</b>	White
<b>Chemical Composition</b>	Polyester multifilament
<b>Pore Size</b>	1.59 mm x 1.41 mm
<b>Weight</b>	120 gsm
<b>Thickness</b>	1.14 mm
<b>Burst Strength</b>	48.1 N/cm <sup>2</sup>
<b>Type of Absorption</b>	Non-absorbable
<b>Sterilization</b>	Ethylene oxide

<b>Product Code</b>	<b>Description</b>	<b>Available Sizes</b>
PEM3D611	Mericon 3D Mesh	6 cm x 11 cm
PEM3D715	Mericon 3D Mesh	7.6 cm x 15 cm
PEM3D1015	Mericon 3D Mesh	10 cm x 15 cm
PEM3D1215	Mericon 3D Mesh	12 cm x 15 cm
PEM3D1515	Mericon 3D Mesh	15 cm x 15 cm
PEM3D3030	Mericon 3D Mesh	30 cm x 30 cm



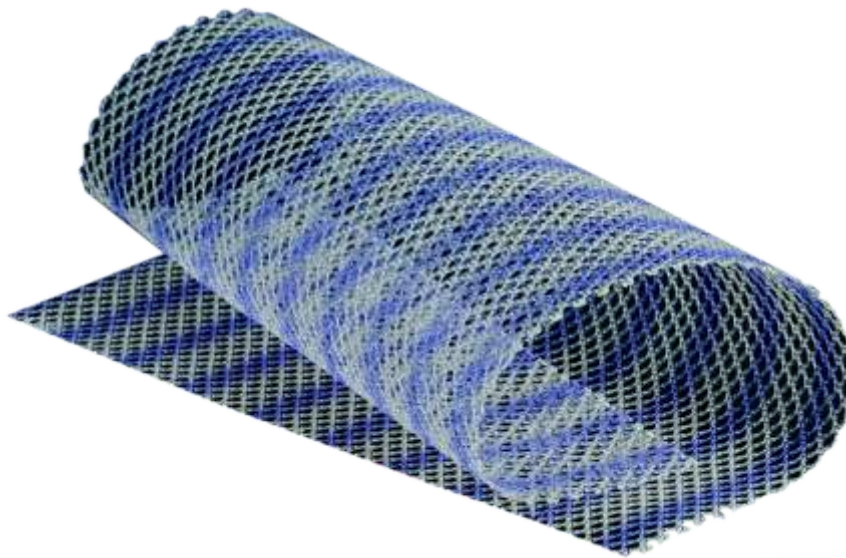
#### Available in 12 cm x 15 cm size

- Eliminates need for mesh trimming
- Reduces operating time

**Balanced Strength  
for Long and Lasting<sup>s)</sup>  
Hernia Repair**



## **ABSOMESH<sup>TM</sup>** (Polyglecaprone – Polypropylene) *Partially Absorbable light weight Mesh*



### **Indications**

- ◆ Inguinal Hernia : Open and Laparoscopic repair
- ◆ Ventral Hernia : Open repair
- ◆ Fascial Surgical Interventions

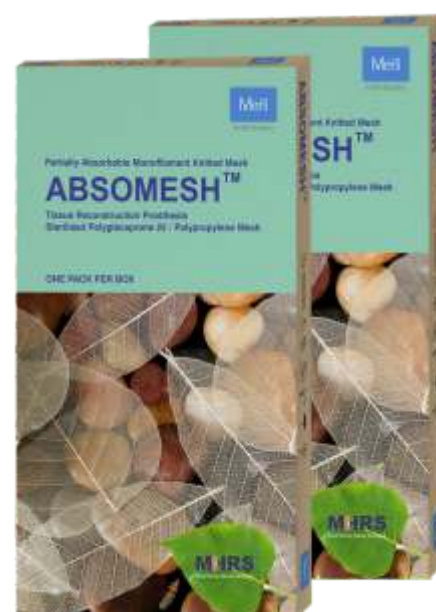
## Key Features

- ◆ Decrease in foreign material by 60% post partial absorption.
- ◆ Creates a strong & flexible scar tissue formation that mimics the natural abdominal wall.
- ◆ Excellent burst strength, handling with better patient comfort.



## Technical Specifications

Pore Size	2.5 mm x 1.0 mm
Thickness	0.50 mm
Burst Strength (initial)	313 N/cm
Burst Strength after Polyglecaprone absorption	215 N/cm
Polypropylene Content	≤ 30 gsm
Elongation (% at 1.6kgf/cm in burst strength test)	30 ± 5 %



## Product Specifications

### Absomesh™ Partially Absorbable Monofilament Knitted Mesh

Sr. No.	Product Code	Brand Name	Description
1	PCM611	ABSOMESH	PARTIALLY ABSORBABLE MESH (6 CM x 11 CM)
2	PCM715	ABSOMESH	PARTIALLY ABSORBABLE MESH (7.6 CM x 15 CM)
3	PCM1015	ABSOMESH	PARTIALLY ABSORBABLE MESH (10 CM x 15 CM)
4	PCM1515	ABSOMESH	PARTIALLY ABSORBABLE MESH (15 CM x 15 CM)
5	PCM3030	ABSOMESH	PARTIALLY ABSORBABLE MESH (30 CM x 30 CM)



Non-absorbable Surgical Contact Gripping Mesh

## CONTACTO™ MESH

Sterilised Surgical Polyester / Polyurethane Mesh

### DESCRIPTION

- Tridimensional Light “honeycomb” knitted structure with “grips”
- Polyester multi filaments impregnated with polyurethane (PUR)

Weight: 126 g/m<sup>2</sup> - Thickness : 1.09 mm

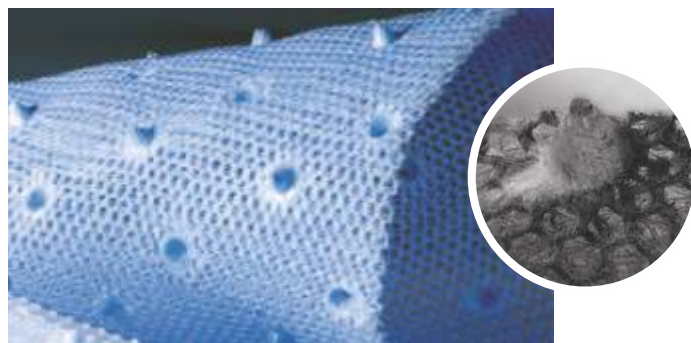
Mean bursting strength: 31.4 N/cm<sup>2</sup>

Pore size: 1.48 x 1.32 mm - Porosity: 61 %

Mean Tensile strength (Warp/Weft): 147/166 N

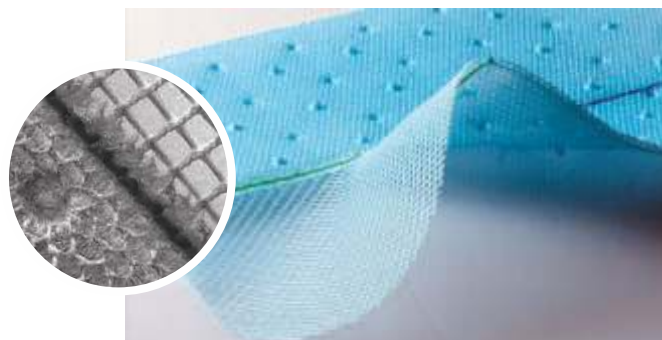
Mean Elongation (Warp/Weft): 41/76 %

\*Max. intra abdominal pressure : 2.4 N/cm<sup>2</sup>



### Advantages

- Self gripping prosthesis thanks to atraumatic “grips” on both sides
- Easy repositioning during surgery
- Porous structure to favour fast tissue ingrowth and colonization
- Shape memory for perfect use for laparoscopic or open surgery
- Elasticity and excellent multidirectional mechanical properties



### Indications

Laparoscopic Inguinal Hernias

Code	Size in cm	Shapes
CGM 1115 R	11 X 15	
CGM 1115 L	11 X 15	
CGM 1216 R	12 x 16	
CGM 1216 L	12 x 16	
CGM 1515	15 x 15	



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Please see the package insert for complete device description, product selection information, indications, contraindications, precautions, adverse effects, warning, materials, sterilization and patient guidance associated with the Hernia Mesh.

MHRS is the registered trade mark of Meril Endosurgery Pvt. Ltd.

## Distributor in Ireland

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