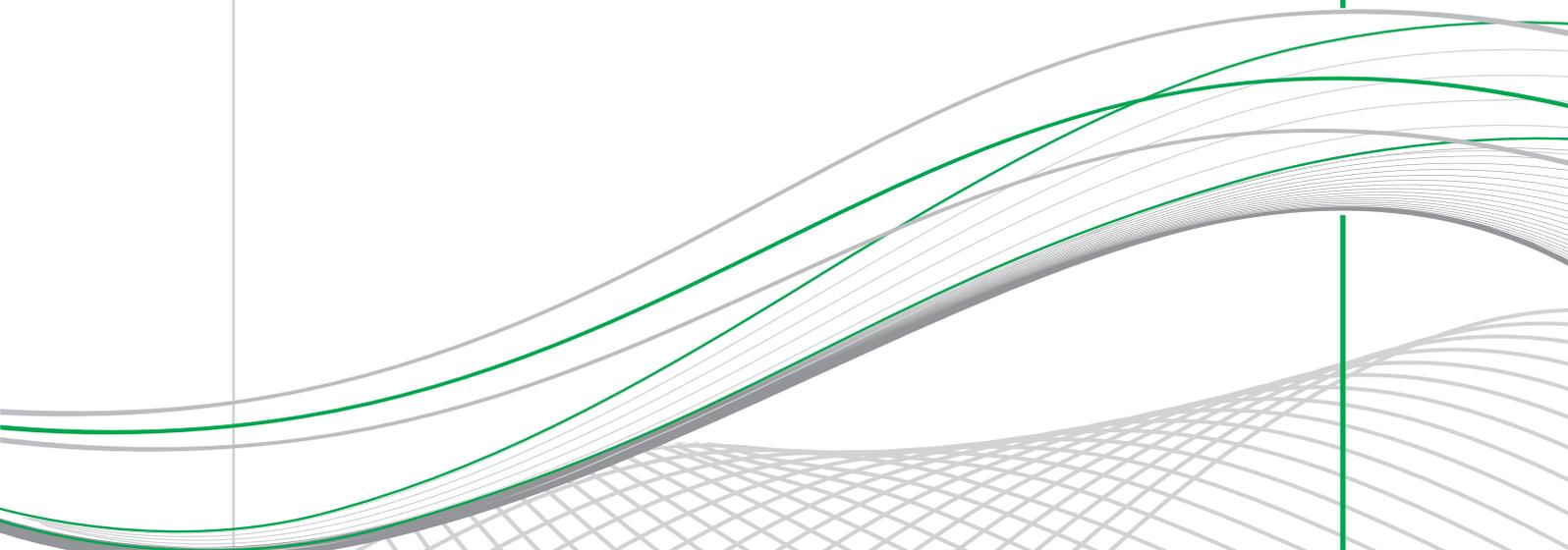


Expert Technologies in **PVDF**

 made  
in  
Germany

# DynaMesh<sup>®</sup>-IPOM

## Special Mesh Implants for the Intraperitoneal Onlay Mesh Technique used in Hernia Surgery

-  100% synthetic 2-component textile structure (PVDF + PP)
  -  Open-pore monofilament mesh
  -  Fast and complete growing-in of peritoneum and simultaneous reduction of adhesions between intestine and mesh
  -  Minimal foreign body reaction
  -  Optimum handling when performing laparoscopic and open techniques
- 

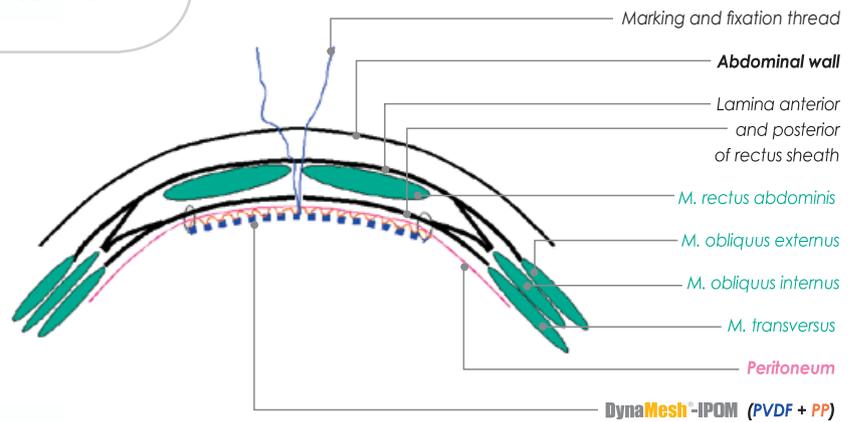
## Method

**DynaMesh®-IPOM** mesh implants were specially developed for the **Intraperitoneal Onlay Mesh** technique in laparoscopic and open hernia surgery.

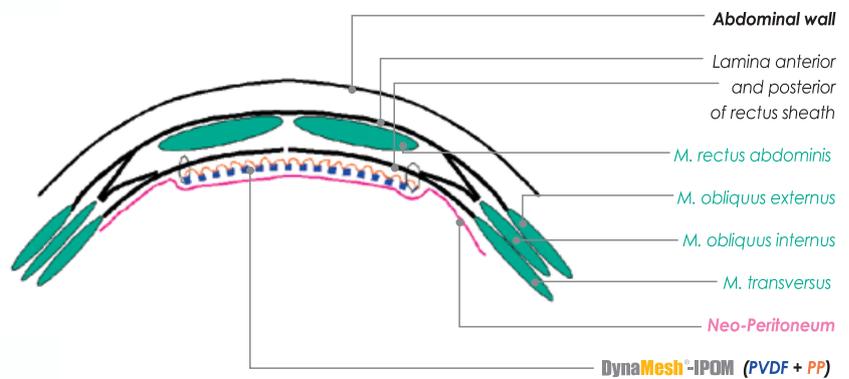
The cut-to-measure implant is placed and fixed intraperitoneally, with the PP side being deployed parietally and the PVDF side viscerally. The marking and fixation thread on the PP side of the mesh indicates the correct positioning (Phase 1).

The unique monofilament 2-component structure brings about ideal integration into the abdominal wall, a reduction in adhesions between the intestine and the mesh, and prophylaxis to prevent them. It ensures complete mesh incorporation during the fast and unimpeded development of the endogenous neo-peritoneum and provides highest patient comfort by its optimal bi-directional elasticity (Phase 2).

### Phase 1



### Phase 2



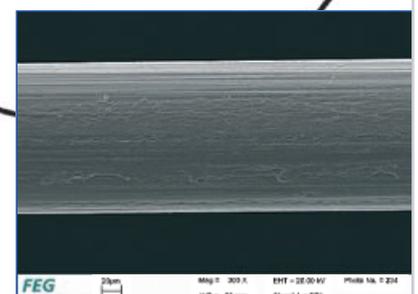
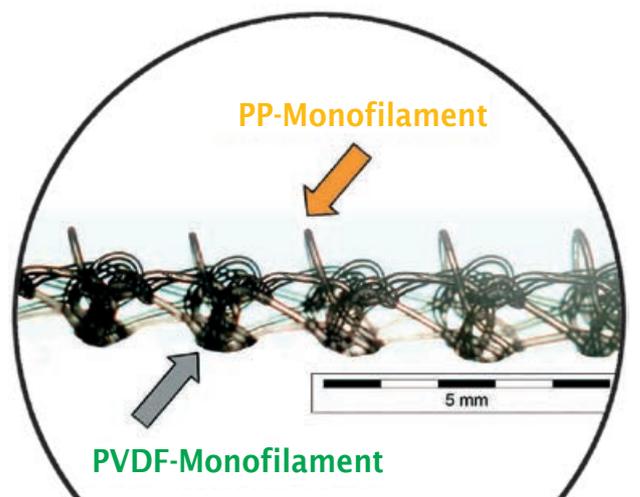
## Material

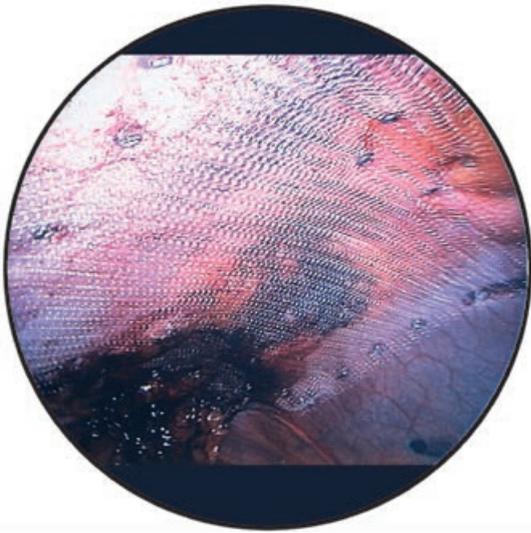
The concept of the 2-component-structure composed of PVDF (88%) and PP (12%) features a fundamental advantage: PVDF reduces bowel adhesions while the parietal PP-side of the mesh is incorporated fast and without complications into the abdominal wall.

The polyvinylidene fluoride (PVDF) monofilament used beside polypropylene (PP) monofilament in **Dyna-Mesh-IPOM** implants reduces adhesion without additional chemical coatings and offers the following advantages compared to conventional implant materials:

- Highest patient comfort due to excellent biocompatibility and outstanding dynamometric properties
- Highest patient safety due to superior durability
- Optimal handling features due to cut-to-size and overlapping possibilities of meshes

### Cross-sectional view





DynaMesh®-IPOM intra-operative view

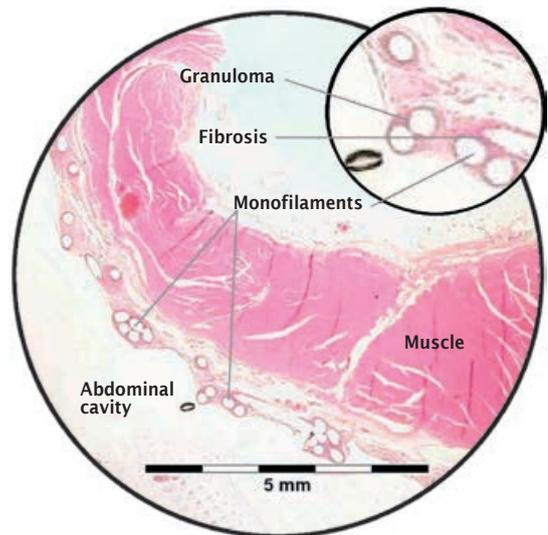
## Handling

Due to its innovative, open-pore 2-component textile structure **DynaMesh®-IPOM** offers high intra-operative transparency. Its excellent memory characteristics (restoration capacity) as well as its minimal roll-up tendency ensure optimal handling for all commonly deployed surgical and fixation techniques. In particular the high demands of laparoscopy are met.

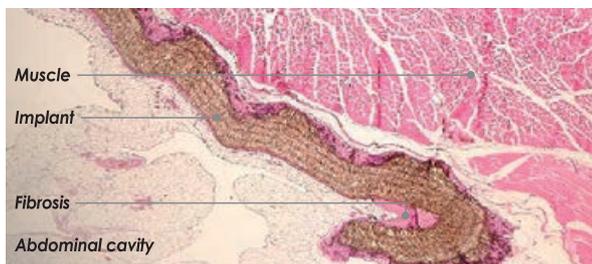
**DynaMesh®-IPOM** enables outstanding post-operative results:

- No seroma and haematoma formation between the mesh and abdominal wall thanks to maximum liquid permeability
- Quick recovery and minimal levels of post-operative pain thanks to ideal transverse and longitudinal elasticity.
- Minimal adhesion induction due to the use of PVDF
- High long-term safety and patient comfort thanks to minimal mesh shrinkage and excellent dynamometric properties
- No scar plate formation (bridging) thanks to optimally scaled pore sizes

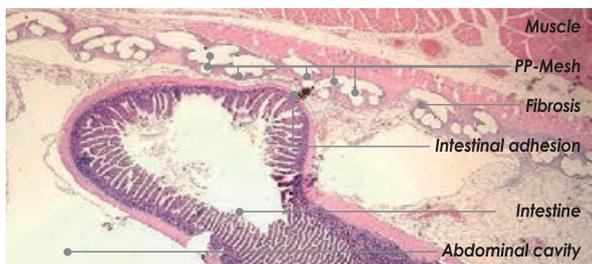
## Histology



DynaMesh®-IPOM 30 days after implantation\*



ePTFE-Implant 30 days after implantation\*



PP-Mesh 30 days after implantation\*

The problems associated with standard ePTFE or pure PP implants (e.g. pronounced fibrosis formation, pronounced implant shrinkage, intestinal adhesion) are effectively avoided.

The deployment of **DynaMesh®-IPOM** also reduces foreign body reactivity to a minimum:

- Minimal fibrosis formation
- Lowest granuloma thickness
- Ideal connective tissue growing-in with minimum induction of intestinal adhesion

\* Wistar rat study (30 days), TV 50.203.2-AC 18, 35/03 BMBF 03N4024  
all micrographs are enlarged 12,5fold

# Technical Data

## DynaMesh®-IPOM

**Viszeral material:** Polyvinylidene Fluoride (PVDF) monofilament

**Parietal material:** Polypropylene (PP) monofilament

**Weight:** Corresponding 60 g/m<sup>2</sup> <sup>1)</sup>

**Thickness:** 0.7 mm

**Pore size:** 80 % > 1.0 mm

**Effective porosity:** 41 % <sup>2)</sup>

**Reactive surface:** 1.71 m<sup>2</sup>/m<sup>2</sup>

**Maximum stability:** 62 N/cm

**Physiological elasticity at 32 N/cm:** 28 %

**Maximum suture pull out strength:** 36 N

<sup>1)</sup> effectively 108 g/m<sup>2</sup> but by different density corresponding to a conventional PP-mesh of approx. 60 g/m<sup>2</sup>  
(Material composition 88% PVDF, density PVDF 1.78 g/cm<sup>3</sup>, Material composition 12% PP, density PP 0.9 g/cm<sup>3</sup>)

<sup>2)</sup> basing on a min. pore size of 0.6 mm with PVDF to avoid bridging.

# Delivery Program

## DynaMesh®-IPOM

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|                     |                |           |
|---------------------|----------------|-----------|
| Size: 07 cm x 06 cm | REF IP070706F5 | BX = 5 EA |
|---------------------|----------------|-----------|

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|                     |                |           |
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| Size: round ø 12 cm | REF IP070012F1 | BX = 1 EA |
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|                     |                |           |
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| Size: 10 cm x 15 cm | REF IP071015F1 | BX = 1 EA |
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|                     |                |           |
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| Size: 15 cm x 15 cm | REF IP071515F1 | BX = 1 EA |
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|                     |                |           |
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| Size: 15 cm x 20 cm | REF IP071520F1 | BX = 1 EA |
|---------------------|----------------|-----------|

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|                     |                |           |
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| Size: 20 cm x 30 cm | REF IP072030F1 | BX = 1 EA |
|---------------------|----------------|-----------|

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|                     |                |           |
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| Size: 28 cm x 37 cm | REF IP072837F1 | BX = 1 EA |
|---------------------|----------------|-----------|

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|                     |                |           |
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| Size: 30 cm x 30 cm | REF IP073030F1 | BX = 1 EA |
|---------------------|----------------|-----------|

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|                     |                |           |
|---------------------|----------------|-----------|
| Size: 30 cm x 45 cm | REF IP073045F1 | BX = 1 EA |
|---------------------|----------------|-----------|

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[www.dyna-mesh.com](http://www.dyna-mesh.com)

hergestellt durch / manufactured by /  
fabriqué par / fabricado por /

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