



# Proven Heel Protection for Vulnerable Patients

A simple and cost-effective solution for surgical patients and the critically ill

Mepilex® Border Heel

  
Mölnlycke®

## External factors affecting pressure ulcers:



PRESSURE



SHEAR



FRICTION



MICROCLIMATE

## The danger of heel pressure ulcers

Pressure ulcers cause approximately 60,000 deaths annually in the U.S.<sup>4</sup> The heel is particularly vulnerable to pressure ulcers due to anatomy, perfusion, shape and angle of the calcaneus.<sup>5</sup>

The prevalence of heel pressure ulcers is increasing, while prevalence of ulcers in other body locations has stayed the same or declined.<sup>6</sup>

- The heel is one of the most common sites for facility-acquired pressure ulcers as well as deep tissue injuries.<sup>5</sup>
- High pressure over bony prominences (heels) for a short period of time and low pressure over bony prominences for a long period of time are equally damaging.<sup>7</sup>

### Results can be devastating

<b>11%</b>	<b>42%</b>	<b>24% &amp; 38%</b>
of patients with ischemic heel ulcers and gangrene in one study required amputation. <sup>8</sup>	of patients (18 of 43 patients) with heel ulcers required leg amputation as a result of persistent infection or non-healing wounds. <sup>8</sup>	(in two studies) of Stage 4 pressure ulcers were located on the heels. <sup>9</sup>



## Benefits of Mepilex® Border Heel

- ✓ All-in-one and self-adherent – no secondary fixation needed
- ✓ Shaped to cover the back, sides and bottom of the heel – no need to cut or adapt
- ✓ Safetac® technology minimizes pain and trauma at dressing changes<sup>10</sup>
- ✓ Can remain in place for several days
- ✓ Can be repositioned without losing its adherent properties
- ✓ Moisture proof and bacteria resistant (> 25nm) film backing<sup>11</sup>

Mepilex Border Heel is designed to be applied on the heel for prevention of skin damage or for management of exuding wounds including pressure ulcers, diabetic foot ulcers, heel ulcers, traumatic wounds and other secondary healing wounds.

## The return on investment in Mepilex® Border Heel

Hospital-acquired pressure ulcers are common, costly and deadly – particularly Stage 3, 4 and “unstageable” pressure injuries (PSI-03). For example, one hospital reported cost of treatment increased with ulcer severity, ranging from an average of \$1,119 for Stage 2 to \$10,185 for Stage 3 and Stage 4 ulcers.<sup>18</sup>

In addition to pressure ulcers occurring in acute care facilities, pressure ulcers are also a problem in post-acute care settings, affecting as many as 23% of long-term care residents.<sup>18</sup> The average compensation for pressure ulcer litigation cases is almost \$1 million.<sup>18</sup>



## Long-lasting, effective protection

Pressure ulcer prevention dressings need to not only offer immediate protection, they must maintain those protective properties throughout the duration of their clinical use. Unlike other dressings, Mepilex Border is not only stronger on Day 1, but it sustains its strength even when wet.<sup>17</sup> By maintaining its structural integrity, Mepilex Border with Deep Defense™ technology provides consistent protection from tissue deformations,<sup>2</sup> the primary cause for pressure ulcers. The structural integrity of other dressings is compromised once they absorb moisture;<sup>17</sup> this may reduce their ability to protect against tissue deformations.



For hospitalized patients in particular, **10-18%** of pressure ulcers occur on the heel.<sup>19</sup>

Mepilex Border dressings were “clinically effective in reducing ICU-acquired heel PUs.”<sup>3</sup>

## The proprietary Mepilex® Border Heel

Each of the unique five layers of the Mepilex Border Heel serves a specific purpose, adding to its strength, durability and absorbency.

No other dressing on the market exhibits these same properties  
- or the published, peer-reviewed results - in pressure ulcer prevention.

# 5 LAYERS 1 TRUTH.

The design of the Mepilex Border Heel is unique in absorbing and distributing pressure, shear and friction.<sup>2,12</sup>



Mepilex® Border Heel  
with Deep Defense™ technology

# 1

### Backing Film:

Low coefficient of friction minimizes the impact of shear forces.<sup>12</sup>

# 2

### Superabsorbent Retention Layer:

Enables internal movement within the dressing to limit transmission of shear forces.<sup>12</sup>

# 3

### Spreading Layer:

Provides an optimal balance of strength and flexibility which, together with the unique construction of the dressing, is able to protect the patient from tissue deformations.<sup>2</sup>

# 4

### Absorption Layer:

Hydrophilic foam provides a cushioning effect, absorbing and limiting the transmission of pressure and shear forces.<sup>12</sup>

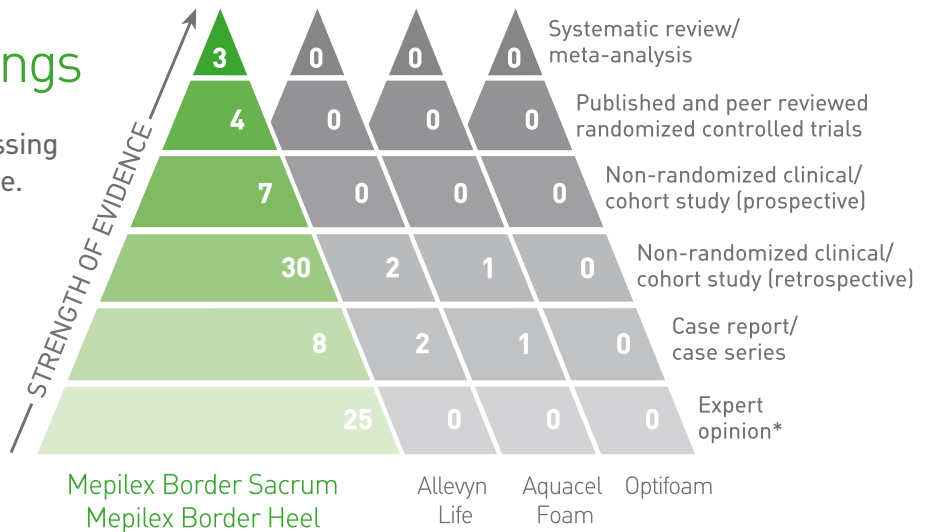
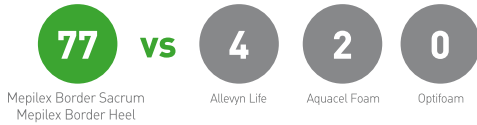
# 5

### Safetac® Layer:

Safetac technology creates many contact points over the uneven surface of the skin.<sup>1</sup>

# Clinically proven Mepilex® Border dressings

Mepilex Border is the only prevention dressing with this extensive level of clinical evidence.



\* Includes three international clinical guideline documents which incorporate recommendations based on available research and expert opinion. Although the guidelines are not brand specific, the underlying clinical evidence identifies only Mepilex Border and not Allevyn Life, Optifoam or Aquacel Foam.

## A study of critically ill patients by Santamaria et al found:<sup>3</sup>

### Control Group:

**152** patients no heel dressings  
**19** heel pressure ulcers

**\$0** = cost of prevention  
**\$202,711** = cost to treat\*\*

### Treatment Group:

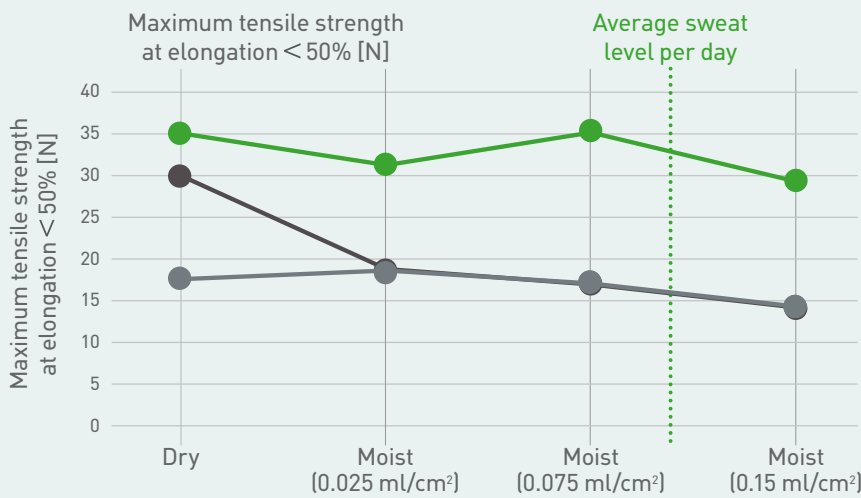
**150** patients Mepilex Border Heel  
**0** pressure ulcers

**\$2,700** = cost of prevention\*  
**\$0** = cost to treat

\* Average cost of heel dressing - \$9 each; assumes dressings changed every 3 days

\*\* Assuming average treatment cost of \$10,669<sup>16</sup>

## Mepilex Border vs Competitive Dressings<sup>17</sup>



Mepilex Border products, with Deep Defense™ technology, maintain their strength, even when wet. Made from the same materials and with the same 5 layer design, Mepilex Border Heel is able to maintain its protective properties, providing consistent protection against tissue deformations.<sup>2</sup>



# Mepilex® Border Heel with NEW user features

## Uniquely designed for pressure ulcer prevention

While other dressings may look similar or claim they achieve the same results, they lack the characteristics and depth of clinical proof of Mepilex Border Heel.

**Safetac® technology** reduces risk of maceration<sup>1, 23</sup>

**Coverage of the malleoli**

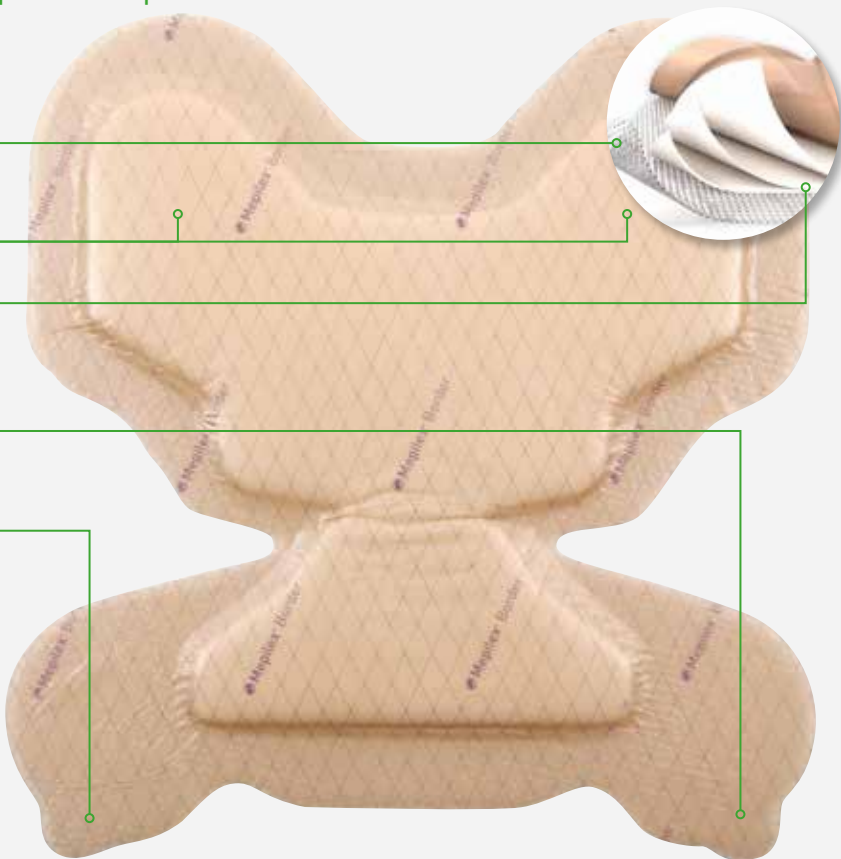
**Five full layers** to help deflect extrinsic forces including friction and shear

**Handling tabs** for easier heel checks\*

**Slightly thicker borders\*** for easy handling and better adhesion

**Deep Defense™ technology** for protection from the combined effect of the extrinsic forces responsible for pressure ulcers:<sup>2</sup>

- Strength in the patient sliding/shearing direction ↑
- Flexibility in the horizontal direction ↔



\* Compared with original Mepilex Border Heel

### Mepilex Border Heel ordering information†

Product code	Size	Pcs/box	Pcs/case	HCPCS
282790	8.7" x 9.1" (22 x 23 cm)	10	30	A6210

† Packaged sterile in single packs

**References:** 1. Wiberg A.B. et al. Preventing maceration with a soft silicone dressing: in-vitro evaluations. Poster presented at the 3rd Congress of the WUWHS, Toronto, Canada, 2008. 2. Levy A., Frank, M.B., Gefen A. The biomechanical efficacy of dressings in preventing heel ulcers. J Tissue Viability 2015; 24: 1, 1-11. 3. Santamaria N., et al. Clinical effectiveness of a silicone foam dressing for the prevention of heel pressure ulcers in critically ill patients: Border II Trial. Journal of Wound Care, 2013; 24(8). 4. "Are we ready for this change?" <http://www.ahrq.gov/professionals/systems/hospital/pressureulcer/toolkit/putool.html>. Accessed 06/2017. 5. Black J. et al. Consensus statement: Global evidence based practice recommendations for the use of wound dressings to augment pressure ulcer prevention protocols - August 2012. 6. Campbell K. et al. Heel Pressure Ulcers in Orthopedic Patients: A Prospective Study of Incidence and Risk Factors in an Acute Care Hospital. Ostomy Wound Manage. 2010 Feb 1;56(2):44-54. 7. Lyder C. Preventing heel pressure ulcers: Economic and legal implications. Nursing Management, November 2011. 8. Black J. Preventing pressure ulcers occurring on the heel. Wounds International 2013. Vol 4, eSupplement. 9. "Pressure Ulcer Prevention and Treatment" <https://wildirismedicaleducation.com/courses/pressure-ulcer-assessment-treatment-ceu>. 10. White R. A multinational survey of the assessment of pain when removing dressings. Wounds UK 2008; Vol 4, No 1. 11. PD-508784 Rev: 01 12. Call E. et al. Enhancing pressure prevention using wound dressings: What are the modes of action? International Wound Journal, July 30 2013. 13. SMTL external lab reports: 10/3299/1, 3F016961, 16/5164/2, 15/4934/1, FX214298 and 16/5209/1. 14. White R. et al. Evidence for atraumatic soft silicone wound dressing use. Wounds UK, 2005. 15. Padula W.V. The Real-World Effectiveness and Value of Sacral Dressings to Prevent Hospital-acquired Pressure Injuries in Academic Medical Centers: An Observational Cohort Study. Poster presented at SAWC, Spring 2017. 16. Spetz J. et al. The value of reducing hospital-acquired pressure ulcer prevalence: an illustrative analysis. J Nurs Adm. 2013 Apr;43(4):235-41. doi: 10.1097. 17. Mölnlycke Health Care. Test Report - Tensile strength of dressings with different Moisture levels. LIMS ID: 20160808-003-app1. 18. Fowler E. et al. Practice Recommendations for Preventing Heel Pressure Ulcers. Ostomy Wound Management 2008;54(10):42-57. 19. Jones P. et al. Duke University. Heel Pressure Ulcer Prevention (H-PUP). Poster. 20. Santamaria, N., Gertz, M., Sage, S. et al. A randomised controlled trial of the effectiveness of soft silicone multi-layered foam dressings in the prevention of sacral and heel pressure ulcers in trauma and critically ill patients: the border trial. Int Wound J 2015; 12: 3, 302-308. 21. Gefen A., Kottner J., Santamaria N. Clinical and biomechanical perspectives on pressure injury prevention research: the case of prophylactic dressings. Clinical Biomechanics 2016; 38: 29-34. 22. Alten. Finite element analysis studying the effect of different prevention dressings on protecting soft tissues from high stresses and deformation. Ref No. 001. Data on file. 2017. 23. Meaume, S., Van De Looverbosch, D., Heyman, H., et al. S. A study to compare a new self-adherent soft silicone dressing with a self-adherent polymer dressing in stage II pressure ulcers. Ostomy Wound Management 2003; 49 (9): 44-51.

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