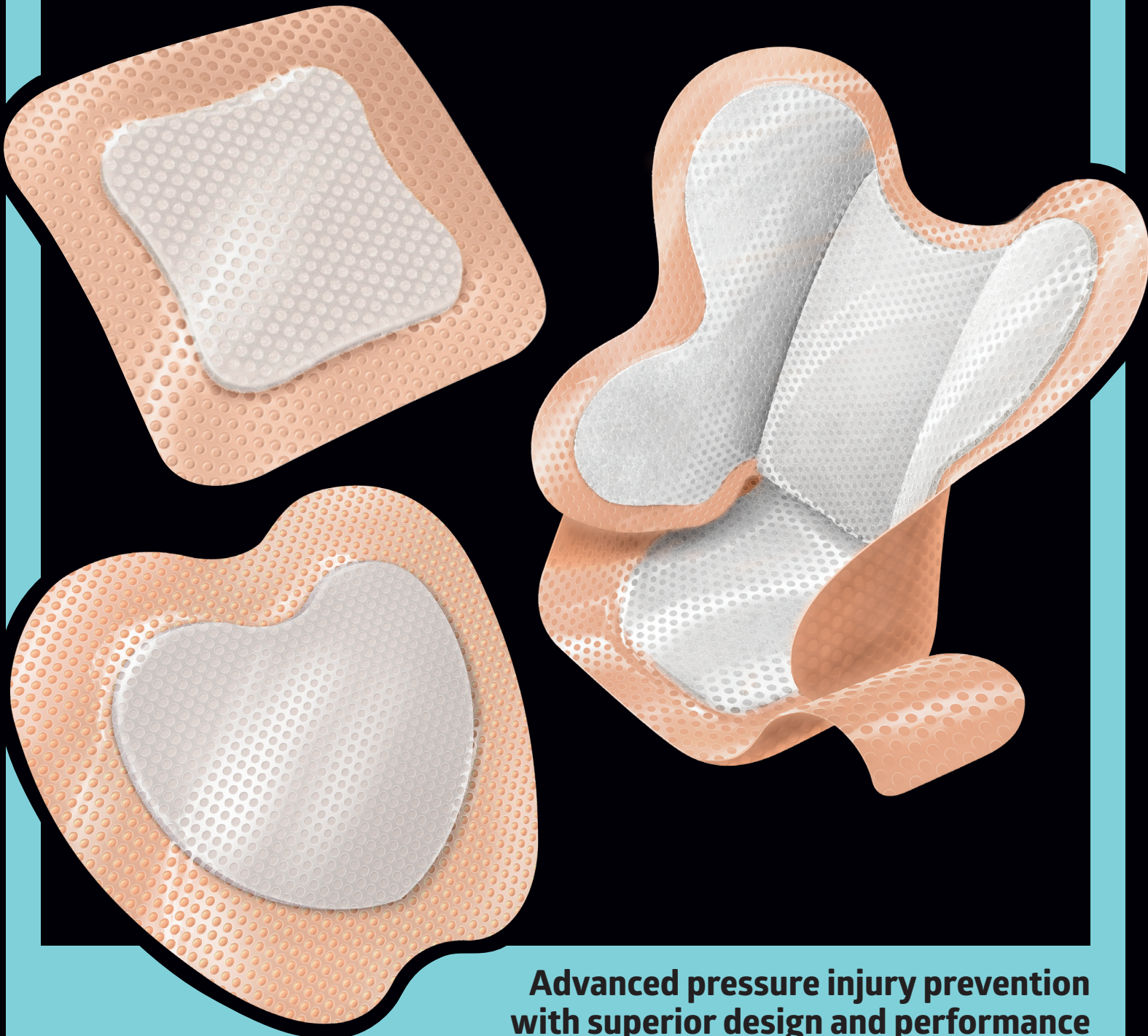




# OPTIFOAM<sup>®</sup> GENTLE SA

5-layer silicone faced foam and border dressings



**Advanced pressure injury prevention  
with superior design and performance**

## THE CHALLENGE

# The high cost of pressure injuries— physically and financially

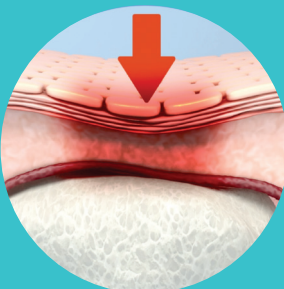
Pressure injuries (PI) are a frequently occurring problem, but are often preventable. The cost of treating and preventing PIs in the U.S. is estimated to be up to \$11.6 billion annually and \$43,000 per hospital stay,<sup>1</sup> placing a huge burden on the healthcare system. Additionally, the physical toll of PIs on patients is incalculable, causing significant pain and complications.

### Pressure injuries: The numbers tell the story<sup>1</sup>

**2.5 million**  
patients per year

**\$9.1–\$11.6 billion**  
in the U.S. annually

**\$20,900–\$151,700**  
per injury



### Why pressure injuries occur

The primary reason why pressure injuries develop and worsen (from stage 1 to more advanced stages) is high pressure points—pressure "hotspots".

These are created due to constant sitting or resting, which can cause pressure, friction and shear on bony prominences such as the sacrum (buttocks) or heel. When this happens, blood flow to the skin is constricted, and over time can cause a pressure injury.

## THE SOLUTION

# Optifoam Gentle SA

Optifoam Gentle SA is a five-layer, silicone-faced foam and border dressing designed to mitigate the factors that lead to pressure injury development: pressure, friction and shear, and microclimate. These layers collectively help to displace pressure when used within a pressure injury prevention protocol.

### Silicone layer

The atraumatic silicone gently conforms to the skin and elastically absorbs shear force

### Foam layer

The hydrophilic foam layer wicks excess moisture away from the skin surface

### Transfer layer

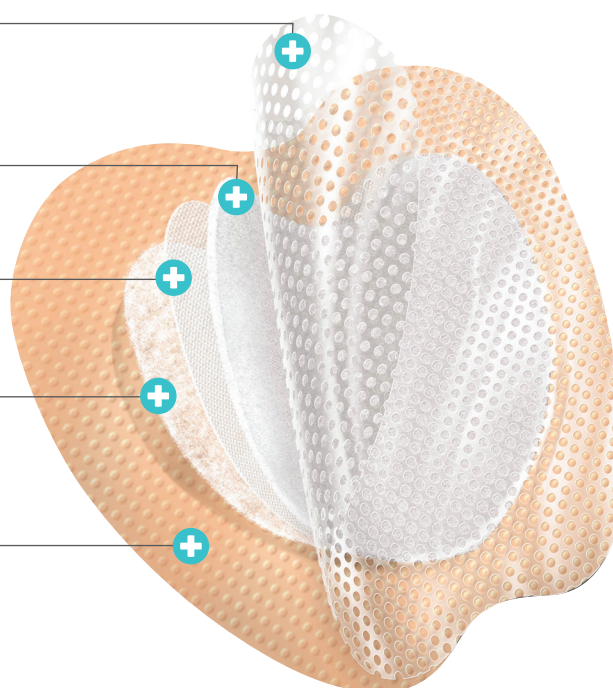
The transfer layer wicks fluid laterally across the dressing

### Superabsorbent layer

The air cushioning superabsorbent layer locks moisture away and helps redistribute pressure

### Highly breathable film

The smooth backing film reduces friction between the skin and the bed surface



## Evidence of efficacy in preventing pressure injuries

In a randomized controlled trial, soft silicone, multi-layered, foam dressings were found to reduce costs by preventing sacral and heel PIs among 440 critically ill patients.<sup>2</sup>

The results showed a significant reduction of PI incidence rates and lower intervention costs, concluding that the use of dressings, such as Optifoam Gentle SA, result in cost savings in the acute care setting.

## PERFORMANCE TESTS

# Optifoam Gentle SA demonstrates best in class performance in tests measuring the top contributing factors to pressure injuries

1. Reduces average **contact pressure** and **peak contact pressure**
2. Reduces **friction and shear properties**
3. Manages the **temperature and relative humidity (microclimate)** at the skin's surface

# PRESSURE REDUCTION

## Optifoam Gentle SA shows superior pressure reduction compared to the competition<sup>3</sup>

### The challenge

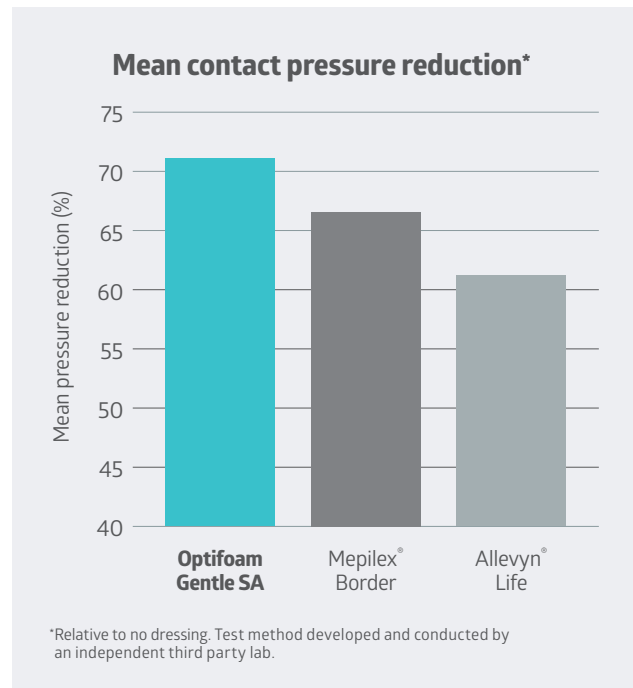
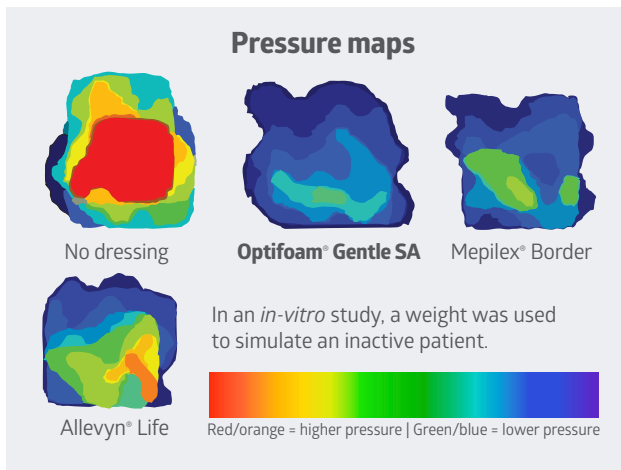
Tissue damage occurs due to prolonged exposure to pressure. If the pressure experienced exceeds capillary pressure, the vessels are effectively constricted and can't supply the surrounding tissue with oxygen and nutrients, causing ischemia. Over time, this can lead to a pressure injury.

### The test

An *in vitro* study was conducted to assess the relative effectiveness of silicone multi-layered foam dressings at reducing pressure. The study used a weight to simulate an inactive patient equivalent to 3x pressure, which can cause ischemia.

### The results

Optifoam Gentle SA sacral dressings led to a 70.9% reduction in average contact pressure and a 71.8% reduction in peak contact pressure relative to no dressing. Overall, Optifoam Gentle SA was shown to provide superior pressure reduction compared to all other dressings tested.



**How Optifoam Gentle SA displaces pressure**

Optifoam Gentle SA's unique, air-cushioning core is comprised of multiple micro-layers enclosing tiny chambers of air. These layers help collectively to displace pressure throughout the entire dressing, rather than being transferred to the skin.

## SHEAR DISPLACEMENT

# Optifoam Gentle SA provides superior friction and shear reduction compared to the competition<sup>4</sup>

### The challenge

When a patient is lying down or seated, a combination of patient weight and gravity creates downward forces. The patient is also exposed to opposing lateral forces, including surface friction as they move or slip down the bed or chair. This combination of perpendicular and lateral forces creates shear. Shear can restrict the blood supply to create ischemia, which can lead to cellular death and tissue necrosis. This type of injury will not be seen at the skin level because it happens beneath the skin.

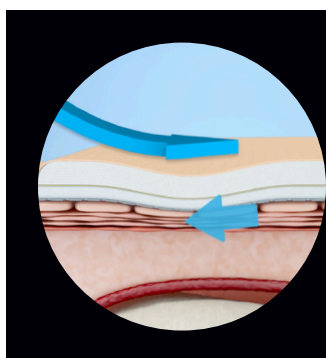
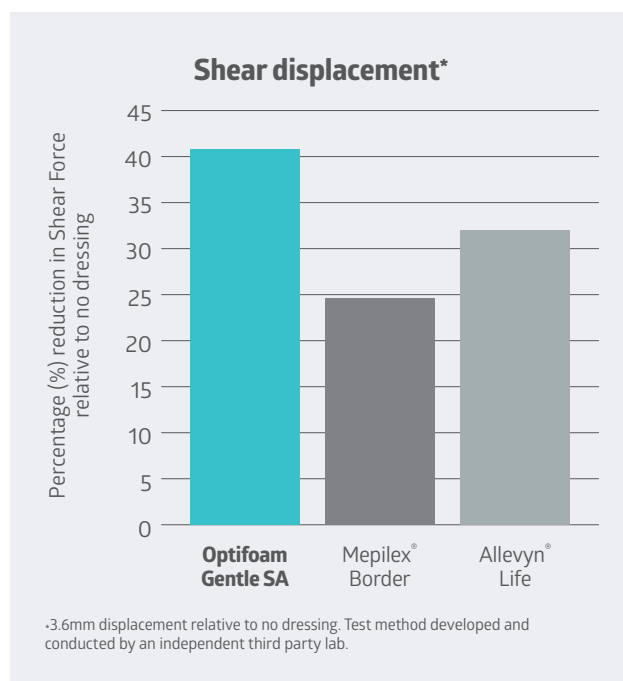


### The test

Lab studies were designed to simulate the friction and shear experienced by a patient wearing a sacral dressing sliding in a bed. For friction, the coefficient of static friction indicates how resistant an object is to initial movement, and the coefficient of dynamic friction describes an object's resistance to keep moving once in motion. When analyzing frictional coefficients and shear stress, lower numbers indicate a reduction in frictional forces and experienced shear, which in turn may reduce the possible negative effects incurred by the skin.

### The results

Optifoam Gentle SA had significantly lower static friction and dynamic friction coefficients than Mepilex (p < 0.01) and Allevyn Life (p < 0.01). Optifoam Gentle SA showed the largest reduction in shear stress in comparison to no dressing, outperforming both Mepilex and Allevyn Life.



### How Optifoam Gentle SA displaces shear

The smooth backing film reduces friction between the skin and the bed surface. The five-layer structure flexes and absorbs shear through its internal layers so minimal force is transferred to the patient's skin.

## MICROCLIMATE

# Optifoam Gentle SA helps reduce humidity beneath the dressing to provide an optimal microclimate level for skin health<sup>5</sup>

### The challenge

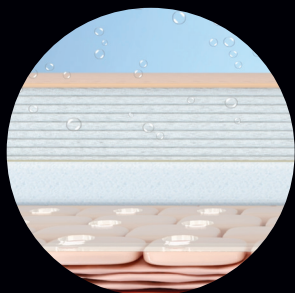
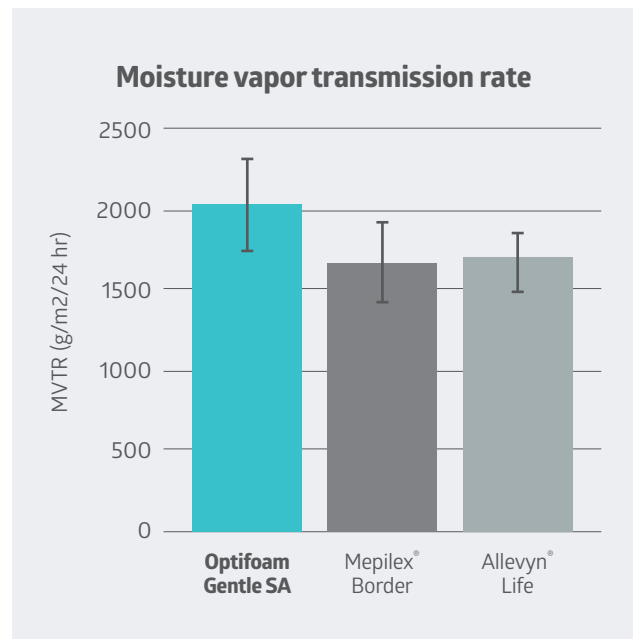
Microclimate refers to the temperature, humidity and air flow above the skin's surface. Low moisture levels reduce skin's elasticity and magnify the impact of body weight. At more than 70%, moisture can be trapped at the skin surface, compromising skin health.

### The test

A lab study was conducted to simulate and measure the impact of silicone multi-layered foam dressings on the temperature and humidity on the surface above the skin.

### The results

Optifoam Gentle SA performed well in tests measuring the impact on temperature and relative humidity versus the other market leading dressings. It showed no significant difference in temperature or relative humidity on the patient side. Optifoam Gentle SA had the highest breathability and allowed significantly more moisture to escape. This in vitro model demonstrated the ability of Optifoam Gentle SA to help maintain a microclimate ideal for skin health.



### How Optifoam Gentle SA manages microclimate

The hydrophilic foam layer wicks excess moisture away from the skin surface and the super-absorbent layer locks this moisture away. The breathable backing film transfers moisture away from the dressing. This ensures skin hydration doesn't increase to a level associated with maceration.

# Optifoam Gentle SA—unique dressing construction for superior pressure injury prevention

- Five unique layers provide added protection and help manage the top contributing factors to pressure injuries
- Silicone adhesive is atraumatic to the skin
- Low profile design increases flexibility and comfort
- Super absorbent core provides excellent fluid management

## Ordering Information

Item No.*	Description	Pkg.
MSC2133EP	Silicone-faced foam dressing in educational packaging, 3" x 3"	100/cs
MSC2144EP	Silicone-faced foam dressing in educational packaging, 4" x 4"	100/cs
MSC2166EP	Silicone-faced foam dressing in educational packaging, 6" x 6"	100/cs
MSC2177EP	Silicone-faced foam dressing in educational packaging, sacrum, 7" x 7"	40/cs
MSC2199EP	Silicone-faced foam dressing in educational packaging, sacrum, 9" x 9"	25/cs
MSC1200B	Silicone-faced foam and border heel dressing	50/cs

\* To order by box, add "Z" to the end of the item number.  
To order by dressing, add "H" to the end of the item number.



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**References:** **1.** William V Padula; Benio A Delarmente. The national cost of hospital-acquired pressure injuries in the United States. *Int Wound J.* 2019 Jun;16(3):634–640. doi: 10.1111/iwj.13071. Epub 2019 Jan 28. **2.** Nick Santamaria *et al.* The cost-benefit of using soft silicone multi-layered foam dressings to prevent sacral and heel pressure ulcers in trauma and critically ill patients: a within-trial analysis of the Border Trial. 06/10/13. Doi: 10.1111/iwj.12160. **3.** P1394R—Pressure Mapping of SA Sacral dressings (Contact Pressure & Peak Contact Pressure); Jun 2019. **4.** P1431R—Shear Assessment Study; Nov 2019. **5.** Optifoam Gentle SA Microclimate Comparative Study; Oct 2016.