



INVACARE® PREVENTION SURFACES



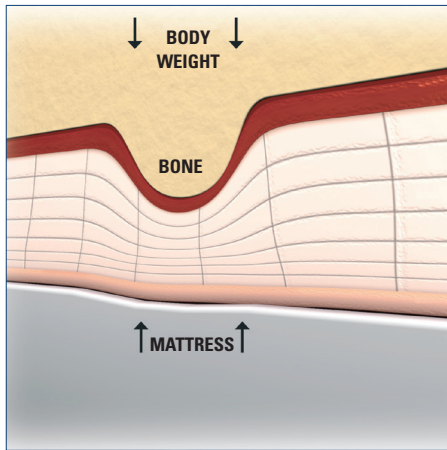
Yes, you can.®

# Invacare Prevention Surfaces

Prevention surfaces are products that are not always visible, covered in linens and not top of mind. However, as the interface between patient and the bed frame she spends many hours on every day, mattresses matter. And not just any foam mattress should suffice. The ultimate goal of a quality prevention surface should be preventing costly and painful pressure injuries while providing comfort for the patient. Whether designed for patients at Low Risk or Very High Risk, all Invacare prevention surfaces have been developed to provide clinical benefits, comfort and value.

**Standardize on a prevention surface you would feel comfortable selecting for your own mother.**

Rest assured that all Invacare prevention surfaces feature premium covers designed to help reduce shear and friction, high-density or high-resiliency foam, concealed zippers to help prevent fluid ingress and pressure-redistributing designs to help prevent pressure injuries. Because every Invacare mattress will support someone's loved one, in comfort and safety.



## What are the causes of pressure injuries?

Pressure injuries develop as a response to external forces causing localized ischemia (a restriction in blood supply). It is generally believed that external forces from direct pressure, shear and friction over bony prominences cause stresses and strains on the tissue. These stresses and strains occlude circulation, reducing oxygen and other vital nutrients reaching the tissue. Lymphatic drainage is also thought to be impaired, causing a build up of metabolic waste.

### Direct Pressure

The pressure from a mattress when lying or sitting compresses skin and tissue between the surface of the mattress and the bony parts of the body. When skin and tissues are compacted between these two surfaces capillaries get compressed, preventing them from carrying oxygen and other vital nutrients to the tissue.

### Shear Forces

Shear forces are parallel forces, sometimes described as stretching forces, caused by the effects of gravity. When an individual slides down, or is dragged up a bed or chair, shear forces pull on the skin. When this occurs, the upper layers of skin can be pulled away from deeper layers of skin and tissue, causing damage. This stretching force can rupture capillaries, thus causing localized tissue damage.

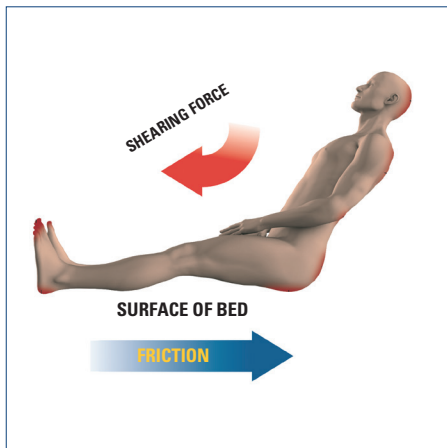
### Friction

Friction is a type of shear force that is limited to the skin but can damage the epidermis and result in a superficial pressure injury (Bader et al, 2005). Friction is commonly defined as the resistance present when one material rubs against another e.g. the rubbing of a bed sheet against the skin. This commonly occurs when individuals slide down the bed or chair, causing skin abrasions or blisters.

### Moisture and Temperature

When moisture is trapped against the skin for prolonged periods of time, it will turn white becoming softer and more prone to breakdown. This is known as maceration. Sweating and incontinence can contribute to the development of pressure injuries through maceration. Moist skin also increases resistance to parallel forces, therefore increasing exposure to the potentially damaging effects of shear and friction.

European Pressure Injury Advisory Panel and National Pressure Injury Advisory Panel. Prevention and treatment of pressure injuries: quick reference guide. Washington DC: National Pressure Injury Advisory Panel; 2009.



### Why is considering shear and friction so important when selecting a mattress?

Shear is a very important contributing factor in the development of pressure injuries but is often overlooked because of the difficulty in accurately measuring the impact of shear forces on skin tissue. Shear can also make skin tissue more vulnerable to the forces of direct pressure. For this reason, a mattress's ability to redistribute pressure is only part of its role in pressure injury prevention. A clinically effective mattress should be constructed to reduce the effects of shear on skin tissue.

### How are Invacare Group I Therapeutic Support Surfaces designed to reduce shear and friction?

- **Premium stretch polyurethane covers** are engineered to help reduce the effect of shear on patients
- The **patented gliding layer in the Invacare® Glissando®** Gliding Mattress enables the top layer to support the patient while the lower layer independently conforms to the bed frame
- **High-resiliency foam** in Softform Excel™, Softform Premier™ and Glissando Gliding Mattresses allows for deeper patient immersion
- **Castellation cuts** in Softform and Glissando Gliding Mattresses redistribute pressure helping to create a drier surface for the patient

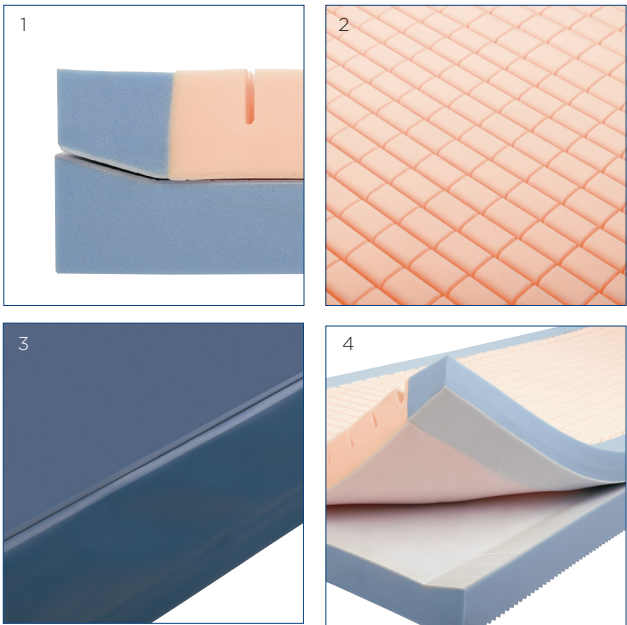
#### Patient Risk Level

LOW	MED	HIGH	VERY HIGH
Invacare® Solace® Mattress			
Invacare® Softform Premier™ Mattress			
Invacare® Glissando® Gliding Mattress			

The **Invacare Glissando Gliding Mattress** features a patented gliding layer between two layers of high density foam designed to help prevent friction and shear that can contribute to pressure injury development, while providing comfort for the patient.

**How does the Glissando Gliding Mattress minimize the effects of shear and friction?**

The patented design allows the mattress to conform simultaneously to the patient and the bed frame, optimizing the features of an articulating bed. When the bed is articulated, the top surface retains its properties for effectively supporting the patient, while the base of the mattress separately conforms to the bed frame. This unique design reduces unwanted patient movement, reducing potential for tissue damage resulting from friction and shearing.



1. Built-in support provides effective sidewall support, facilitating patient transfer
2. Castellations break surface tension, optimizing pressure redistribution
3. Premium fluid resistant cover with heat-welded seams and flap conceal the zipper to help prevent potential fluid ingress
4. Two-part construction with a patented "gliding" layer enable top and bottom sections to move independently as mattress is articulated

As seen in this photograph of the Glissando Gliding Mattress with its cover removed, the upper foam section of the mattress moves independently of the lower stationary foam section, minimizing skin shear which can contribute to pressure injuries.

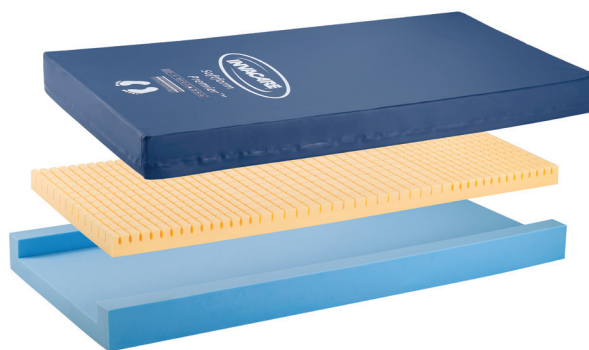




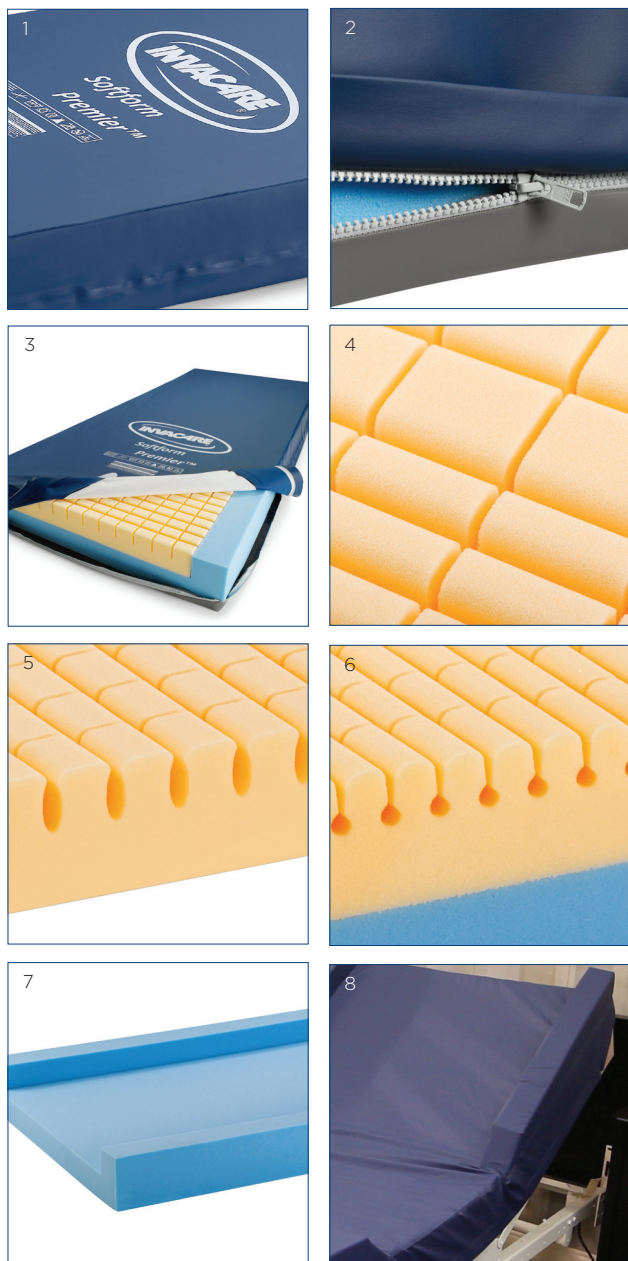
**Higher density foam delivers a higher degree of prevention and performance**

Softform Mattresses utilize 2.5 lb. high-resiliency (HR) foam, which means they will maintain their shape, comfort and pressure-reduction qualities longer than foams of lower density. HR foam contours to the patient exceptionally well, and when combined with the castellated design of the Softform Mattresses, provides necessary pressure redistribution without sacrificing comfort.

The **fluid-resistant, four-way stretch Softform Mattress cover** is engineered to help reduce shear and friction forces, which can be contributing factors in the development of pressure injuries as well as make the skin tissue more vulnerable to the forces of direct pressure.



The **Invacare® Softform Premier Mattress** features a unique single-piece U-core and contoured foam insert which provides excellent patient comfort and optimizes pressure redistribution for patients up to Very High Risk.



## Premium fluid-resistant cover

1. Softform Mattress covers are four-way stretch fluid resistant polyurethane and feature a tough coated polyurethane base to extend the longevity of the mattress. The Softform Premier Mattress features high-frequency welded seams; the Softform Excel mattress features stitched seams. (Softform Premier Mattress cover shown).

## Concealed Zippers

2. Softform Mattress covers feature a concealed zipper, reducing possible risk of fluid ingress (Full flap on Softform Premier Mattress cover shown).
3. Fully removable covers allow for easy replacement, laundering and inspection of foam.

## Castellated Cut Foam

4. Break the surface tensions of the foam, allowing patient to be immersed into the foam, maximizing body contact area and optimizing pressure redistribution.

## 2.5 lb. high-resiliency (HR) foam

5. The Softform Premier Mattress features premium HR foam cut into mushroom-shaped cells to allow superior patient immersion and pressure redistribution.
6. The Softform Excel Mattress features a unique keyhole cut to ensure proper airflow through the foam to maintain a consistent temperature while moving with the patient to help reduce friction and shear.

## Single-piece U Core

7. The Softform Premier Mattress features a single piece foam "U" core which facilitates patient transfer by providing effective side-wall support. Manufacturing the core out of one piece of foam vs. glued sections results in a strong, durable mattress.

## Raised Side Rail (RSR) covers available separately

8. Customize Softform Mattresses with RSR covers as needed for patients requiring additional side support. Widths up to 48" available.

## For improved outcomes, standardize on the prevention surfaces that are anything but standard.

As an integral part of your support surface formulary, Softform Mattresses can deliver essential clinical and financial benefits. In two published, randomized clinical studies, the use of the Softform Mattress in place of traditional mattress systems reduced pressure injury incidence in high risk patient populations from 34% to 7% and pressure injury prevalence from 30% to 9% respectively.<sup>1,2</sup>

In subsequent work, Gray and colleagues examined the long term performance of the Softform Mattresses and concluded there was no deterioration of the mattresses performance over three years.<sup>3</sup> Additionally, James concluded a standardized, static led mattress approach using the Softform mattress improved patient care, produced a significant savings and reduced dynamic mattress rental costs over a three year period.<sup>2</sup>

1. Gray D, Campbell M. A Randomized Clinical Trial of Two Types of Foam Mattresses. *Journal of Tissue Viability* 1994;4(4): 128-132

2. James J. A Static-led Approach to Pressure Injuries: an Evaluation After 3 Years. *British Journal of Nursing* 2004;13(20): 1221-1225

3. Gray D, Cooper P, Campbell M. A Study of the Performance of a Pressure Reducing Foam Mattress After Three Years of Use. *Journal of Tissue Viability* 1998;8(3): 9-13

## Invacare® Solace® Prevention 1080 Mattress

The convoluted “fortress” cut design offers more surface area for resident support and relief. Duel-layered high quality foam includes a soft head and heel section. Available in 80" standard length or custom 84" (SPS1084) and optional raised side rail design (SPS1080RSR). The three zones help relieve pressure in the important susceptible body zones.

### Features

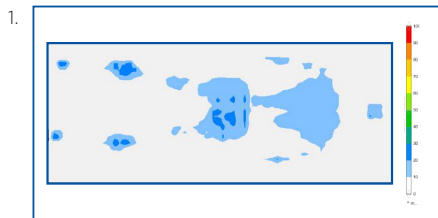
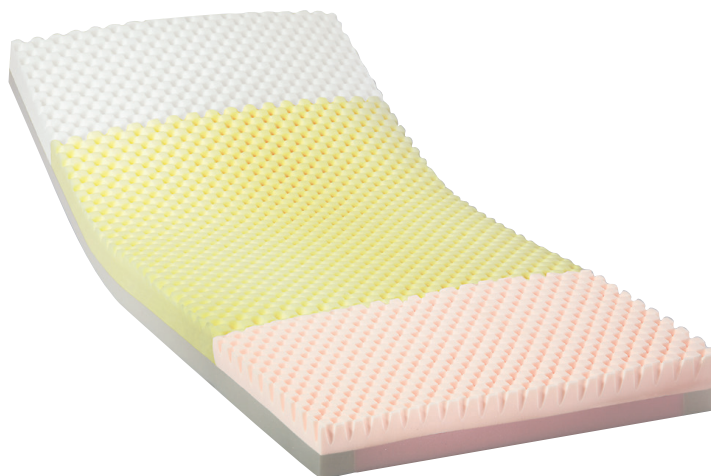
70 Denier nylon top

11 oz. tri-laminate vinyl bottom

Fluid resistant

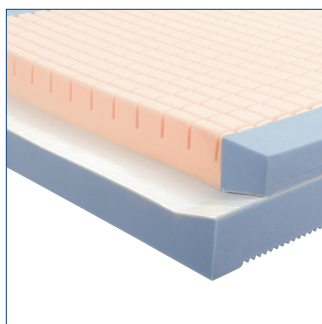
Raised side rail design available

Compliant with federal fire regulations\*

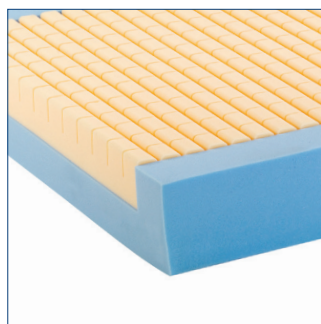


1. Test shows subject in supine position demonstrating contact measurement between key pressure points using BodiTrak mapping technology on the SPS1084 support surface. Subject: Male 5'11", 185 lb.

\*Federal flammability standards: 16CFR1632, 16CFR1633, CA Technical Bulletin 129



Invacare Glissando Gliding Mattress Foam



Invacare Softform Premier Mattress Foam



Dimensions

Weight  
CapacityRegulation  
ComplianceLimited  
Warranty

Model #	Invacare® Glissando™ Mattress			
SRS2080/	80" L, 36" W	500 lbs.	N/A	8 Years Foam 4 Years Cover
SRS2084	80" L, 36" W	500 lbs.	N/A	8 Years Foam 4 Years Cover
SRS2080W42/	80" L, 42" W, 3" Raised Side Rails	550 lbs.	N/A	8 Years Foam 4 Years Cover
	Invacare® Softform Premier™ Mattress			
IPM1080	80" L, 36" W, 6" H	500 lbs.	TB 129, 16 CFR 1632, 16 CFR 1633	8 Years Foam 4 Years Cover
IPM1084	84" L, 36" W, 6" H	500 lbs.	TB 129, 16 CFR 1632, 16 CFR 1633	8 Years Foam 4 Years Cover
IPM1080B42	80" L, 42" W, 6" H	650 lbs.	TB 129, 16 CFR 1632, 16 CFR 1633	8 Years Foam 4 Years Cover
IPM1080B48	80" L, 48" W, 6" H	650 lbs.	TB 129, 16 CFR 1632, 16 CFR 1633	8 Years Foam 4 Years Cover



Dimensions

Weight  
CapacityRegulation  
ComplianceLimited  
Warranty

Model #	Invacare® Prevention Mattress			
SPS1080	80" L, 36" W	350 lbs.	16 CFR 1632, 16 CFR 1633	5 Years Foam 1 Years Cover
SPS1084	84" L, 36" W	350 lbs.	16 CFR 1632, 16 CFR 1633	5 Years Foam 1 Years Cover
SPS2080B42	80" L, 42" W, 6.5" H	450 lbs.	16 CFR 1632, 16 CFR 1633	5 Years Foam 1 Years Cover
SPS2080B48	80" L, 48" W, 6.5" H	450 lbs.	16 CFR 1632, 16 CFR 1633	5 Years Foam 1 Years Cover

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