

# Envelo™ Cushion Range

**Where comfort  
meets clinical care**







**Born out of human understanding and clinical know-how, our therapeutic chairs and cushions are engineered and built to support the body where it most needs support.**

**Adapting to the individuals' needs and allowing improved weight distribution, Seating Matters chairs and cushions provide pressure redistribution, alleviating discomfort for the client and strain for the caregiver.**



## **Contents**

- 3 Envelo Cushion Range**
- 5 Assessment & Selection**
- 7 4 Principles of Effective Clinical Seating**
- 9 Cushion Testing**
- 11 Envelo Features**
- 13 Envelo Plus Features**
- 15 Envelo Gel Features**
- 17 Technical Specification**
- 19 Storage & Cleaning Instructions**
- 21 Fitting Instructions**
- 22 Product Information**

# Envelo<sup>TM</sup> Cushion Range

The Seating Matters<sup>®</sup> Envelo range of cushions has been developed following extensive pressure mapping, comfort scoring and trials.

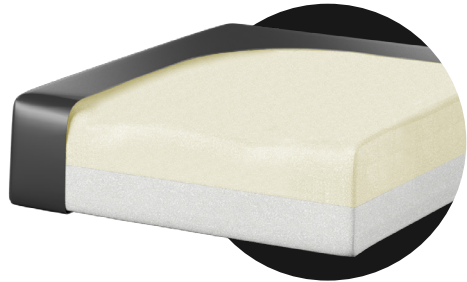
Seating Matters range of clinical therapeutic chairs and cushions are designed for anyone who has a short or long-term mobility issue, are used for those who are seated for prolonged periods or who are considered at risk of pressure injuries.

The Seating Guidelines<sup>1</sup> state that cushions made of specific materials should be considered for those who are seated for prolonged periods. In line with the guidelines, the Envelo range comprises of visco-memory foam and gel options to help meet the pressure needs of clients with low mobility and those with conditions requiring postural support.

All Envelo cushions allow for immersion and envelopment of bony prominences including the pelvis and ischial tuberosities (ITs) and help redistribute pressure over a larger surface area.

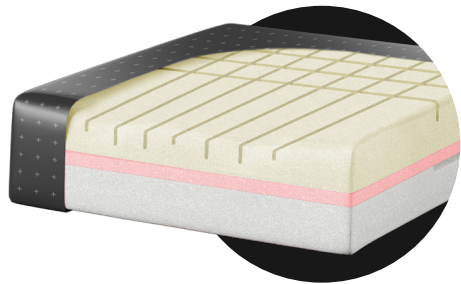
# Envelo™

The Envelo cushion provides excellent pressure redistribution and comes as standard on all Seating Matters chairs, meeting the clinical needs of most clients.



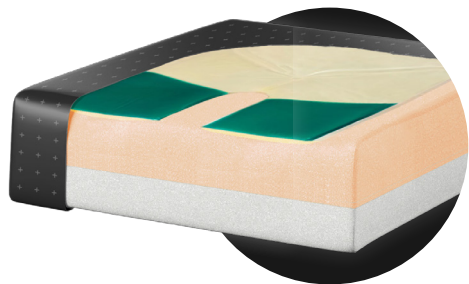
# Envelo™ Plus

Contoured and castellated for comfort, the Envelo Plus is made up of three distinct layers of foam providing increased immersion and envelopment.



# Envelo™ Gel

Constructed from a combination of anatomically contoured, temperature regulating gel and viscoelastic foam, the Envelo Gel provides excellent pressure redistribution and seating stability.



# Assessment & Selection

Why is the assessment and selection of the correct chair and cushion important?

Improper posture can lead to imbalanced weight distribution which may lead to pressure injuries or other sometimes fatal complications.<sup>2</sup> Support from the correct chair and cushion can improve posture and help with pressure redistribution for pressure management.

The selection of a cushion should not be solely based on interface pressure mapping. Other factors such as comfort, appearance, feel and look of the cushion, weight limit and portability are equally important<sup>1</sup> when choosing the correct cushion to meet the need of the seated person.

# Assessing for Seating

**For the person being assessed, the time spent doing a seating assessment can make a major difference to their future comfort, positioning and quality of life.**

**Seating assessments involve:**

- Checking medical conditions and the person's weight.
- Understanding levels of mobility and assistance required with transfers.
- Taking critical measurements of the seated person's body dimensions.
- Testing the person's range of movement (ROM).
- Prioritising the goals of seating – activity related functions, psychological functions and physiological functions.
- Selecting an appropriate chair and cushion.
- Fitting and adjusting the chair to meet the person's needs.

**The assessment should aim to provide a chair and cushion which will;**

- Support the user's body.
- Manage their skin and pressure needs.
- Provide comfort.
- Ensure safety.



# 4 Principles of Effective Clinical Seating

For some clinicians, the cushion can be seen as the primary intervention required to address pressure management in their clients.

However, to achieve the best results in seating and pressure care, the 4 Principles of Effective Clinical Seating should be followed, with the cushion or "appropriate surface" always considered in conjunction with the other three principles.<sup>3</sup>

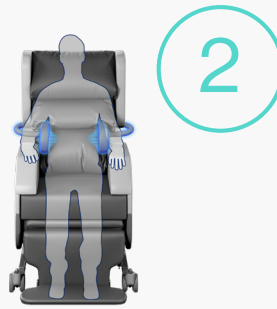
- 1 Load the Body
- 2 Provide Postural Support
- 3 Effective Repositioning
- 4 Appropriate Surface





## Load the Body

Ensure full body is in contact with the chair to redistribute pressure from bony prominences. Don't forget to load the feet! 19% of body weight goes through our feet.<sup>4</sup>



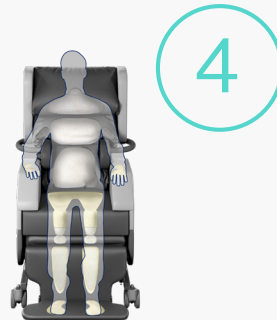
## Provide Postural Support

Accommodate fixed deviations and correct flexible deviations to prevent further progression of deformities and avoid uneven pressure redistribution.



## Effective Repositioning

Repositioning is recommended in pressure injury guidelines.<sup>5</sup> Research has shown that increasing the angle of tilt and increasing recline reduces the loading of pressure at the seating interface.<sup>6</sup>



## Appropriate Surface

All weight-bearing parts of the chair should facilitate immersion, envelopment and support of the patient's body. The surfaces of Seating Matters chairs and cushions are made of high performance pressure redistributing materials with a multi-stretch Dartex covering.

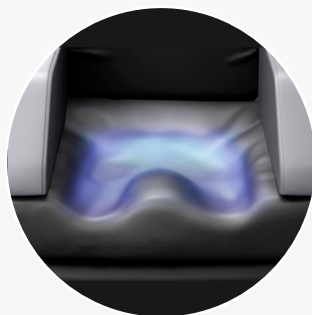
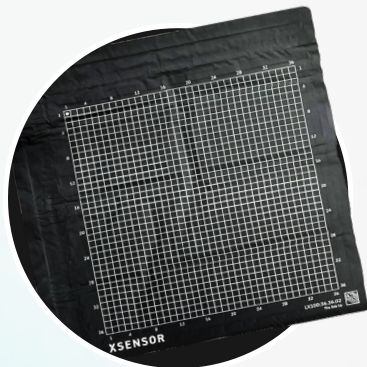
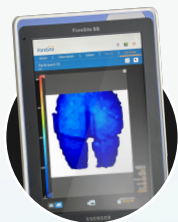
# Cushion Testing

## Interface Pressure Mapping

Interface pressure mapping (IPM) is used as a tool to help in the prediction of pressure ulceration.<sup>7</sup> Pressure mapping involves moving away from expert opinion and tradition towards objective assessment. A systematic review of IPM to predict pressure injury development concluded there was evidence of a relation between interface pressure and the incidence and time to develop or heal pressure ulcers.<sup>8</sup>

As part of the development of the Envelo cushion range, Seating Matters conducted interface pressure mapping and comfort scoring trials among healthy volunteers.

During the trials, the Seating Matters Clinical and Research and Development teams placed specialist mats with hundreds of highly sensitive sensors on the cushions. The mats transmit live mapping data which was interpreted under the first three categories opposite with a qualitative comfort score also sought from trial participants.



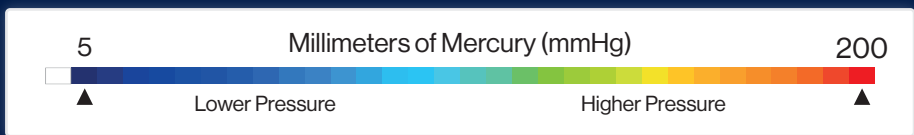
## Measurements During Testing

### 1 Peak Pressure

The highest value of the pressures recorded by the sensors in the mat, measured in millimeters of mercury. Blue indicates a lower pressure reading on the digital image. Red indicates a higher pressure reading digital image.

### 2 Peak Pressure Index

The average value calculated within a 14.5cm<sup>2</sup> area (i.e., the approximate contact area of an ischial tuberosity) around the highest peak pressure value. A high gradient from peak to adjacent sensors indicates poor envelopment of the bony prominence.



X-Sensor 4.0 Interface Pressure Mapping Range

### 3 Contact Area

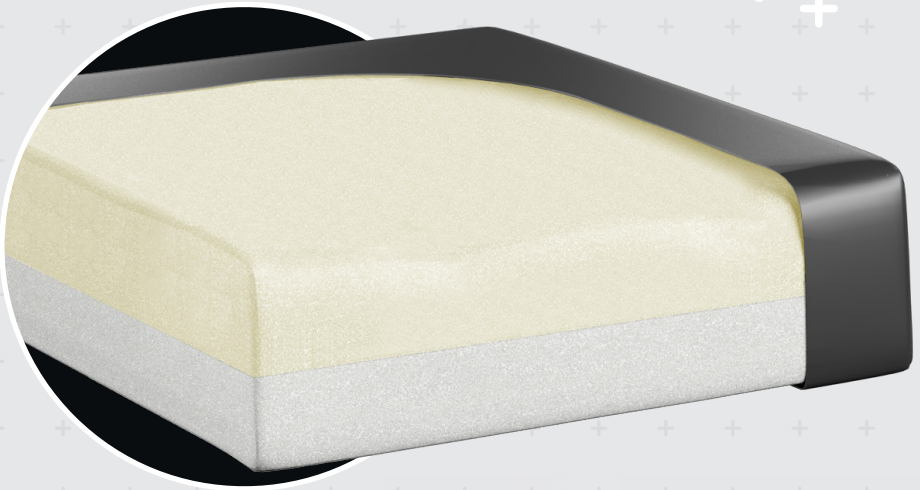
The area under the load. Measured in square centimeters (cm<sup>2</sup>).

### 4 Comfort Scores

Responses to the question: How would you rate the comfort of this cushion where 0 is extremely uncomfortable and 10 is extremely comfortable?

# Envelo™ Features

The Envelo cushion comes as standard on all Seating Matters chairs.



## Who uses the Envelo?

Providing pressure redistribution, the Envelo is an excellent standard issue cushion which should meet the needs of most clients.

- Anyone who can benefit from pressure redistribution.
- Those at higher risk of slipping out of a chair could benefit from the ramped seat cushion adaptation.

Dartex®

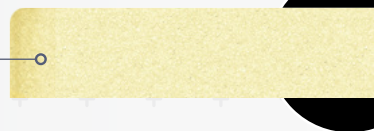
**What is it?**

Dartex is multi-stretch, breathable, waterproof material. It has the ability to be wiped clean and has biostatic (anti-mycotic) coatings to provide an impenetrable barrier to virus and bacteria.



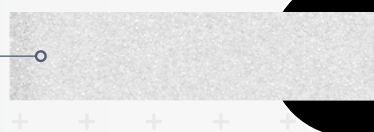
1 Top Layer —————

**2½” High performance memory foam**  
Provides comfort and allows for immersion and envelopment.



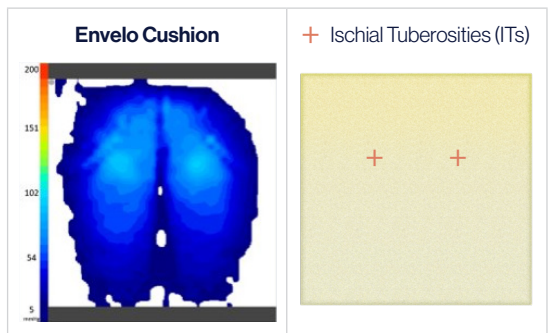
2 Base Layer —————

**2½” High density layer of foam**  
Helps to provide stability to the pelvis.



**Interface Pressure Mapping (IPM)**

Interface Pressure Mapping of 20 healthy volunteers sat upright in a Sorrento Chair. Images of a volunteer with a BMI of 27.8kg/m<sup>2</sup>

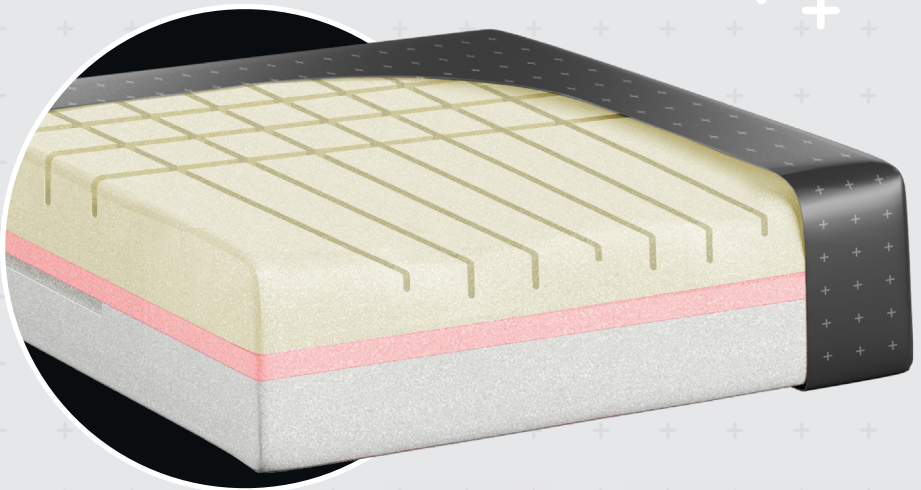


Peak Pressure (mmHg)	<b>91.7</b>
Peak Pressure Index (mmHg)	<b>76.7</b>
Contact (cm <sup>2</sup> )	<b>1457.7</b>

For information about measurements during testing refer to page 10.

# Envelo™ Plus Features

Contoured and castellated for comfort, the Envelo Plus provides deep envelopment and redistributes high pressure evenly.



## Who uses the Envelo Plus?

Envelo Plus is an excellent upgrade to our standard cushion and is suitable for patients requiring an extra level of comfort and envelopment.

- Patients who prefer a soft, comfortable cushion.
- Those who require greater pressure redistribution.

1

### Top Layer

#### **2" High performance castellated memory foam**

Provides comfort and allows for immersion and envelopment.



2

### Second Layer

#### **¾" High performance memory foam**

An additional layer of memory foam which contours to the pelvic well in the base layer, providing an extra level of comfort for patients.

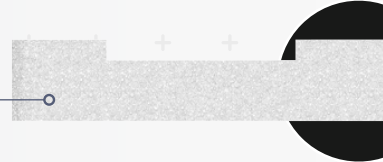


3

### Base Layer

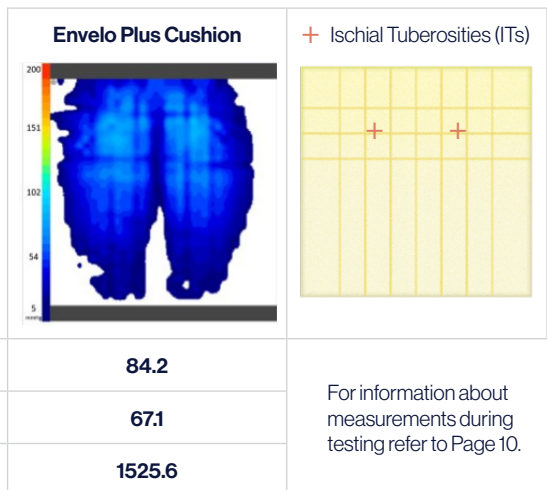
#### **A dense layer of foam with a pelvic well**

Helps to provide stability to the pelvis.



## Interface Pressure Mapping (IPM)

Interface Pressure Mapping of 20 healthy volunteers sat upright in a Sorrento Chair. Images of a volunteer with a BMI of 27.8kg/m<sup>2</sup>

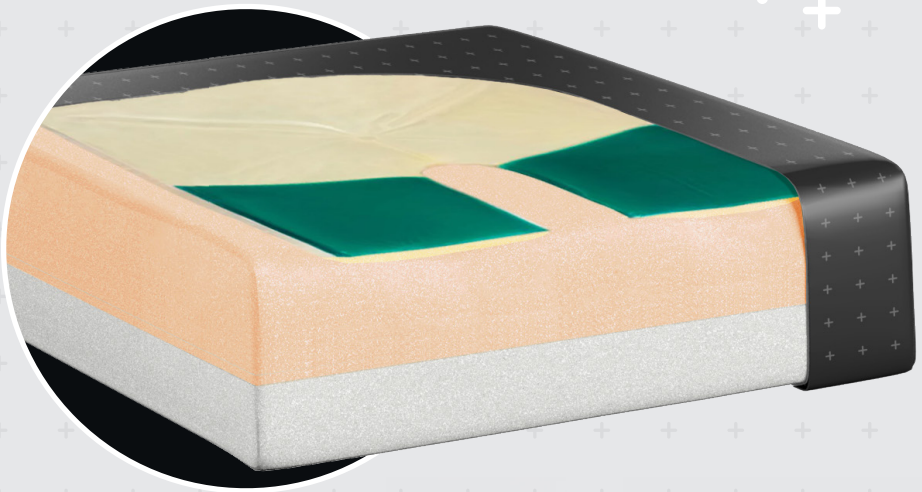


For information about measurements during testing refer to Page 10.

# Envelo™ Gel

## Features

Constructed from a combination of anatomically contoured, cooling gel and viscoelastic foam, giving weight distribution and seating stability.



### Who uses the Envelo Gel?

Prescribed by clinicians whose clients require increased pressure redistribution.

- Patients who require a firm, stable cushion.
- Those who sit out for long periods of time.



1 Clear Gel Layer (Ischial Tuberosities)

**Temperature reducing FloGel ischial area**  
 Allows a higher level of immersion and envelopment for the ITs and helps regulate micro-climate.

2 Green Gel Layer (Thighs)

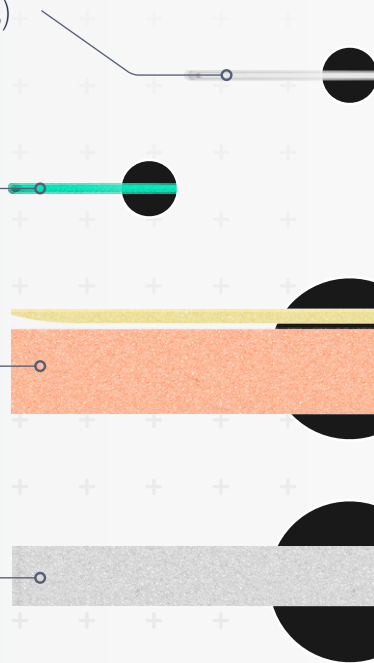
**Temperature reducing TruGel thigh channels**  
 Provides a cooling effect and allows a higher level of immersion and envelopment for the thighs.

3 Middle Layer

**A combination of fast & slow recovery foam**  
 Anatomically contoured fast-recovery foam with slow-recovery foam inset, giving excellent pressure redistribution and stability.

4 Base Layer

**A dense layer of foam**  
 Helps to provide stability to the pelvis.



## Interface Pressure Mapping (IPM)

Interface Pressure Mapping of 20 healthy volunteers sat upright in a Sorrento Chair. Images of a volunteer with a BMI of 27.8kg/m<sup>2</sup>



Peak Pressure (mmHg)	<b>73.9</b>
Peak Pressure Index (mmHg)	<b>56.8</b>
Contact (cm2)	<b>1422.0</b>

For information about measurements during testing refer to Page 10.

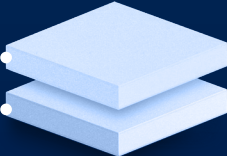
# Technical Specification

---

## Envelo™

Slow Recovery Memory Foam

High Density Base Foam

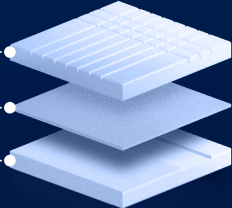


## Envelo™ Plus

Slow Recovery Memory Foam

Slow Recovery Memory Foam

High Density Base Foam



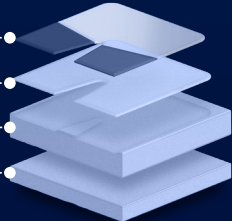
## Envelo™ Gel

FloGel & TruGel\*

Slow Recovery Memory Foam

Fast Recovery Memory Foam

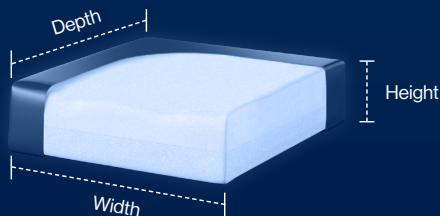
High Density Base Foam



\*Store flat on a level plane to avoid gel gathering to one side

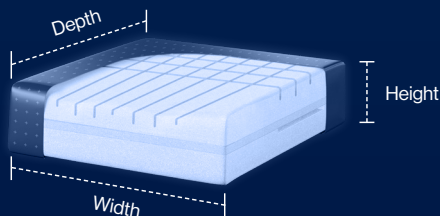
---

Part No.	Width	Depth	Height	
PN373	400mm / 16"	500mm / 20"	125mm / 5"	
PN374	450mm / 18"	500mm / 20"	125mm / 5"	
PN6	500mm / 20"	500mm / 20"	125mm / 5"	
PN375	550mm / 22"	500mm / 20"	125mm / 5"	
PN376	600mm / 24"	500mm / 20"	125mm / 5"	
PN1585	650mm / 26"	500mm / 20"	125mm / 5"	
PN804	550mm / 22"	500mm / 20"	125mm / 5"	Milano



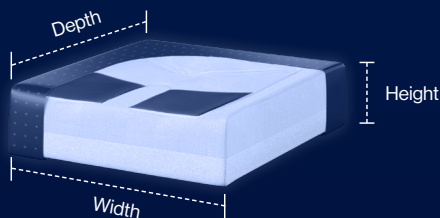
**Envelo Weight Limit:**  
200kg / 440lb / 31.5 Stone

Part No.	Width	Depth	Height	
PN1706	400mm / 16"	500mm / 20"	125mm / 5"	
PN1707	450mm / 18"	500mm / 20"	125mm / 5"	
PN1708	500mm / 20"	500mm / 20"	125mm / 5"	
PN1709	550mm / 22"	500mm / 20"	125mm / 5"	
PN1710	600mm / 24"	500mm / 20"	125mm / 5"	
PN1711	650mm / 26"	500mm / 20"	125mm / 5"	
PN1712	550mm / 22"	500mm / 20"	125mm / 5"	Milano



**Envelo Plus Weight Limit:**  
200kg / 440lb / 31.5 Stone

Part No.	Width	Depth	Height	
PN1713	400mm / 16"	500mm / 20"	125mm / 5"	
PN1714	450mm / 18"	500mm / 20"	125mm / 5"	
PN1715	500mm / 20"	500mm / 20"	125mm / 5"	
PN1716	550mm / 22"	500mm / 20"	125mm / 5"	
PN1717	600mm / 24"	500mm / 20"	125mm / 5"	
PN1718	650mm / 26"	500mm / 20"	125mm / 5"	
PN1719	550mm / 22"	500mm / 20"	125mm / 5"	Milano



**Envelo Gel Weight Limit:**  
130kg / 287lb / 20.5 Stone

# Storage & Cleaning Instructions

**Your Seating Matters chair is upholstered with two distinct materials, Vinyl and Dartex multi-stretch material.**



## **Dartex®**

Dartex is multi-stretch, breathable, waterproof material. It has the ability to be wiped clean and has biostatic (anti-mycotic) coatings to provide an impenetrable barrier to virus and bacteria.



## **Vinyl**

Vinyl is resistant to urine, most household stains, mild acids/alkalis, drinks and beverages as they are not absorbed and can be wiped off without any problem or lasting damage. Some difficult substances such as lipstick, ball point pen ink and food colourings should be cleaned off immediately to avoid permanent staining.



### **Watch - How to clean your Seating Matters chair and cushion**

Scan the QR code with your phone camera or visit YouTube to watch.

## Storage & Maintenance

For optimal performance, it is recommended that Envelo cushions are stored flat, in a dry environment. The recommended temperature range for safe storage is between 0 to 45 degrees Celsius.

Monthly checks should be carried out for damage. Discontinue use of the cushion if there is damage to the cover, foam or gel and contact Seating Matters for advice.

## Cleaning

Superficial dirt may be removed by wiping with a soft cloth moistened with water containing a neutral detergent. More persistent contamination may be treated by wiping with alcohols or turpentine substitute, followed by hot water and detergent. Routine cleaning and disinfection may be carried out on the coating with hand hot water and a neutral detergent or with a bleach solution (0.1% or 1000 parts per million available chlorine).

The material is compatible with the 10,000ppm available chlorine in solution required for the decontamination of blood spills. Excess solution must be removed and the surface thoroughly rinsed and dried prior to reuse or storage. Proprietary disinfectants may be used provided manufacturer's instructions are followed.

**All cleaning agents, and disinfectants, must be thoroughly rinsed off and the item dried after cleaning.**

## What you can use

### 1 Warm Soapy Water

Use warm soapy water to wash down your chair. Bear in mind that it is important to dry the surface afterwards.

### 2 70% Alcohol

The can be used in line with the manufacturer's guidelines.

### 3 Bleach

Concentrations of bleach from 1,000ppm to 10,000ppm available chlorine, is likely to be considered effective cleaning. **Use bleach sparingly.**

### Example of Dilution Ratio

The ppm of available chlorine may vary with each different brand of bleach. Search online for its data sheet and adjust your ratio accordingly to achieve a dilution of approx. 1000ppm of available chlorine.



# Fitting Instructions

## Removal and fitting of your Seating Matters Envelo cushion



The underside of the Seating Matters cushion and the baseboard of the chair are upholstered with non-slip material, which combine to create a friction contact when the chair is occupied. To fit the cushion correctly, place the cushion onto the baseboard of the chair, with the non-slip underside of the cushion facing downwards.



The rear, zipped end of the cushion should be facing towards the back of the chair. See cushion label for orientation. To remove the cushion, simply lift it out from the chair.

# Product Information

## Warranty

All cushions in our range are covered under a one-year manufacturer's warranty. This includes the cushion cover, material, zips and seams where the cushion has been used within the manufacturer's specifications. The internal cushion construction is also covered under warranty where the cushion has been stored and used under the manufacturer's guidelines.

## Disclaimer

Our cushions have been designed for use on the Seating Matters chair range and with patients within a weight range of 40kg-200kg. Due to the non-slip design between the Seating Matters chair range and cushion range, we are not liable for any use outside of the conditions of use. While all care has been taken to provide a safe and comfortable cushion solution for patients, we recommend a seating assessment is carried out prior to purchase of the cushion to ensure the patient is compatible with the prescribed product.



For full terms and conditions visit our website or scan the QR code here:

## Recycling Policy

The polyurethane foam component of our cushions is completely recyclable and can be reconstituted for further use at the end of life. We recommend following your local recycling guidelines to recycle this foam rather than add it to landfill!

## References

1. M. Stephens, C.A. Bartley, Understanding the association between pressure ulcers and sitting in adults what does it mean for me and my carers? Seating guidelines for people, carers and health & social care professionals, *Journal of Tissue Viability*, Volume 27, Issue 1, 2018, Pages 59-73.
2. Heslop P, Blair PS, Fleming P, Hoghton M, Marriott A, Russ L. The Confidential Inquiry into premature deaths of people with intellectual disabilities in the UK: a population-based study. *Lancet*. 2014 Mar 8;383(9920):889-95.
3. M. Tierney. *The Clinician's Seating Handbook. A Reference Guide for Clinical Seating Provision 6th Edition.* <https://seatingmatters.com/>
4. Selecting cushions and armchairs: how to make an informed choice. *J Wound Care*. 2001 Nov;10(10):423-7.
5. European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers/Injuries Clinical Practice Guideline The International Guideline. Emily Haesler (Ed.). EPUAP/ NPIAP/PPPPIA: 2019.
6. Schofield R, Porter-Armstrong A, Stinson M. Reviewing the literature on the effectiveness of pressure relieving movements. *Nurs Res Pract*. 2013;2013:124095.
7. BSI Standards Publication. PD ISO/TR 16840-9: 2015. Wheelchair seating Part 9: Clinical interface mapping guidelines for seating.
8. Reenalda J, Jannink M, Nederhand M, et al. Clinical use of interface pressure to predict pressure ulcer development: a systematic review. 2009.



**UK & Europe**

131 Carnamuff Road  
Limavady  
Northern Ireland  
BT49 9JG  
T: +44 (0) 28 777 666 24  
[contact@seatingmatters.com](mailto:contact@seatingmatters.com)

**USA**

300 International Dr  
Suite 100, Buffalo  
New York, USA  
NY 14221  
T: +1 (905) 507 9007  
[usa@seatingmatters.com](mailto:usa@seatingmatters.com)

**Australia**

9/256 New Line Road  
Dural  
NSW 2158  
Australia  
T: +61 1300 001 050  
[australia@seatingmatters.com](mailto:australia@seatingmatters.com)

