

# Technology that transforms

Your guide to the innovative new  
**chitosan gelling fibre** dressing

Discover more:  
[www.maxiocel.com](http://www.maxiocel.com)



## **MaxioCel**<sup>®</sup>

Powered by **Bioactive Microfibre Gelling<sup>®</sup>** technology



USFDA 510k Clearances  
CE Certified

# The proven science behind MaxioCel

## Chitosan: proven benefits in woundcare

Chitosan is derived from chitin – the most abundantly available natural polymer after cellulose<sup>1</sup> Chitosan has several properties that aid wound healing<sup>2</sup> :

- ✓ haemostasis
- ✓ anti-microbial
- ✓ anti-inflammatory
- ✓ non-cytotoxic

MaxioCel® is composed of chitosan extracted from Shellfish. MaxioCel is a highly absorbent advanced wound dressing, indicated for the management of moderately to heavily exuding chronic and acute wounds.

### CASE STUDY

Promotion of autolytic debridement and activation of the healing process<sup>3</sup>



17th November 2021



15th December 2021

A 64 year old female presented with a static traumatic wound to her left leg, following a gardening accident at home. Previous dressing regime included a range of superabsorbent dressings, together with reduced compression. MaxioCel was commenced with treatment objectives to manage high levels of exudate and promote autolytic debridement. Within just 4 weeks, MaxioCel reduced pain levels from 8 to 3 (visual analogue scale) and activated healing, with tissue type improving from 100% necrotic to 70% granulation and 30% epithelialisation. Clinicians commented:

*"MaxioCel assisted in reducing pain for this patient as MaxioCel could be removed easily, atraumatically and in one piece. The haemostatic properties of the dressing proved extremely beneficial for this very traumatic wound and subsequent haematoma."*

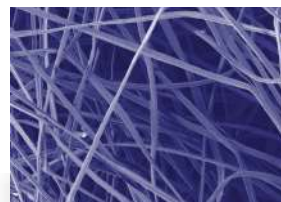
Visit [www.maxiocel.com](http://www.maxiocel.com) to read more case studies

# Bioactive Microfibre Gelling technology

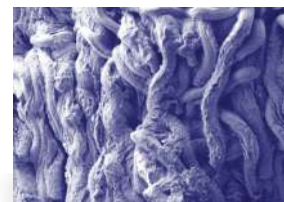
BMG technology transform chitosan microfibrils of MaxioCel into a cohesive and conformable gel which helps to manage the wound exudate, entrap bacteria and provides an optimal moist environment for faster wound healing.<sup>4</sup>

- high absorption
- strength when wet
- longer wear time
- easy removal
- vertical wicking

## Super-absorbent gelling fibers



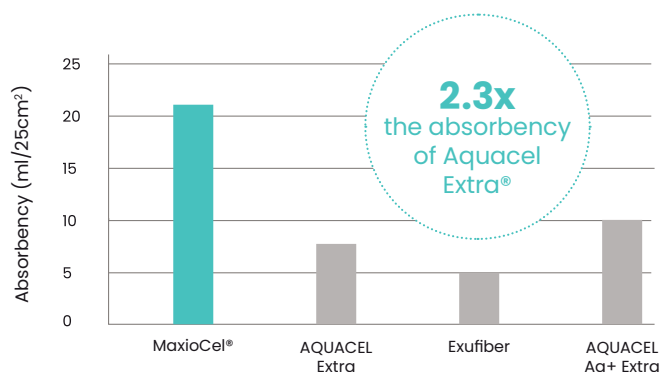
Before absorption of wound exudates



After absorption of wound exudates

## Locks in exudate

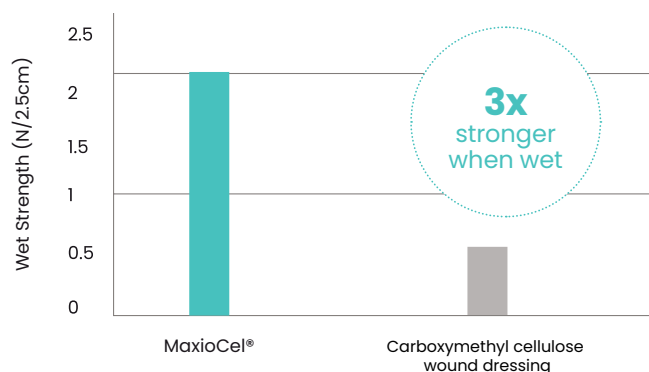
MaxioCel absorbs exudate vertically and forms a cohesive gel matrix that locks exudate inside the core of the fibres – protecting the peri-wound skin and preventing maceration, even under compression.<sup>4</sup>



## Strength when wet

On absorbing wound exudate, MaxioCel's fibres transform into a cohesive and conformable gelling matrix that maintains its integrity – resulting in simpler, faster, more comfortable dressing removal.

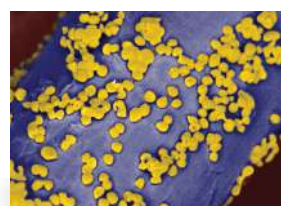
The wet strength of MaxioCel is around 3 times greater than a traditional gelling fibre dressing.<sup>4</sup>



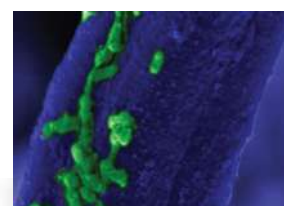
## Microbial protection

Provides barrier against bacterial penetration.<sup>4</sup>

## Bacterial adhesion and sequestration



Adherence of *Staphylococcus aureus* on MaxioCel® Microfibrils

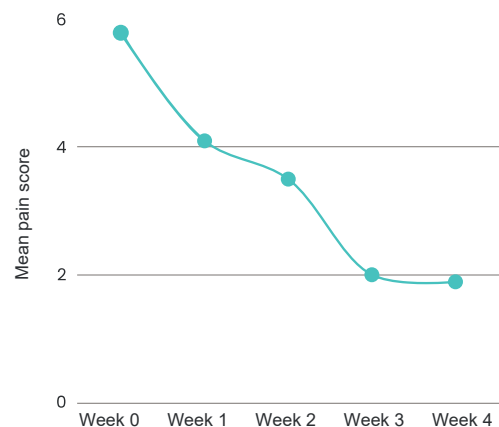


Adherence of *Pseudomonas aeruginosa* on MaxioCel® Microfibrils

## Improves patient comfort

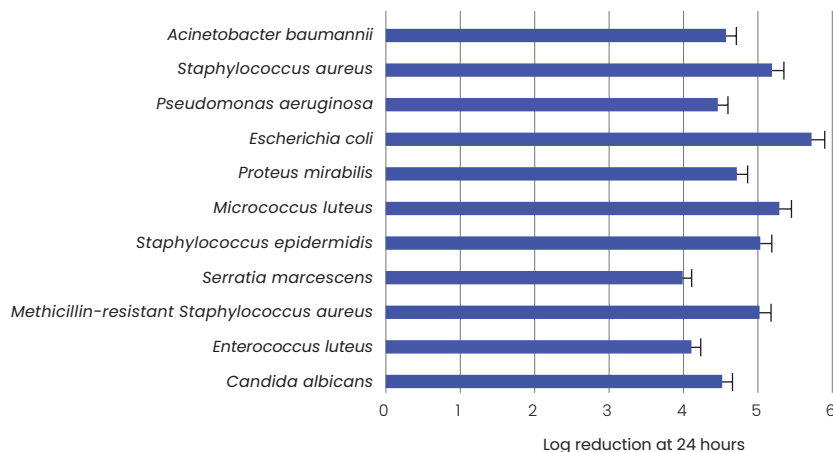
MaxioCel's Bioactive Microfibre Gelling Technology transforms into a soothing gel matrix that works to reduce inflammation, protect peri-wound skin, and activate healing-improving patient comfort and experience. It is a difference that you can see and the patients can feel.<sup>4</sup>

In a 4-week evaluation, patients using MaxioCel reported a significant reduction in pain perception.<sup>5</sup>



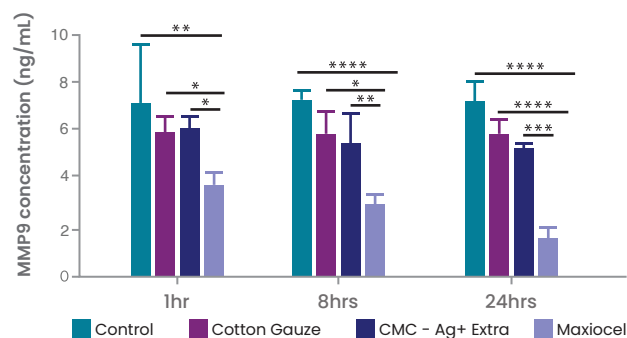
## Antimicrobial+ anti-biofilm action

MaxioCel's positively charged chitosan fibres attract, disrupt, and kill bacteria within the dressing - reducing bacterial load which is a barrier to healing. Biofilms can adhere to the gel matrix, when the dressing is changed, the biofilm is gets removed.<sup>4</sup>



## Activates wound healing & Haemostasis

MaxioCel helps to accelerate the granulation and re-epithelialization through fibroblast proliferation and sequestration of excess Matrix metalloprotease (MMPs). MaxioCel's positively charged fibers also attract blood cells to activate haemostasis in wound site.<sup>4</sup>

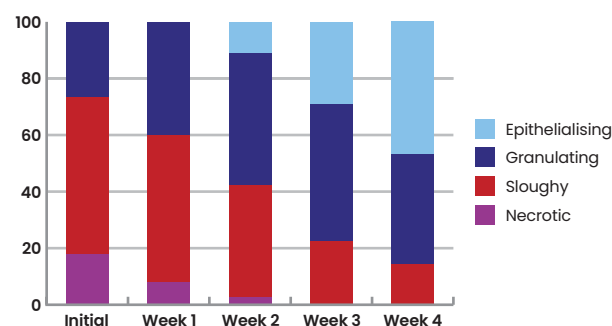
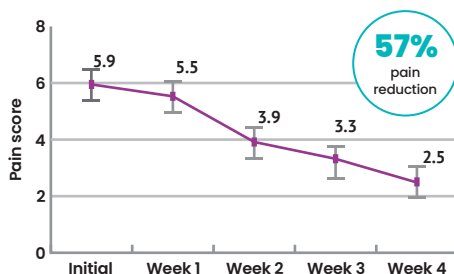
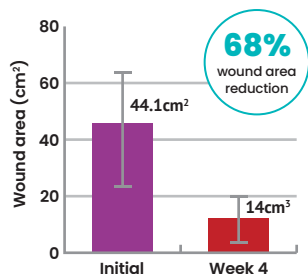


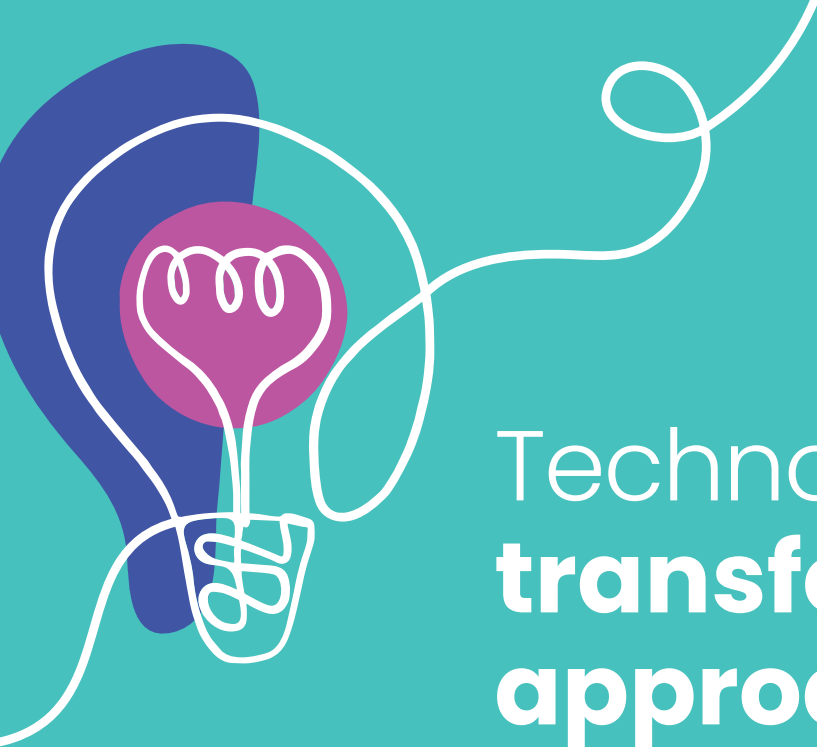
## Streamlines dressing selection

MaxioCel can be used first line on a wide variety of wound types - streamlining dressing selection and usage. Actives in all phases of wound healing. Simple to use, Bio-compatible, non-Cytotoxic for your patient.<sup>4</sup>

## Clinical Evidence

Evaluation of MaxioCel dressing in the management of hard-to-heal wounds.<sup>6</sup> (Conducted at NHS UK)  
In 4 week evaluation, patients using MaxioCel dressing reported a significant wound area reduction and pain reduction along with improvement in granulation and re-epithelialization.





# Technology that **transforms your approach** to wound healing



Microscopic image of BMG fibre stained with coloured dyes, demonstrating core shell structure.

Powered by Bioactive Microfibre Gelling® (BMG) technology, MaxioCel® is an innovative new gelling fibre dressing that activates wound healing and improves patient comfort. It's a powerfully simple solution to your wound healing challenges – in one intelligent dressing.<sup>4</sup>

- ✓ A versatile dressing for use on moist wounds
- ✓ Locks exudate inside the dressing core and protects peri-wound skin
- ✓ One piece removal
- ✓ Broad spectrum antimicrobial property and biofilm removal
- ✓ Faster granulation and epithelization
- ✓ Improves patient comfort

“Adding MaxioCel to my woundcare toolkit **made dressing selection easier**. I found that it debrided slough efficiently, **encouraged granulation** and continued to do its job allowing wound healing progression. Importantly, my patients also felt **completely comfortable** with MaxioCel”

**Tanya Brandon,**  
Deputy Charge Nurse – Burns and Plastics, UK

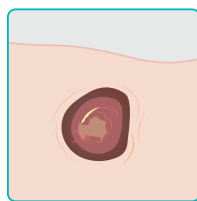
# Indications<sup>7,8,9</sup>



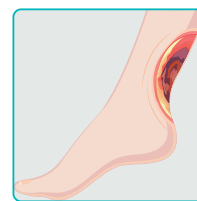
Pressure sores/  
Bed sores



Diabetic  
ulcers



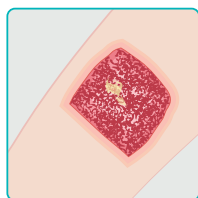
Skin abrasion and  
laceration



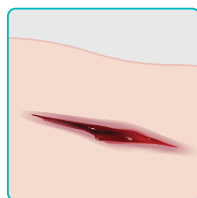
Leg  
ulcers



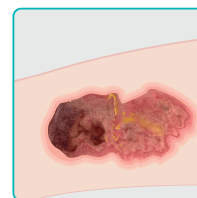
Surgical  
wounds



Donor sites and  
graft sites



Trauma  
wound



1st and 2nd  
degree burns

## Available Size

MPC Code	Size	Pack
MX4545	45cm x 45cm	Box of 3
MX2030	20cm x 30cm	Box of 5
MX1515	15cm x 15cm	Box of 10
MX2530	2.5cm x 30cm	Box of 10
MX1010	10cm x 10cm	Box of 10
MX0510	5cm x 10cm	Box of 10
MX0505	5cm x 5cm	Box of 10

Shelf Life: 3 Years



E: [int.sales@axiobio.com](mailto:int.sales@axiobio.com) T: **+91 88607 86067**

W: [www.maxiocel.com](http://www.maxiocel.com)



### References

- <sup>1</sup> Liu H, Wang C, Li C, Qin Y, Wang Z, Yang F, Li Z, Wang J. A functional Chitosan-based hydrogel as a wound dressing and drug delivery system in the treatment of wound healing. RSC advances. 2018;8(14):7533-49.
- <sup>2</sup> Dai T, Tanaka M, Huang VY, Hamblin MR. Chitosan preparations for wounds and burns: antimicrobial and wound-healing effects. Expert review of anti-infective therapy. 2011 Jul 1;9(7):857-79.
- <sup>3</sup> Tickle J. A clinical case series: Evaluation of a Bioactive Microfibre Gelling® (BMG) dressing to support improved service delivery in the management of chronic wounds in a wound healing clinic (2022) Wounds UK.
- <sup>4</sup> A HN, Kumar A, Agrawal A, Mavely L, Bhatia D. Characterization of a Bioactive Chitosan Dressing: A Comprehensive Solution for Different Wound Healing Phases. ACS Appl Bio Mater. 2025 Feb 27. doi: 10.1021/acsabm.4c01161. Epub ahead of print. PMID: 40014862.
- <sup>5</sup> Pramod, S. A ten patient case study series of the impact of a 100% Chitosan based dressing with Bioactive Microfibre Gelling® (BMG) technology in Individual s with oncology wounds (2022) Wounds UK.
- <sup>6</sup> Tickle, J., 2023. Evaluation of a chitosan dressing in the management of hard-to-heal wounds. British Journal of Nursing, 32(4), pp.S44-S50.
- <sup>7</sup> Gupta AK, Vyas A. Use of chitosan wound dressing for the treatment of surgical site infection: a case report. Journal of Wound Care. 2023 Mar 1;32(Sup3):S4-S8.
- <sup>8</sup> Nair, K.R., Suhanthi, R. and Balakrishnan, R.A.R., Evaluation of a bioactive microfibre gelling dressing in the management of chronic wounds: a case series.
- <sup>9</sup> East, W.M., Evaluation of a bioactive microfibre gelling dressing in the management of chronic wounds: a case series. Journal Articles, 6(03).