

**EXUDATE** 

INFECTION

BIOFILM

# Wound healing has always had villains. Now it has a hero.



No dressing does more.+

**Available on Drug Tariff from 1st June 2014** 



## No dressing does more.<sup>+</sup>



# Three wound healing villains: exudate, infection and biofilm.





#### Two powerful technologies.

#### **NEW Ag+ Technology**

Revolutionary technology **destroys biofilm** and **kills infection-causing bacteria**.\*<sup>1-3</sup>



#### Hydrofiber<sup>®</sup> Technology

Proven technology that **absorbs and retains excess exudate** to help create an ideal healing environment.\*4-8





### One wound healing hero.



Currently available in AQUACEL<sup>®</sup> Ag+ Extra<sup>™</sup> and AQUwACEL<sup>®</sup> Ag+ Ribbon dressings.

\*As demonstrated *in vitro* †Demonstrated ability to manage excess exudate, infection and biofilm.

## Biofilm delays wound healing.

## Biofilm is common.

Biofilm is formed when colonies of bacteria secrete a slime layer to protect themselves.<sup>9</sup>

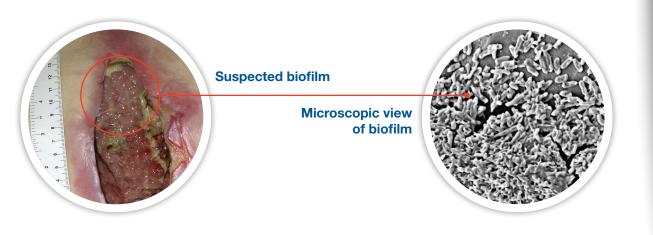
It is involved in approximately 80% of all healthcare infections.<sup>10</sup> The plaque on your teeth, urinary tract infections and eye infections are all linked to biofilm.<sup>11-13</sup>

Even though you can't always see it, **the majority of chronic wounds contain biofilm**<sup>14</sup> – and it's a key cause of delayed wound healing<sup>15</sup> and a precursor to infection.<sup>16</sup>

## Biofilm is stubborn.

Biofilm is **difficult to completely remove**<sup>17</sup> – even with debridement – and it **reforms quickly**.<sup>18</sup> Biofilm tolerates:

- Antimicrobials such as PHMB\*\*19, honey<sup>20</sup>, iodine<sup>21,22</sup> and silver<sup>23</sup>
- Antibiotics<sup>24</sup>
- Attempts by the body to clean the wound bed<sup>25</sup> and close the wound<sup>19</sup>



# Two powerful technologies working s the key barriers to wound healing.



Aq+ Technology is a unique, silver-containing anti-biofilm formulation that:<sup>26</sup>

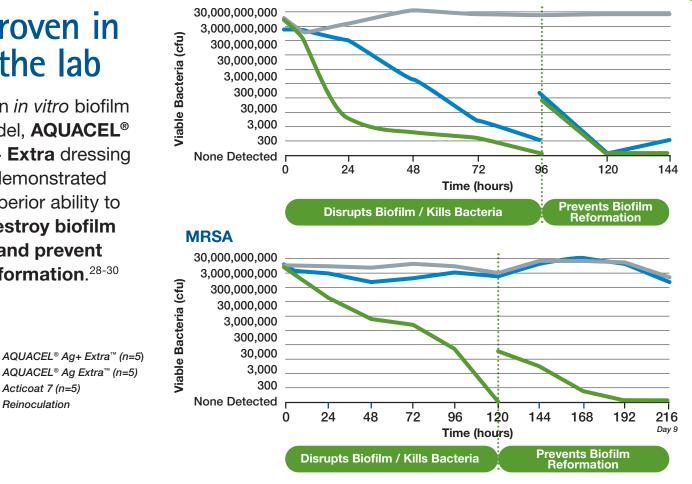
- DISRUPTS and breaks down biofilm slime to expose bacteria<sup>\*1-3</sup>
- KILLS a broad spectrum of bacteria, including antibiotic resistant superbugs, with its reservoir of silver\*2,3,27
- PREVENTS biofilm reformation\*2,3

#### Proven in the lab

In an in vitro biofilm model, AQUACEL® Aq+ Extra dressing demonstrated superior ability to destroy biofilm and prevent reformation.<sup>28-30</sup>

Acticoat 7 (n=5)

····· Reinoculation



In this in vitro model, mature biofilm was grown on a gauze substrate and confirmed by microscopy. Gauze-biofilm substrates were then transferred to agar plates to create a simulated wound biofilm model; dressings were applied to the biofilm surface, hydrated and covered with an appropriate secondary dressing. Following incubation, the killing effect of the dressing on biofilm-embedded bacteria was assessed at several time points over a maximum of 120 hours. Biofilm reformation was also assessed by inoculating fresh bacteria onto the gauze substrate beneath the dressing, followed by assessment of biofilm presence or absence over a maximum of 96 hours. \*As demonstrated in vitro

#### Pseudomonas aeruginosa

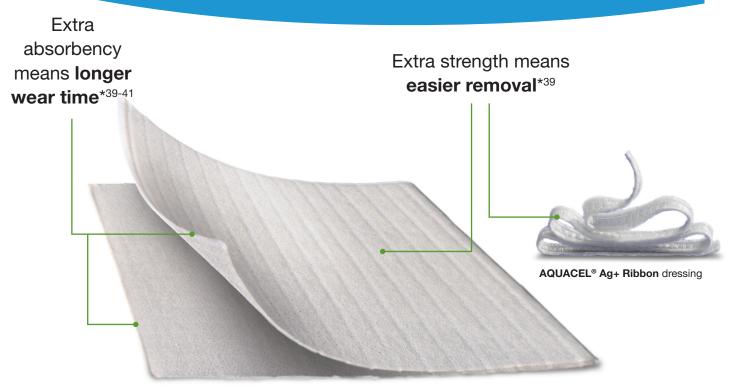
## synergistically to manage

Hydrofiber<sup>®</sup> Technology helps create an ideal environment for healing – and for Ag+ Technology to work.

• LOCKS IN excess exudate, bacteria and biofilm to help minimise cross infection and prevent maceration\*4-7,31,32



- MICRO-CONTOURS to the wound bed, maintaining optimal moisture balance and eliminating dead spaces where bacteria and biofilm can grow\*<sup>33-35</sup>
- **RESPONDS** to wound conditions by forming a cohesive gel, while helping to minimise pain associated with dressing changes\*<sup>36-38</sup>



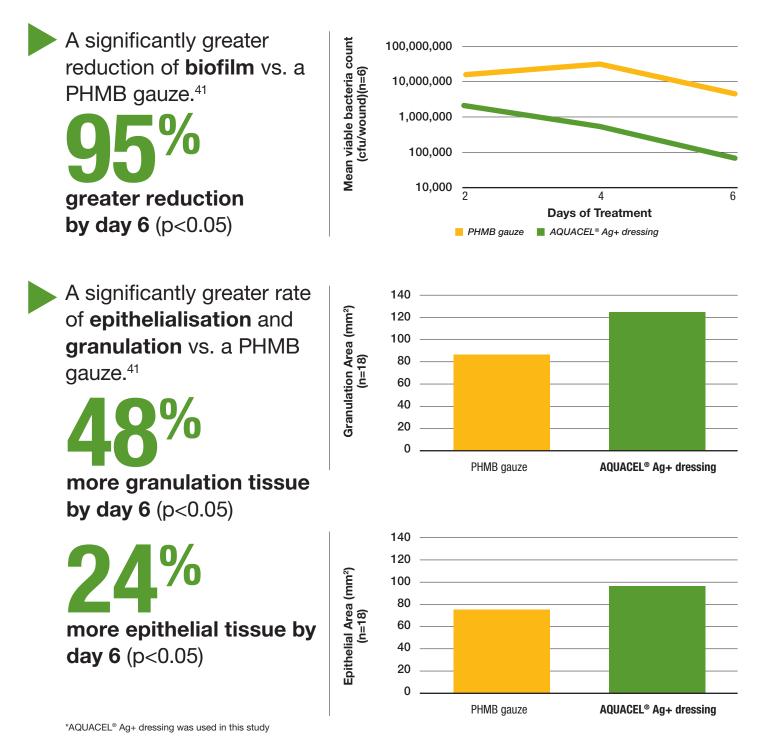
AQUACEL<sup>®</sup> Ag+ Extra<sup>™</sup> dressing



# AQUACEL Ag+Dressings - the family

### Proven in scientifically controlled wounds

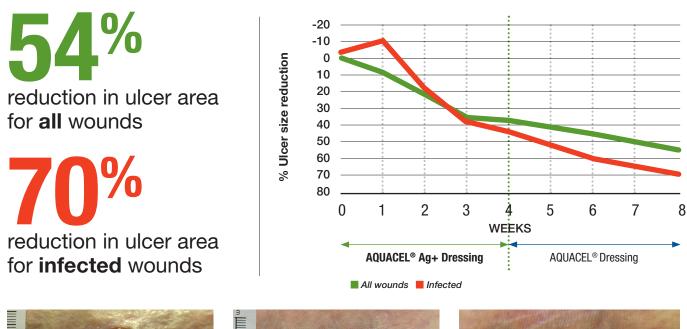
In an adapted *in vivo* biofilm model<sup>19</sup>, **Ag+ Technology** in combination with **Hydrofiber**<sup>®</sup> **Technology** demonstrated:\*



## ily of wound healing heroes.

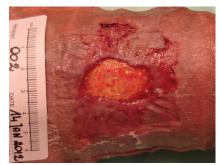
### Demonstrated wound healing in the clinic<sup>42</sup>

In a prospective, multi-Centre, non-comparative study on 42 chronic venous leg ulcer patients with at-risk or infected wounds<sup>^</sup> where biofilm is highly likely, **Ag+ Technology** in combination with **Hydrofiber**<sup>®</sup> **Technology** demonstrated:<sup>\*</sup>









Day 1





Day 22



Day 49 - healed



Day 56 - healed

^10 infected (exhibiting all 5 signs of clinical infection) and 32 at-risk wounds (exhibiting at least 3 of the 5 classical clinical signs of infection) \*AQUACEL<sup>®</sup> Ag+ dressing was used in this study All pictures used with permission of their respective owners.

#### AQUACEL<sup>®</sup> Ag+ Dressings No dressing does more<sup>+</sup>.

# Add **AQUACEL® Ag+ Dressings** to your protocol of care for chronic and acute wounds that are **infected** or **at risk of infection**.

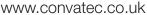


#### Perfect partners: AQUACEL Ag+Dressings and AQUACEL Foam

| Dressing Size    | Dressings     | Product | NHS    | PIP      | Dressing Size              | Dressings | Product | NHS    | PIP      |
|------------------|---------------|---------|--------|----------|----------------------------|-----------|---------|--------|----------|
|                  | per box       | Code    | Code   | Code     |                            | per box   | Code    | Code   | Code     |
| AQUACEL® Ag+ Ex  | tra™          |         |        |          | AQUACEL® Foam              | Adhesive  |         |        |          |
| 5 cm x 5 cm      | 10            | 413566  | ELY514 | 386-2703 | 8 cm x 8 cm                | 10        | 420804  | ELY428 | 378-1820 |
| 10 cm x 10 cm    | 10            | 413567  | ELY515 | 386-2695 | 10 cm x 10 cm              | 10        | 420680  | ELY417 | 370-2784 |
| 15 cm x 15 cm    | 5             | 413568  | ELY516 | 386-2711 | 12.5 cm x 12.5 cm          | ı 10      | 420619  | ELY418 | 370-2792 |
| 20 cm x 30 cm    | 5             | 413569  | ELY517 | 386-2679 | 17.5 cm x 17.5 cm          | ı 10      | 420621  | ELY419 | 370-2800 |
| 4 cm x 10 cm     | 10            | 413581  | ELY520 | 386-0350 | 21 cm x 21 cm              | 5         | 420623  | ELY420 | 370-2818 |
| 4 cm x 20 cm     | 10            | 413598  | ELY521 | 386-0368 | 25 cm x 30 cm              | 5         | 420624  | ELY421 | 370-736  |
| 4 cm x 30 cm     | 10            | 413599  | ELY522 | 386-2687 | 19.8 cm x 14 cm H          | leel 5    | 420625  | ELY422 | 370-7486 |
|                  |               |         |        |          | 20 cm x 16.9 cm \$         | Sacral 5  | 420626  | ELY423 | 370-6041 |
| AQUACEL® Ag+ Ril | bbon Dressing |         |        |          |                            |           |         |        |          |
| 2 cm x 45 cm     | 5             | 413571  | ELY519 | 386-2737 | AQUACEL® Foam Non-Adhesive |           |         |        |          |
| 1 cm x 45 cm     | 5             | 413570  | ELY518 | 386-2729 | 5 cm x 5 cm                | 10        | 420631  | ELY412 | 369-9311 |
|                  |               |         |        |          | <br>10 cm x 10 cm          | 10        | 420633  | ELY413 | 369-932  |
|                  |               |         |        |          | 15 cm x 15 cm              | 5         | 420635  | ELY414 | 370-2750 |
|                  |               |         |        |          | 20 cm x 20 cm              | 5         | 420636  | ELY416 | 370-2776 |
|                  |               |         |        |          | 15 cm x 20 cm              | 5         | 420637  | ELY415 | 370-276  |
|                  |               |         |        |          |                            |           |         |        |          |

1. Physical Disruption of Biofilm by AQUACEL® Ag+ Wound Dressing. Scientific Background Report. WHRI3850 MA232, 2013, Data on file, ConvaTee Inc. **2**. Antimicrobial activity against CA-MR5A and prevention of biofilm reformation by AQUACEL<sup>™</sup> Ag+EXTRA dressing. Scientific Background Report. WHRI3857 MA238, 2013, Data on file, ConvaTee Inc. **4**. Newman GR, Walker M, Hobot JA, Bowler PG, 2006. Visualisation of bacterial sequestration and bacterial activity within hydrating Hydrober<sup>™</sup> wound dressings. *Biomaterials*: 24: 843-890. 6 by Biomaterials 24: 843-890. Biolimis 12: 845-81. Biolimis 12: 845-81.

To learn more about AQUACEL<sup>®</sup> Ag+ dressings or to arrange a visit from your ConvaTec representative, please call **0800 289 738 (UK)** or **1800 946 938 (ROI)** 





†Demonstrated ability to manage excess exudate, infection and biofilm.

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