

SURGICEL® Powder Absorbable Haemostat

SURGICEL Powder is more effective and efficient than ARISTA™ Absorbable Haemostatic Particles¹

Head-to-head in vivo comparison of SURGICEL Powder vs ARISTA™ AH*



SURGICEL Powder†



ARISTA™ AH†

*Based on preclinical testing in a swine acute liver abrasion model.

†Device not shown at actual size.

Reference: 1. MacDonald M. Pivotal study comparing performance of SURGICEL® Powder—Absorbable Hemostatic Powder to ARISTA™ AH Absorbable Hemostatic Particles and PerClot® Polysaccharide Hemostatic System in a swine acute live biopsy model. Study 150120, Project 16438. September 2, 2015. Ethicon, Inc.

SURGICEL® Powder Absorbable Haemostat

ARISTA™ AH

IMPROVED EFFICACY


 SURGICEL Powder achieves haemostasis **89% faster** than ARISTA™ AH—that's **more than 4 minutes!***

 **Dual mechanism of action²**


Acts only as a dehydrant^{2,3}

 **Forms a more adherent and durable clot^{4*}**

Underperformed in maintaining durable haemostasis following irrigation^{4*}

 **Does not increase the incidence of remote adhesions in laparoscopic procedures^{4,5†}**

No proven bactericidal properties

 **Proven bactericidal in vitro^{5‡§}**

IMPROVED EFFICIENCY

 **2-in-1 laparoscopic tip**

Separate purchases required

 **Innovative delivery device⁶**

Powder delivery is inconsistent⁶

 **Economic advantages over ARISTA™ AH^{7||}**

Click on the icons above to learn more about the benefits of SURGICEL Powder.

*Based on preclinical testing in a swine acute liver abrasion model.

†Based on preclinical in vivo animal studies.

‡Methicillin-resistant *Staphylococcus aureus* (MRSA), methicillin-resistant *Staphylococcus epidermidis* (MRSE), vancomycin-resistant *Enterococcus* (VRE), penicillin-resistant *Streptococcus pneumoniae* (PRSP), and *Escherichia coli* (*E. coli*).

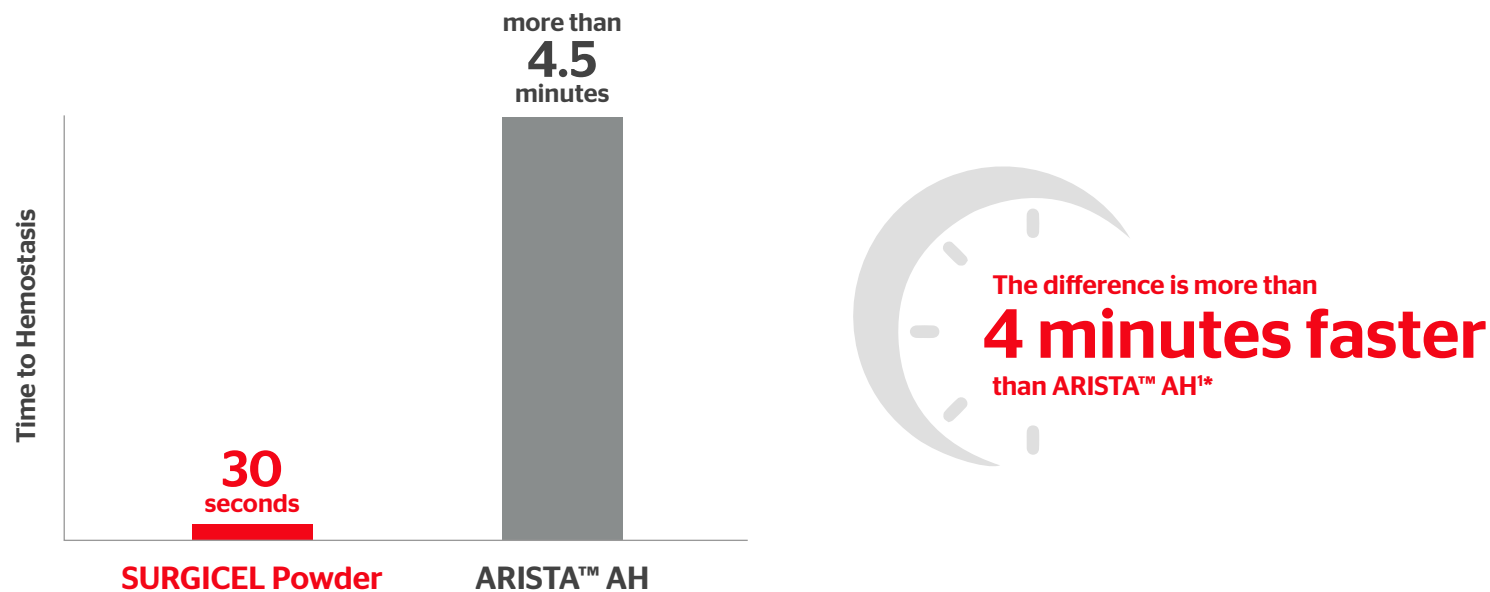
§The clinical benefit of these bactericidal claims has not been studied or demonstrated.

||In a propensity score-matched, retrospective review of C-section cases.

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SURGICEL® Powder Absorbable Haemostat stops bleeding more than 4 minutes faster than ARISTA™ AH on average^{1*}

- SURGICEL Powder is specifically intended for treatment of broad-surface oozing bleeding in open and minimally invasive procedures¹
- This type of bleeding can be more time-consuming than difficult
- SURGICEL Powder achieves haemostasis **89% faster than ARISTA™ AH** ($P < 0.001$)^{1*}
 - In real time, that translates to stopping bleeding in **30 seconds vs more than 4.5 minutes**¹



¹*Based on preclinical testing in a swine acute liver biopsy model.

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SURGICEL® Powder Absorbable Haemostat stops bleeding more efficiently than ARISTA™ AH^{1*}

SURGICEL Powder

Dual mechanism of action working within the haemostatic cascade

- SURGICEL Powder oxidized regenerated cellulose (ORC) fragments provide a surface for platelet adhesion and aggregation, working with the patient's endogenous clotting factors to initiate clot formation¹
- The localized reduction in blood pH induces vasoconstriction of blood vessels, reducing blood flow to the area and enabling safe, rapid hemostasis¹

Unique structure breaks the surface tension of the blood to get to the source of the bleeding^{3†}



ARISTA™ AH

Acts only as a dehydrant²

- ARISTA™ AH particles concentrate blood solids on the particle surfaces to form a gelled matrix
- ARISTA™ AH does not contribute to vasoconstriction

Particles do not readily penetrate blood, making them more likely to float on its surface.^{3†}



*Based on preclinical testing in a swine acute liver biopsy model.

†Based on surface area and surface energy analyses using inverse gas chromatography in benchtop testing.

References: **1.** SURGICEL® Technical Report. 2018. Ethicon, Inc. **2.** ARISTA™ AH Absorbable Hemostatic Particles, Instructions for Use. Bard Davol, Inc. **3.** Wang A. Surface energy/tension analysis among ORC Aggregate, ORC Fine Fiber, and Arista - Project PIXIE. Ethicon, Inc.

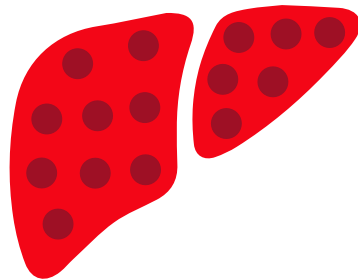
SURGICEL® Powder was shown in vivo to form a more adherent and durable clot than ARISTA™ AH^{1*}

SURGICEL Powder

SURGICEL Powder achieved haemostasis on

15 out of 15 sites

in a diffuse bleeding liver abrasion model^{1*}



SURGICEL Powder sustains haemostasis even when irrigated*



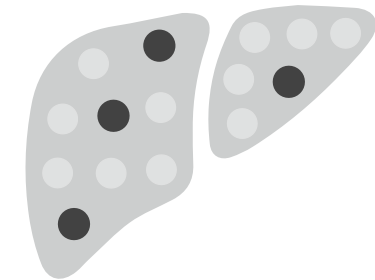
Does not increase the incidence of remote adhesions in laparoscopic procedures^{1,2†}

ARISTA™ AH

ARISTA™ AH achieved haemostasis on ONLY

4 out of 15 sites

in a diffuse bleeding liver abrasion model^{1*}



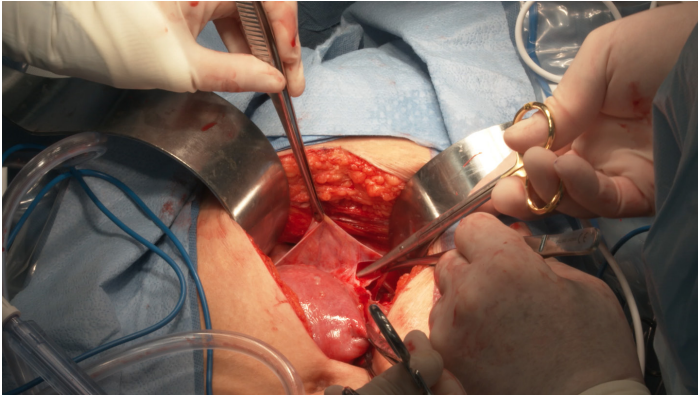
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SURGICEL has 50+ years of clinical performance with an established safety and efficacy profile^{1-3,5}

- SURGICEL Powder does not increase the incidence of remote adhesions in laparoscopic procedures^{2,4*}
- Like SURGICEL Original Haemostat, SURGICEL Powder demonstrates consistent, effective haemostasis⁵
- Fully absorbable within 7 to 14 days^{6,7}



*Based on preclinical in vivo animal studies.

Reference: **1.** Hong YM, Loughlin KR. The use of hemostatic agents and sealants in urology. *J Urol.* 2006;176(6 Pt 1):2367-2374. **2.** SURGICEL® Absorbable Hemostat Instructions for Use. Ethicon, Inc. **3.** Ethicon, Inc. Quarterly Report. **4.** MacDonald M. Study comparing performance of SURGICEL® Powder—Absorbable Hemostatic Powder to marketed competitive powdered topical hemostats in a swine acute liver abrasion model. Study 16-0006, Project 16438. March 8, 2016. Ethicon, Inc. **5.** SURGICEL® Technical Report. 2018. Ethicon, Inc. **6.** Buehler E. Evaluation of tissue acceptability and absorbability in a rat subcutaneous implant mode. April 26, 1993. Ethicon, Inc. **7.** Morris T. Evaluation of hemostasis in swine. Project No. 95-8799-21. 1995. Ethicon, Inc.

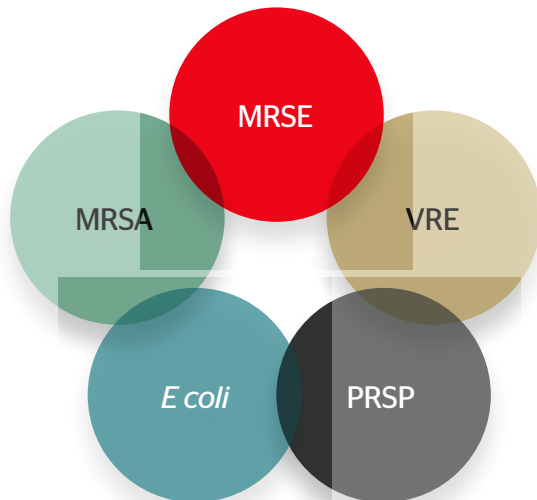
SURGICEL® Powder Absorbable Haemostat is proven bactericidal in vitro^{1*}

Proven bactericidal in vitro against a broad range of gram-positive and gram-negative organisms¹

- Including MRSA, MRSE, PRSP, VRE, and *E coli*¹
- The interaction of ORC and blood causes a localized reduction in blood pH, giving SURGICEL Powder proven in vitro bactericidal properties **against a broad range of organisms**^{1,2}

SURGICEL Powder

Proven in vitro bactericidal activity against^{1*}



ARISTA™ AH

No bactericidal properties³



*The clinical benefit of these bactericidal claims has not been studied or demonstrated.

References: 1. SURGICEL® Powder Absorbable Hemostat, Instructions for Use. Ethicon, Inc. 2. SURGICEL® Technical Report. 2018. Ethicon, Inc. 3. ARISTA™ AH Absorbable Hemostatic Particles, Instructions for Use. Bard Davol, Inc.

Have the right tool when you need it with the 2-in-1 SURGICEL™ Endoscopic Applicator

- Flexible inner tube 38 cm (15 in) can be bent for **precise product placement**¹
- Rigid stainless-steel sheath 31 cm (12.2 in) allows for **one-handed use**; 36 cm (14.2 in) in total length with protrusion of the flexible inner tip from the cannula¹

Flexible Tip

Flexible tip on both the open and endoscopic applicators allows for aspiration in any direction or orientation in open and minimally invasive procedures.

Efficient Aspiration

Provides a consistent dosage per application for minimal wasted product.²

Rigid Tip

The rigid component of the endoscopic applicator is designed for one-handed application and enables easy access in MIPs.

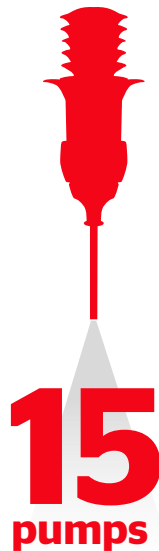


SURGICEL® Powder Absorbable Haemostat innovative device design provides more control and consistency in delivery than ARISTA™ AH¹

SURGICEL Powder

- Provides **consistent expression** regardless of the device orientation¹
- Chamber design **keeps the powder securely in place** until the user is ready to deploy it
- Delivers **greater control and less waste**, with just 3 g of powder, compared to 5 g of ARISTA™ AH¹²

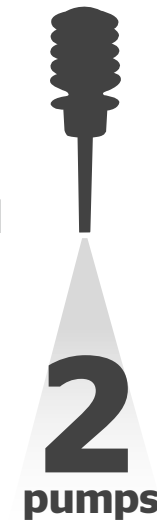
**SURGICEL®
Powder**
**Consistent
expression
for about**



ARISTA™ AH

- In the vertical position, **expresses most of its product in just 2 pumps**, and is empty after 5 pumps¹
- In the horizontal position, **cannot fully express the remaining one-third of its powder**¹

ARISTA™ AH
**Inconsistent
expression**
**Most powder
expressed in**



SURGICEL® Powder Absorbable Haemostat has economic advantages over ARISTA™ AH

Head-to-head cost-efficiency comparison

In a propensity score-matched, retrospective review comparing SURGICEL Powder to ARISTA™ AH in C-section and open hysterectomy cases, SURGICEL Powder was associated with



^ **\$1,933 lower**
hospital cost per discharge in C-section cases (\$8,637 vs \$10,977; $P < 0.005$)¹

^ **\$1,955 lower**
hospital cost per discharge in open hysterectomy cases (\$10,488 vs \$12,443; $P < 0.005$)¹



Shorter length of stay

in C-section cases (3.36 days vs 4.17 days; $P = 0.006$)¹

Simplifies inventory with only one SKU each for SURGICEL Powder and the 2-in-1 endoscopic applicator

SURGICEL Powder

Only 1 SKU

- 3 g^{2,3}

Endoscopic applicator is only 1 SKU

- 2-in-1 applicator includes both a flexible and a rigid tip

ARISTA™ AH

4 different SKUs

- 1 g
- 3 g
- 5 g
- 2g ENT kit

3 laparoscopic tip SKUs

- Flexible tips (2)
- Rigid tip

^ Cost saving calculations may not be in local currencies. The economic analysis was performed according to a hospital set outside of Australia and New Zealand

References: 1. Hennegan K, Silber A, Yuan A, et al. Comparison of Cesarean section and hysterectomy outcomes between topical powdered hemostat cohorts: a retrospective analysis. Poster presentation at ISPOR. May 19, 2020.

2. ARISTA AH™ Absorbable Hemostatic Particles, Instructions for Use. Data on File. Bard Davol Inc. 3. SURGICEL Powder vs. Arista AH Expression Testing. ADAPTIV Document 100293850_1. Ethicon, Inc.

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