

# OKCEL®

OFFERING MORE

## ABSORBABLE HAEMOSTATS



### OKCEL® H-T

ORIGINAL TEXTILE FORM OF OXIDIZED CELLULOSE

### OKCEL® H-D

HEAVY DUTY TEXTILE FORM OF OXIDIZED CELLULOSE

### OKCEL® F

COTTON WOOL FORM OF OXIDIZED CELLULOSE



 **Synthesia**  
Chemistry for the future



You can find more detailed information about OKCEL® product range below:

Product type	Description	Handling	Indication
OKCEL® H-T	<ul style="list-style-type: none"> <li>knitted regular density textile form</li> </ul>	<ul style="list-style-type: none"> <li>can be easily cut or sutured without fraying</li> <li>easy (re)positioning on the wound</li> <li>can be rolled</li> <li>does not stick to instruments</li> </ul>	<ul style="list-style-type: none"> <li>control of capillary bleeding, control of minor venous and arteriolar bleeding</li> </ul>
OKCEL® H-D	<ul style="list-style-type: none"> <li>knitted high density textile form</li> <li>higher thickness</li> <li>improved endurance</li> <li>better efficiency</li> </ul>	<ul style="list-style-type: none"> <li>can be easily cut or sutured without fraying</li> <li>easy (re)positioning on the wound</li> <li>can be rolled</li> <li>does not stick to instruments</li> </ul>	<ul style="list-style-type: none"> <li>control of heavy capillary, venous and arteriolar bleeding</li> </ul>
OKCEL® F	<ul style="list-style-type: none"> <li>non-woven cotton wool form</li> <li>layered structure</li> <li>reduced weight, extreme absorbency, improved adherence</li> </ul>	<ul style="list-style-type: none"> <li>any layer can be easily separated</li> <li>extreme flexibility</li> <li>easy (re)positioning on the wound</li> <li>can be rolled</li> <li>does not stick to instruments</li> </ul>	<ul style="list-style-type: none"> <li>application to irregularly shaped or difficult to access areas</li> <li>application over large areas</li> </ul>

## OKCEL® = easy-to-handle packaging

- compliance with the highest standards for medical device packaging
- easy handling
- superior protection over a whole shelf life period
- outstanding resistance to microbial penetration
- minimum risk of package failure
- all the relevant information for users clearly provided
- practical suture box consists of a sealed primary and secondary package, IFU and triple stickers for better product traceability



## OKCEL® compared to ORC

- OKCEL®/OC (oxidized cellulose) and ORC (oxidized regenerated cellulose) are characterised by similar properties and way of usage but have different limits and methods of testing according to United States Pharmacopeial Convention (USP) – see in a below table
- OKCEL® – produced from pure high quality cotton that is only mechanically pre-treated and whitened
- ORC – produced from viscose obtained by chemical modification of cellulose
- OKCEL® – slower gelatinisation against ORC enables to relocate the material on the wound if necessary, this possibility of (re)positioning provides benefits for surgeons as it significantly simplifies material handling during surgical procedures

	Unit	USP OC	USP ORC	OKCEL®
Cellulose	–	Native	Regenerated	Pure cotton
Identification	–	Corresponds	Corresponds	Corresponds
Loss on drying	wt%	Max. 15	Max. 15	Max. 15
Residue on ignition	wt%	Max. 0,15	Max. 0,15	Max. 0,15
Nitrogen content	wt%	Max. 0,5	Max. 0,5	Max. 0,5
Formaldehyde	wt%	Max. 0,5	Max. 0,5	Max. 0,5
Assay of –COOH groups	wt%	16–24	18–24	16–24
pH value in 1% extract, typically	–	–	–	2,2–4,5

## Antimicrobial effect of OKCEL®

The bactericidal and bacteriostatic properties of OKCEL® products are a secondary positive effect that the use of our products brings to topical haemostasis. OKCEL® product range shows clear antimicrobial effect on large spectrum of pathogens thanks to the creation of surroundings with low pH round the wound. The lower pH levels inhibit the growth and multiplication of Gram-negative and Gram-positive bacteria, including both aerobic and anaerobic strains. This efficiency was confirmed among others against antibiotic-resistant bacteria (MRSA, PRSP, VRE, MRSE).

Under cover of University of Pardubice, Faculty of Chemical Technology, OKCEL® haemostats were tested using a diffusion method which is considered to be the most suitable method for proof of antimicrobial effect as it best simulates a real usage of haemostats while coming into contact with tissue and stopping bleeding during surgical procedures.

OKCEL® products tested by the diffusion method showed an enhanced antimicrobial activity. No bacterial growth and/or presence in contact with OKCEL® sample were verified for wide range of bacterial strains. Results of this study have proven that OKCEL® has a great potential to be used as a dressing material in medical practice.



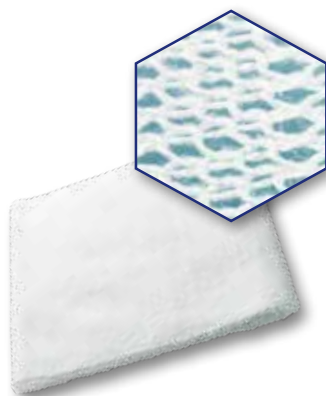
1. *Arcanobacterium haemolyticum*
2. *Bacillus subtilis*
3. *Bacteroides fragilis*
4. *Candida albicans*
5. *Clostridium perfringens*
6. *Clostridium tetani*
7. *Corynebacterium xerosis*
8. *Enterobacter cloacae*
9. *Enterococcus faecalis*
10. *Escherichia coli*
11. *Klebsiella oxytoca*
12. *Klebsiella pneumoniae*
13. *Kocuria rosea*
14. *Lactobacillus vaginalis*
15. *Listeria monocytogenes*
16. *Methicillin-resistant Staphylococcus aureus* (MRSA)
17. *Methicillin-resistant Staphylococcus epidermidis* (MRSE)
18. *Moraxella catharralis*
19. *Mycobacterium phlei*
20. *Mycobacterium smegmatis*
21. *Penicillin-resistant Streptococcus pneumoniae* (PRSP)
22. *Proteus mirabilis*
23. *Proteus vulgaris*
24. *Pseudomonas aeruginosa*
25. *Pseudomonas fluorescens*
26. *Pseudomonas stutzeri*
27. *Salmonella enterica sp. Enterica*
28. *Serratia marcescens*
29. *Shigella dysenteriae*
30. *Staphylococcus aureus*
31. *Staphylococcus epidermis*
32. *Staphylococcus saprophyticus*
33. *Streptococcus agalactiae*
34. *Streptococcus pyogenes*
35. *Streptococcus salivarius*
36. *Vancomycin-resistant Enterococcus* (VRE)

Testing was carried out at the Department of Biological and Biochemical Sciences at the Faculty of Chemical Technology, University of Pardubice. The study report is available under reference number 18640 - 034, rev. 1.



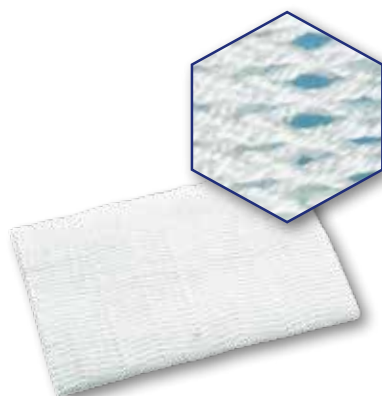
University  
of Pardubice  
Faculty  
of chemical technology

# OKCEL<sup>®</sup> product range



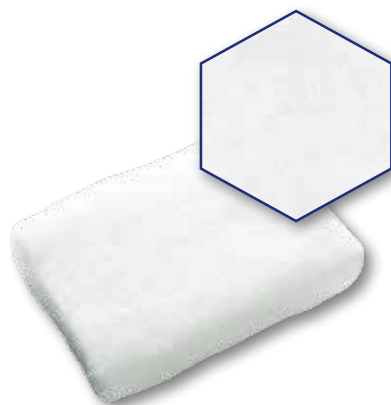
## OKCEL<sup>®</sup> H-T original textile form of oxidized cellulose

Item	Format size	Packaging [pcs / sales unit]
OKCEL H-T 101	1,5 × 1,5 cm	100
OKCEL H-T 151	1,5 × 1,5 cm	40
OKCEL H-T 501	5 × 1,25 cm	15
OKCEL H-T 507	5 × 7 cm	15
OKCEL H-T 510	7 × 10 cm	15
OKCEL H-T 535	5 × 35 cm	10
OKCEL H-T 540	10 × 20 cm	10



## OKCEL<sup>®</sup> H-D heavy duty textile form of oxidized cellulose

Item	Format size	Packaging [pcs / sales unit]
OKCEL H-D 202	2,5 × 2,5 cm	15
OKCEL H-D 209	2,5 × 9 cm	15
OKCEL H-D 575	5 × 7,5 cm	10
OKCEL H-D 710	7 × 10 cm	10
OKCEL H-D 1420	14 × 20 cm	10
OKCEL H-D 1523	15 × 23 cm	10



## OKCEL<sup>®</sup> F cotton wool form of oxidized cellulose

Item	Format size	Packaging [pcs / sales unit]
OKCEL F 205	2,5 × 5 cm	10
OKCEL F 575	5 × 7,5 cm	10
OKCEL F 510	5 × 10 cm	10
OKCEL F 1010	10 × 10 cm	10
OKCEL F 1020	10 × 20 cm	10



## OKCEL<sup>®</sup> Ca-L calcium salt of oxidized cellulose, powder form

This material is white to light yellow in colour. It can be used as a powder or sprayed on to stop bleeding, particularly in first aid situations to treat small cuts, abrasions and scrapes. It can be used as a component for haemostatic plasters for the treatment of small wounds. It is available in a bulk form.

Distributed by

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