

Sharklet™
microbial resistant micro-pattern
for high-touch surfaces

GC3 - May 2016

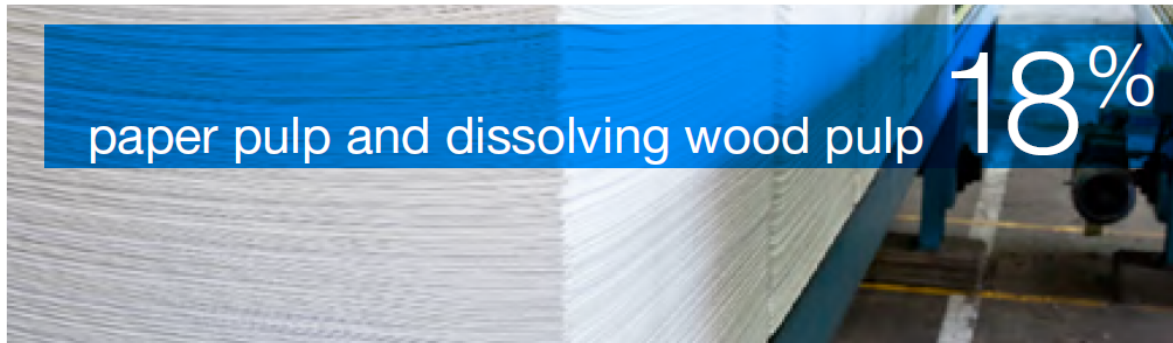


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www.sappirelease.com

sappi

Sappi – \$5.39bn global business (FY2015)



1% Other sales

The global leader in casting and release papers

sappi

What is release paper?

A close-up photograph showing a person's hand peeling a piece of white, wavy-patterned release paper from a red surface. The red surface also has a wavy pattern. The background is a solid grey color.

Release paper is a tool

- **It acts as a mold for coated fabrics and laminates**
- **It provides texture and gloss**
- **It is stripped away and can be reused**

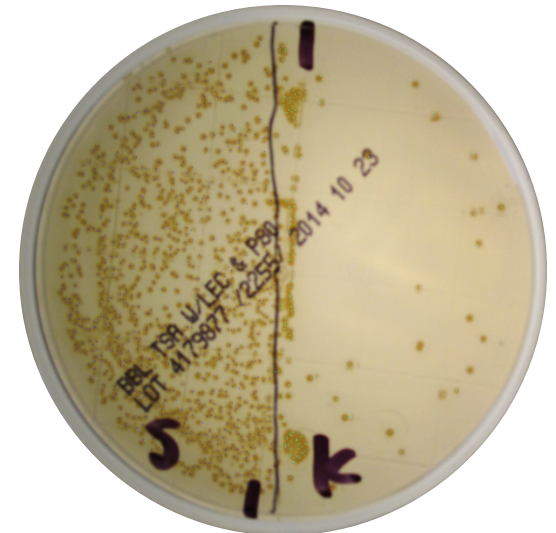
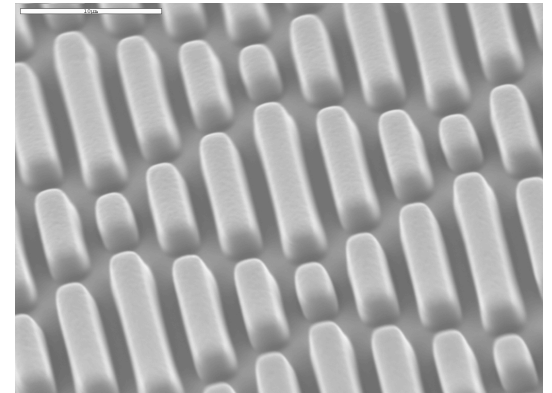


Apparel
Automotive
Furniture
Handbags
Luggage
Shoes
Upholstery
Countertops
Doors
Cabinets
Furniture
Flooring
Wall Panel



Sharklet™ micro-pattern

- The world's first texture designed to inhibit bacterial contamination
- A microscopic texture (measured in microns)
- 90-95% effective
- Patented technology

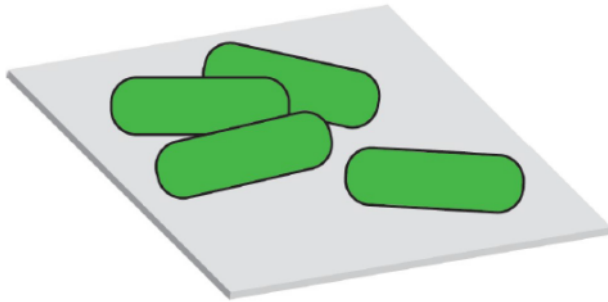


Smooth

Sharklet

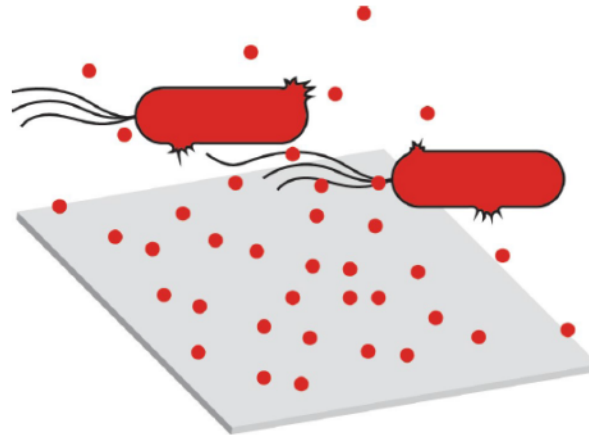
How it works

Untreated Surface



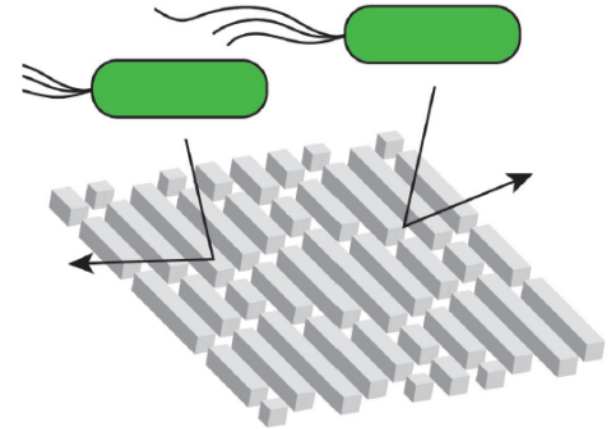
On an untreated surface, microbes transfer to the surface, attach, and begin forming colonies.

Antimicrobial Surface



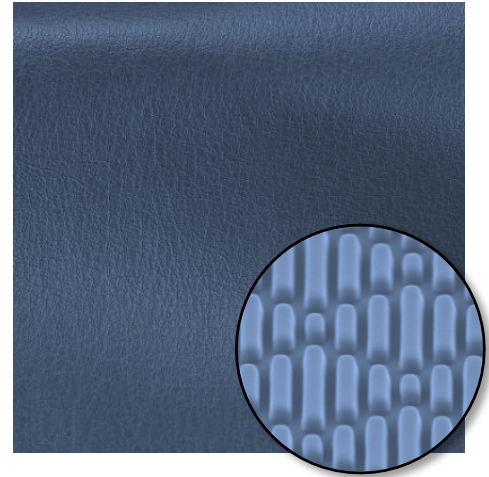
On a traditional antimicrobial surface, chemical or metal additives often leach away from the surface, killing microbes.

Sharklet Surface



On a Sharklet surface, microbial colonization and transfer is reduced 90—95%, preventing propagation of microbes.

Sharklet limits the transfer and adherence of bacteria



- **Non-toxic** — no chemicals or heavy metals
- **Manufactured-in** — no coatings to reapply
- **Non-killing** — does not contribute to antimicrobial resistance
- **Works immediately** — to prevent surface contamination

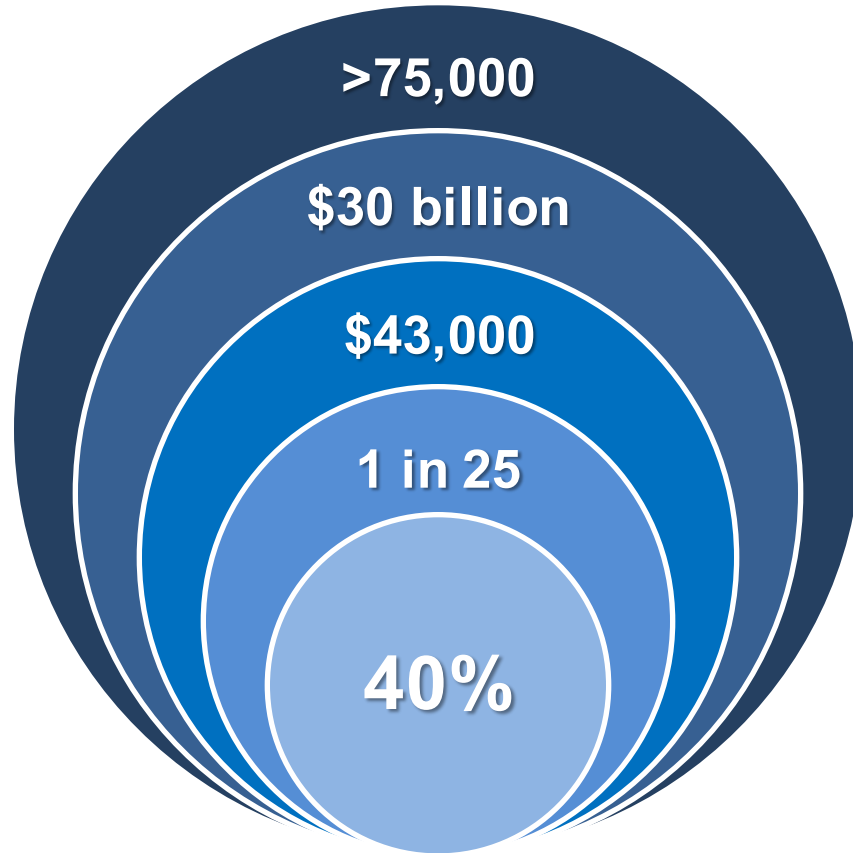
Sharklet represents a revolutionary new approach to bacterial control

Sharklet™ keeps surfaces cleaner

- Continuous protection between cleanings
- Reduces microbial burden on surfaces
- Less reliance on human behavior
(hand washing & surface disinfection)
- Decreases risk of bacterial transmission

Sharklet is needed

Hospital Acquired Infections (US)



deaths each year

excess healthcare costs each year

to treat each individual

patients develops a Hospital
Acquired Infection

of near-patient surfaces are cleaned
in accordance with hospital policies

Commercialization challenge

Existing antimicrobial testing paradigm

1. Many standards organizations



2. Many different antimicrobial tests

- AATCC 110
- AATCC 147
- ASTM E1428
- JIS 1902
- JIS 2801
- ISO 22196
- ASTM D-751
- ASTM G21
- ANSI A118
- EN 15973
- CFFA 120

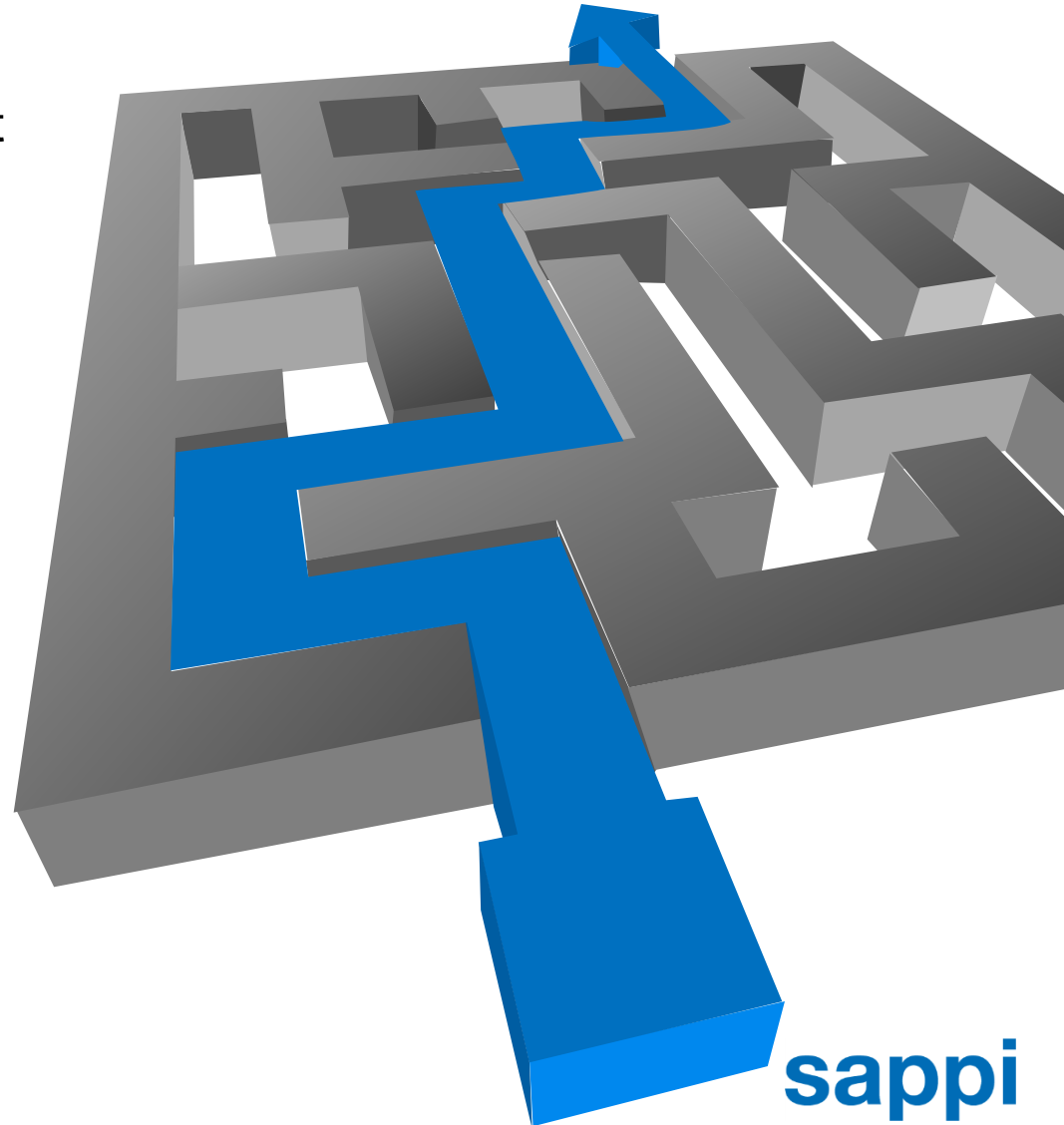
3. Sharklet is a non-killing technology and **will not pass** most standard tests (which measure kill rate)

4. This functional difference can be difficult to convey

Navigating the challenge

Sappi is working with Sharklet Technologies to:

- Establish a unique efficacy test standard for non-kill surfaces
- Develop modified versions of existing, accepted standard antimicrobial tests
- Validate protocols at independent labs to support customer product efficacy testing
- Work 1-on-1 with customers to communicate the need for these distinct test methods



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