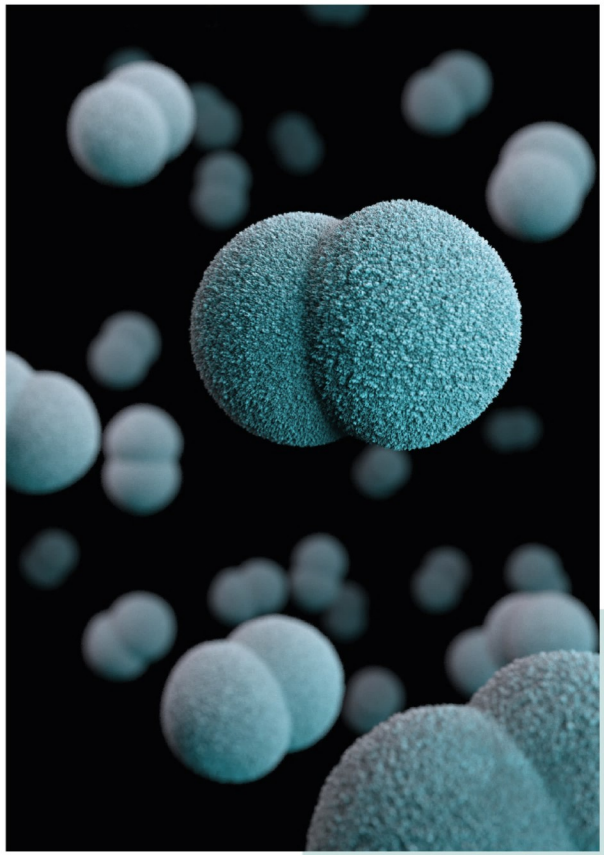
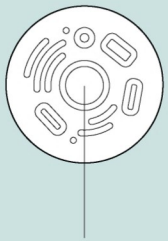


PURE FT

Antibacterial technology filament



BACTERIA

PURE FT

Micro organisms could grow and reproduce on most surfaces, everyday, every time and all around us.

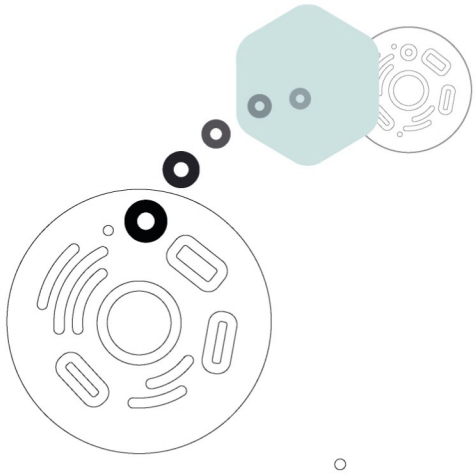
Pure FT is a half-flexible filament with anti microbial technology, hardness 93 Shore A.

Pure FT has a large spectrum's activity, bacteria, fungus, moulds, yeasts.

Pure FT offers the possibility to create 3D printed items with an effective built in functionality.

Pure FT : Hygiene and Protection.

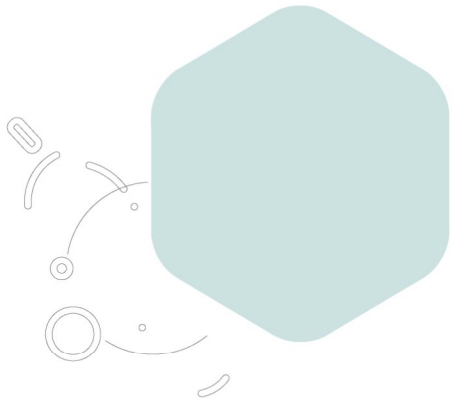
HOW DOES PURE FT WORK?



1. PURE FT interfaces of transmembrane transport.

2. PURE FT discruptions of plasma membrane fuction.

3. PURE FT inavctiivation of mitochondrial proteins.

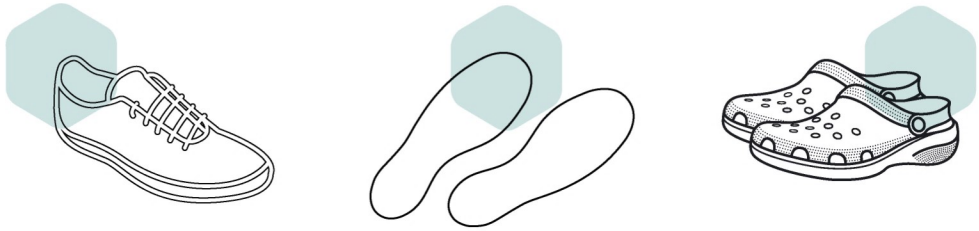


4. PURE FT disrupts Bacterias.

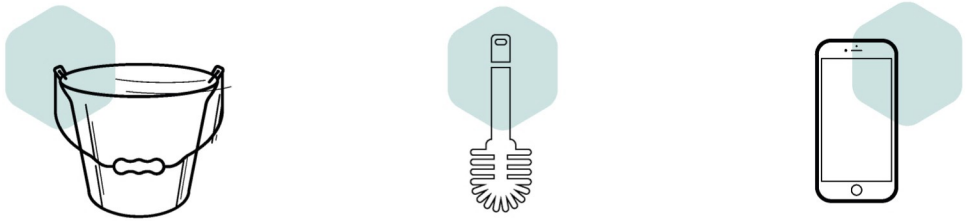
PURE FT APPLICATIONS

Healthcare

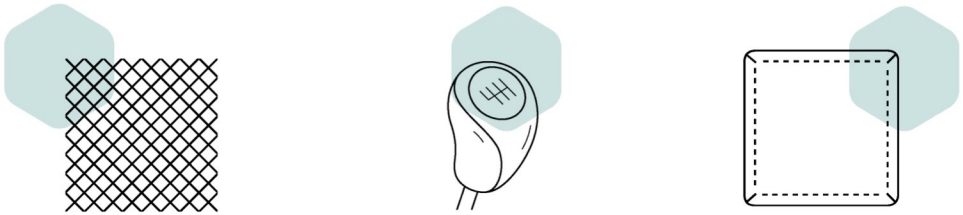
Sandal & soels



Home



Industry



Lab test

Sample details

Date received	Febraury 2 2017
Description	Pure Ft filament
Sample 1	Polymer without antibacteria
Sample 2	Polymer with antibacteria Pure FT

Test method

ISO 22196 : antibacterial performance against **Escherichia coli** and **Staphylococcus aureus**

ASTM E2180 : antifungal performance against **Aspergillus niger**

Antibacterial perormance (E.coli)

*Reduction calculated versus sample 1 at t= 24h

Sample ID	Bacterial count (CFU / cm2) t = 0h	t = 24h	Log reduction*	% reduction*
Sample 1	1.6E+04	2.5E+03	0.81	84.36
Sample 2	1.6E+04	<1.00	>3.39	>99.96

Antibacterial perormance (S.aureus)

- Reduction calculated versus sample 1 at t= 24h

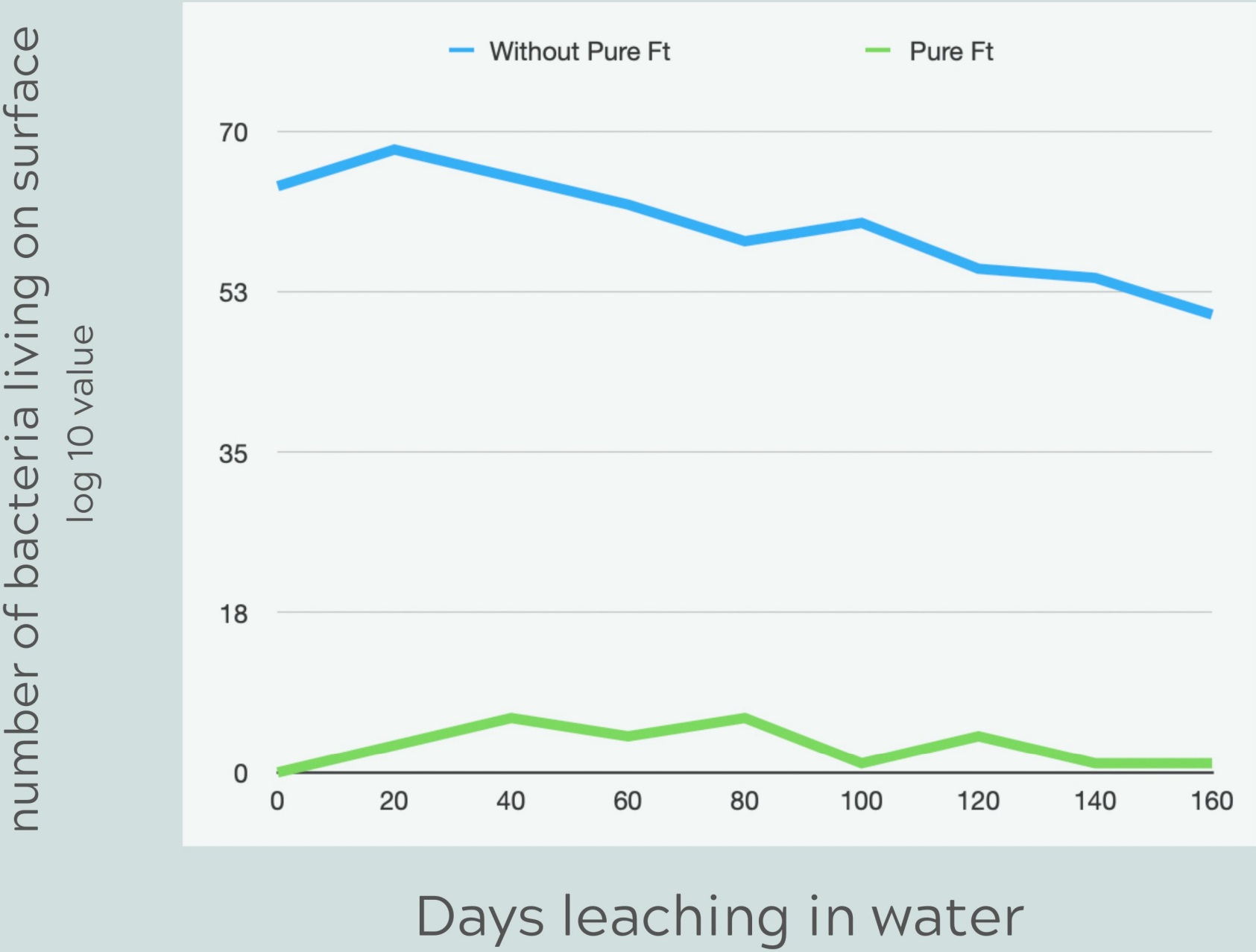
Sample ID	Bacterial count (CFU / cm2) t = 0h	t = 24h	Log reduction*	% reduction*
Sample 1	1.6E+04	2.6E+02	1.79	98.40
Sample 2	1.6E+04	<1.00	>2.42	>99.62

Antibacterial perormance (A.niger)

*Reduction calculated versus sample 1 at t= 96h

Sample ID	Fungal count (CFU / cm2) t = 0 h	t = 96 h	% reduction
Sample 1	5.95E+03	6.23E+03	0.0
Sample 2	5.95E+03	0.00E+00	100.0

Durability

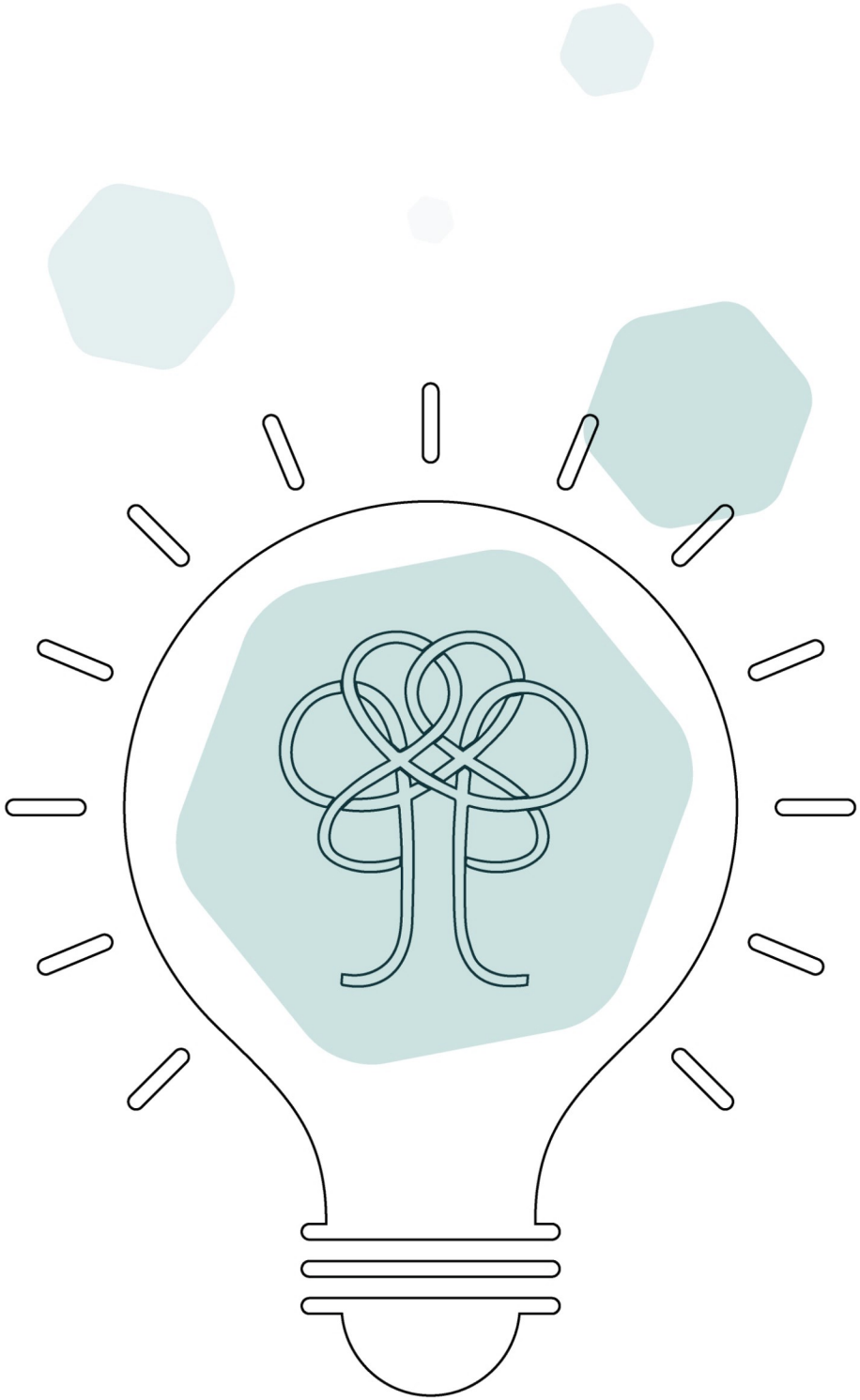

number of bacteria living on surface
log 10 value
Without Pure Ft
Pure Ft
70
53
35
18
0
0
20
40
60
80
100
120
140
160
Days leaching in water

Conclusion

The antibacterial test ISO 22196 reveals excellent performance of Pure FT treated sample (full bcterial control), both against Staphylococcus aureus and Escherichia coli. The small reduction observed for the untreated samples n(84% and 98%, respectively doe E.coli and S.aureus are not unusual and are due to the fact that freshly produced plastic samples are used in the ISO test.

The antifungal test ASTM E2180 equally shows excellent activity on the Pure FT treated sample, whereas the untreated control had no fungal activity and even supported the fungal growth.

It can be concluded thatPure Ft will result in a strong and broad spectrum antimicrobial against both bacteria and fungi.



SUGGESTIONS & INSTRUCTIONS

Do not use UV A UV Band UV C rays for sterilization of **Pure FT** Filament or of the product realized with the filament. For sterilizaton in liquid solution, please contact us , or as an alternative please make a test on a sample plate.

Anti-bacterical function's duration is related to use condition of the product.

It is suggested to keep filament spool sealed into original package after use.

For printing parameters it is suggested to consult technical data sheet of the **Pure FT** Filament.

PURE FT DISCLAMERS

Pure FT is a filament with bactericide and fungicide 's characteristics. The enclosed test results have been reali zed in an indipendent laboratory.
Every product or items realized or being part of a series , created thanks to the employment of the **Pure FT** filament will HAVE TO be submitted to additional tests and laboratory examinations in order to confirm the best features conservation.
The wrong use of the **Pure FT** Filament and effects created from this behaviour, couldn't be blamed to filament's producer.

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