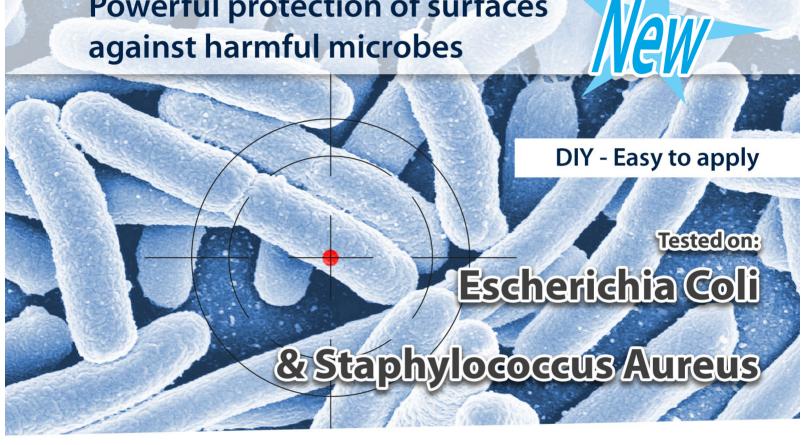
Certified antibacterial protection ISO 22196:2011



factory of coated - decoration - self adhesive films

07.2020

### **Powerful protection of surfaces** against harmful microbes





07.2020

#### Czym jest nasz nowy produkt?

At first glance, it is a 100 micrometer transparent or white PVC film. What you can't see is its antibacterial properties resulting from having a special coating.

This extra coating prevents bacteria from multiplying on laminated surfaces! Its effectiveness has been thoroughly tested and confirmed by official certificates: ISO 22196: 2011.

The film is suitable for print & lamiantion!

#### What is the biggest advantage of the product?

Very wide range of applications. The antibacterial film fits perfectly everywhere, where it is necessary to maintain a sterile environment.





### A professional application without a professional?



This is possible thanks to the use of Fast & Easy technology. Get a professional effect yourself! The special tubular structure of the glue makes the application of Ikonos materials a pleasure, not a job.

- security - fewer people involved in the project reduce the risk associated with COVID-19

- saving money - no need to spend them on assembly

- convenience and speed - immediate installation at the most appropriate time, not when the contractor fits





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### Antimicrobial film 2020

#### 07.2020





### Let's restore security to public spaces!

Conditions for a valid test					
Requirements	Obtained results	Assessment of the study			
The logarithmic value of the number of bacteria recovered immediately after inoculation from the untreated test specimens shall satisfy the following requiment: (Lmax-Lmin) / (Lmean) <0.2 where: Lmax, Lmin - decimal logarithm of the largest and smallest number of bacteria on the sample immediately after inoculation of bacteria L mean - decimal logarithm of the average number of bacteria on the sample immediately after inoculation of bacteria	L min = $4.17$ L max = $4.22$ Lmean = $4.20$ (4.22-4.17)/(4.20) = 0.01	Meets the criteria			
The average number of bacteria determined immediately after inoculation on the control sample should be within the range of $6.2 \times 10^3$ to $2.5 \times 10^4$ cfu/cm <sup>2</sup>	1.6x10 <sup>4</sup> cfu/cm <sup>2</sup>	Meets the criteria			
The number of bacteria on each control sample after 24 hours of incubation should be not less than $6.1 \times 10^1$ cfu/cm <sup>2</sup>	7.9x10 <sup>5</sup> cfu/cm <sup>2</sup> 9.3x10 <sup>5</sup> cfu/cm <sup>2</sup> 9.0x10 <sup>5</sup> cfu/cm <sup>2</sup>	Meets the criteria			

Table 1. Antibacterial activity results of film samples against E. coli - results are given as the average of three replicates.

Sample symbol		Escherichia coli ATCC 11229		
	Time [h]	Number of bacteria average value N <sub>mean</sub> [cfu/cm <sup>2</sup> ]	log N <sub>mean</sub>	Antibacterial activity R
control	0	1.6 x 10 <sup>4</sup>	$U_0 = 4.20$	-
control	24	8.8 x 10 <sup>5</sup>	Ut= 5.94	-
Film Profiflex Pro GPT FX100+ Antibacterial	24	5.5 x 10 <sup>3</sup>	$A_t = 3.72$	2.22



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#### Antimicrobial film 2020







continuation of the Test Report No 34/2020 of 10/06/2020 Test results for *Staphylococcus aureus* ATCC 6538 Date of test: 01-04/06/2020

Number of replicates: three replicates of each sample

Incubation temperature: 35°C

S. aureus inoculum concentration: 4.2 x 10<sup>5</sup> cfu / ml, Inoculum volume: 0.4ml

Conditions for a valid test					
Requirements	Obtained results	Assessment of the study			
The logarithmic value of the number of bacteria recovered immediately after inoculation from the untreated test specimens shall satisfy the following requiment: (Lmax-Lmin) / (L <sub>mean</sub> ) <0.2 where: Lmax, Lmin - decimal logarithm of the largest and smallest number of bacteria on the sample immediately after inoculation of bacteria L mean - decimal logarithm of the average number of bacteria on the sample immediately after inoculation of bacteria	L min=4.08 L max=4.12 L <sub>mean</sub> =4.10 (4.12-4.08)/(4.10)= <b>0.01</b>	Meets the criteria			
The average number of bacteria determined immediately after inoculation on the control sample should be within the range of $6.2x10^3$ to $2.5x10^4$ cfu/cm <sup>2</sup>	$1.3 \mathrm{x} 10^4  \mathrm{cfu/cm^2}$	Meets the criteria			
The number of bacteria on each control sample after 24 hours of incubation should be not less than $6.1 \times 10^1$ cfu/cm <sup>2</sup>	5.2x10 <sup>4</sup> cfu/cm <sup>2</sup> 3.8x10 <sup>4</sup> cfu/cm <sup>2</sup> 4.5x10 <sup>4</sup> cfu/cm <sup>2</sup>	Meets the criteria			

Table 2. Antibacterial activity results of film samples agains S. aureus - results are given as the average of three replicates.

Sample symbol		Staphylococcus aureus ATCC 6538		
	Time [h]	Number of bacteria average value N <sub>mean</sub> [cfu/cm <sup>2</sup> ]	log N <sub>mean</sub>	Antibacterial activity R
control foil	0	1.3 x 10 <sup>4</sup>	$U_0 = 4.10$	-
control foil	24	4.5 x 10 <sup>4</sup>	$U_t = 4.65$	-
Film Profiflex Pro GPT FX100+ Antibacterial	24	1.3 x 10 <sup>0</sup>	$A_t = 0.10$	4.55

**Conclusions:** 

The tested sample labeled Film Profiflex Pro GPT FX100+ Antibacterial showed antibacterial activity against tested strains of *Escherichia coli* ATCC 11229 and strong antibacterial activity with reference to *Staphylococcus aureus* ATCC 6538.

After 24 hours of incubation the number of E. coli bacteria in the control sample was  $5.5 \times 10^3$  cfu/cm<sup>2</sup>. Antibacterial activity P was 2.22 with reference to E. coli



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