



# INSTITUTE OF BIOPOLYMERS AND CHEMICAL FIBRES

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Laboratory with  
management  
system according  
to PN-EN ISO /  
IEC 17025: 2005

## Microbiological Laboratory

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Refers to: commission dated:  
11.08.2017

### Report of tests No: 48/2017/I

contains 1 page

Łódź, date 20.09.2017

Copy no: 1

Page: 1 of 1.

Customer: Alnor Systemy Wentylacji, 05-552 Wola Mrokowska, Aleja Krakowska 10,

Object of testing: Ventilation ducts FLX-HDPE-A

Testing method: PN-EN ISO 22196:2011. "Plastics -Measurement of antibacterial activity on plastics and other non porous surfaces".

Sample quantity: square samples measuring 5x5cm, blue ribs on one side, smooth side tested, 3 replicates

Sampling: the customer

Kind of sterilization of samples: sterilization in ethanol (70%, 1s).

Type and dimensions of the cover film: square polyethylene film measuring 4x4cm, 0.065 mm thickness.

Type and dimensions of the control film: square polyethylene film measuring 5x5 cm, 0.065 mm thickness.

Test organism: *Escherichia coli* (ATCC 11229), *Staphylococcus aureus* (ATCC 6538)

Volume of inoculum: 0.4 ml

Density of bacterial suspension: *E. coli*  $7.3 \times 10^5$  cfu/ml, *S. aureus*  $3.7 \times 10^5$  cfu/ml

Volume of SCDLP: 10ml

Incubation conditions:  $37 \pm 1^\circ\text{C}$ ,

Results:

Symbol of sample	incubation time [h]	<i>Escherichia coli</i>			<i>Staphylococcus aureus</i>		
		Numer of bacteria N [cfu/cm <sup>2</sup> ]	log N	Antimicrobial activity R	Numer of bacteria N [cfu/cm <sup>2</sup> ]	log N	Antimicrobial activity R
control	0	$1.8 \times 10^4$	$U_0 = 4.25$	-	$1.2 \times 10^4$	$U_0 = 4.08$	-
control	24	$8.5 \times 10^5$	$U_t = 5.93$	-	$6.1 \times 10^4$	$U_t = 4.79$	-
Ventilation ducts FLX-HDPE-A	24	$1.0 \times 10^3$	$A_t = 3.00$	2.9	$4.8 \times 10^3$	$A_t = 3.68$	1.1

The test performed by: M. Sc. Eng. Krystyna Guzińska, PhD Dorota Kaźmierczak

Head of Microbiological Laboratory  
PhD Dorota Kaźmierczak

Sample received: 11.08.2017

Test date: 22.08-01.09.2017

The report drawn up in two identical copies:

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*The end of report-*

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