

## **Bacteria killing efficiency of ABLOY ACTIVE coating according to Standard ISO 22196**

### **Test microbe:**

Methicillin-resistant *Staphylococcus aureus* (MRSA strain ATCC 43300)

### **Products to be studied:**

<b>RAL-colour</b>
<b>7038</b>
<b>7031</b>
<b>9010</b>

### **Method:**

Viability tests were performed according to the ISO 22196 standard for surface antimicrobial efficacy. Suspension with a microbial count of  $4.86 \times 10^6$  cfu/ml was prepared from a pure culture. This suspension was pipetted (400  $\mu$ l) and spread on test surfaces (2cm\*2cm) three replicates for each sample. The test surfaces with microbial suspension were covered with plastic foil and incubated in 36 °C for 24 hours in humid chamber (relative humidity min. 90%). After 24 h incubation test samples was placed into a sterile Stomacher bag with 9.9 ml buffer solution and incubated for 5 min. The bag is then shaken in Stomacher devise for one minute and the solution was pipetted on a soya agar plates with proper ten-fold dilutions. The plates were incubated at 36 °C overnight. After 24-48 hrs colonies are counted and the microbicidal efficacy is determined according to the standard. Some samples were also tested after mechanical abrasion and some after UVB-radiation (data not shown).

## **Results:**

Table 1. Amount of MRSA colonies on plates 0 and 24 hours after the pipetting.

<b>RAL-colour</b>	<b>Amount of MRSA colonies on plates [cfu]</b>		
	<b>0 hours</b>	<b>24 hours</b>	<b>Bacterial reduction</b>
RAL 7038	$1.22 \cdot 10^5$	$1.3 \cdot 10^1$	<b>&gt;log3</b>
RAL 7038	$1.22 \cdot 10^5$	$1.3 \cdot 10^1$	<b>&gt;log3</b>
RAL 7031	$1.22 \cdot 10^5$	$1.2 \cdot 10^1$	<b>&gt;log3</b>
RAL 7031	$1.22 \cdot 10^5$	$4.4 \cdot 10^1$	<b>&gt;log3</b>
RAL 9010	$1.22 \cdot 10^5$	$3.0 \cdot 10^1$	<b>&gt;log3</b>
RAL 9010	$1.22 \cdot 10^5$	$1.9 \cdot 10^1$	<b>&gt;log4</b>
Untreated reference	$1.22 \cdot 10^5$	$1.7 \cdot 10^4$	<log2

Mechanical abrasion or UVB-radiation did not have any effect on microbial effectiveness of the samples tested.

## **Conclusions**

According to Standard ISO 22196, test product possess antimicrobial efficacy if bacterial reduction after 24 h incubation period is >log2.

16.1.2009 Helsinki

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