# ANTIBACTERIAL SURFACES

From our everyday items to interior decoration and furniture, a room contains many places full of bacteria. Proper hand hygiene and surface disinfection can reduce the spread of bacteria, but using the right materials can further improve the health of the place where we live and work.

Antibacterial surfaces for example in offices, restaurants kitchens, hotels, public transportation and medical sector are more in demand than ever.

- All our impregnated paper is antibacterial.
- Melamine faced chipboard standard surface is antibacterial due to the nature of the system. This function is checked and proofed by independent testing institute ISEGA in Germany.
- Suitable additives tested by us already exist.
- Tested according to ISO and JIS.
- We cooperate with the test institute and accompany your end product up to certification.


impress products are tested with different emission level boards and different anti-bacterial additives (samples 1-3) compared to the reference without any treatment.

**Bacteria measured after 24 hours according to JIS and ISO norm gets destroyed by 99,9% in all versions, reference and antibac.**

The determination was performed according to JIS Z 2801:2012 respectivly 22196:2011-8. and the test specimens were contaminated with the test organism on the surface. Immediately after inoculation the germ suspension was removed from some test pieces with neutralizing broth and the number of germs ($U_0$) was determined. The remaining test pieces were stored in a humid chamber. After 24 hours the germ suspension was removed and the germ count on these samples was determined ($U_t$ respectively $A_t$) as well.

COMPARISON FOR ANTIBACTERIAL EFFICACY OF DIFFERENT IMPRESS MATERIALS

| S. aureus (DSM 346) | impress sample 1 | impress sample 2 | impress sample 3 |
|---|---|---|---|
| Average CFU/cm² (0 h) | $6.4 \times 10^4$ | --- | --- |
| Average CFU/cm² (24 h) | ≤ 1 | ≤ 1 | ≤ 1 |
| $U_0$ = Log CFU/cm² (0 h) | 4.8 | --- | --- |
| $U_t$ = Log CFU/cm² (24 h) | -0.2 | --- | --- |
| $A_t$ = Log CFU/cm² (24 h) | --- | -0.2 | -0.2 |
| % - Reduction (24 h) | **≥ 99.99** | **≥ 99.99** | **≥ 99.99** |
| log. Reduction (24 h) | 5.0 | 5.0 | 5.0 |

| E. coli (DSM 1576) | impress sample 1 | impress sample 2 | impress sample 3 |
|---|---|---|---|
| Average CFU/cm² (o h) | $1.2 \times 10^5$ | --- | --- |
| Average CFU/cm² (24 h) | 13 | ≤ 1 | ≤ 1 |
| $U_0$ = Log CFU/cm² (0 h) | 5.1 | --- | --- |
| $U_t$ = Log CFU/cm² (24 h) | 5.0 | --- | --- |
| $A_t$ = Log CFU/cm² (24 h) | --- | -0.2 | -0.2 |
| % - Reduction (24 h) | **99.99** | **≥ 99.99** | **≥ 99.99** |
| log. Reduction (24 h) | 4.6 | 5.3 | 5.3 |

tested by ISEGA Forschungs- und Untersuchungsgesellschaft mbH Aschaffenburg

$U_0$ average of logarithm of viable bacteria [cells/cm²] immediately after inoculation on reference test pieces
$U_t$ average of logarithm of viable bacteria [cells/cm²] immediately after incubation on reference test pieces
$A_t$ average of logarithm of viable bacteria [cells/cm²] immediately after incubation on the equipped test pieces

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