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# TEST CERTIFICATE

# BT-19-03-08-01

Dresden, 08/03/2019

| | |
|---|---|
| **Client:** | KASTAMONU INTEGRATED WOOD INDUSTRY LLC<br>SEZ "Alabuga", SH-3 street, building 3/3<br>423600 Yelabuga, Russian Federation |
| **Products:** | Floor coverings: 8 mm 32 Cl / 8 mm 33 Cl / 7 mm 31 Cl |
| **Order:** | Antibacterial test of a flooring surface |
| **Test engineer:** | Dipl.-Biol. Katharina Plaschkies |
| **Test standard:** | ISO 22196 (2011): Plastics – Measurement of antibacterial activity on plastics surfaces. |
| **Replicates:** | 6 (3 specimens, 2 replicates per dilution) |
| **Incubation:** | 24 hours at 36 °C |
| **Reference material:** | Polyethylene film |
| **Test area:** | 40 mm × 40 mm |
| **Test report:** | No. 2219009, 08/03/2019 |

**Results**

| | *Escherichia coli* | *Staphylococcus aureus* |
|---|---|---|
| Concentration of the inoculum | $1.0 \times 10^6$ cfu/ml | $1.0 \times 10^6$ cfu/ml |
| Theoretical recovery rate on the material | $2.5 \times 10^4$ cfu/cm² | $2.5 \times 10^4$ cfu/cm² |
| Recovery rate of viable bacteria after 0 hours on the reference material | $3.8 \times 10^4$ cfu/cm²<br>lg = 4.6 | $4.4 \times 10^4$ cfu/cm²<br>lg = 4.6 |
| Recovery rate of viable bacteria after 24 hours | | |
| ▪ Reference material | $3.1 \times 10^5$ cfu/cm²<br>lg = 5.5 = $U_T$ | $8.7 \times 10^3$ cfu/cm²<br>lg = 3.9 = $U_T$ |
| ▪ Test materials no. 1, 2, 3 | $< 6.0 \times 10^3$ cfu/cm²<br>lg < 0.8 = $A_T$ | $< 6.0 \times 10^3$ cfu/cm²<br>lg < 0.8 = $A_T$ |
| Antibacterial activity $R = U_T - A_T$ | > 4.7 | > 3.1 |

A clear antibacterial activity is given if $R \geq 1.0$.

Head of laboratory

Im Institut für Holztechnologie Dresden gemeinnützige GmbH
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QUALITÄT GEPRÜFT

Katharina Plaschkies

Engineer in charge