

# T E S T C E R T I F I C A T E

## BT-19-04-01-01

Dresden, 01/04/2019

**Client:** KASTAMONU INTEGRATED WOOD INDUSTRY LLC  
SEZ "Alabuga", SH-3 street, building 3/3  
423600 Yelabuga, Russian Federation

**Products:** Laminate flooring Floorpan, Artfloor, Ideal, Sunfloor, Artens, Floormax

**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

	<i>Escherichia coli</i>	<i>Staphylococcus aureus</i>
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/cm <sup>2</sup>	$2.5 \times 10^4$ cfu/cm <sup>2</sup>
Recovery rate of viable bacteria after 0 hours on the reference material	$3.8 \times 10^4$ cfu/cm <sup>2</sup> lg = 4.6	$4.4 \times 10^4$ cfu/cm <sup>2</sup> lg = 4.6
Recovery rate of viable bacteria after 24 hours		
▪ Reference material	$3.1 \times 10^5$ cfu/cm <sup>2</sup> lg = 5.5 = U <sub>T</sub>	$8.7 \times 10^3$ cfu/cm <sup>2</sup> lg = 3.9 = U <sub>T</sub>
▪ Test materials	$< 6.0 \times 10^3$ cfu/cm <sup>2</sup> lg < 0.8 = A <sub>T</sub>	$< 6.0 \times 10^3$ cfu/cm <sup>2</sup> lg < 0.8 = A <sub>T</sub>
Antibacterial activity R = U <sub>T</sub> - A <sub>T</sub>	> 4.7	> 3.1

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

Head of laboratory



Engineer in charge