

# Antibacterial finishing agent

## SENSIL 555

Consumer needs for a healthy, clean, and comfortable life have been increasing in recent years, and there is widespread demand for antibacterial finishing that prevents the unpleasant odors generated by bacterial growth on textiles.

SENSIL 555 is an antibacterial finishing agent for cellulose that prevents the generation of unpleasant odors through its antibacterial action that suppresses the growth of bacteria on the fibers.

### 【Properties】

Appearance	Light yellow liquid
Component	Water soluble cationic polymer
Ionic	Cationic
pH	Approx. 6.5 (1% water solution)
Solubility	Soluble in any proportion of water

### 【Characteristics】

- ① Exhibits excellent antibacterial effect against a wide range of Gram-positive and Gram-negative bacteria.
- ② Gives antibacterial and deodorant effects with excellent durability to cellulose fibers.
- ③ It does not interfere with the water absorbency of the treated fabric.
- ④ Due to its low oral toxicity (rat LD50 > 5,000 mg/kg), it is less toxic than general antibacterial agents.
- ⑤ Both exhaustion treatment and continuous treatment are possible.

### 【Antibacterial test (Bacterial solution absorption method JIS L-1902 : 2008)】

Fabric : Cotton knit (cotton 100%)

Dye : Reactive dye (red, 0.25%o.w.f., 3.00%o.w.f.)

Condition : Pad → Dry  
R.T., 1dip·1nip  
Pick up 100%

120°C × 3min. ⇒

**Bacteriostatic activity value : > 2.2**  
**SENSIL 555 is having antibacterial effect**

Laundry method / number of times : JIS L 0217·103 / L0, 10 (compendium method)

Test bacteria : *Staphylococcus aureus* NBRC12732

Dey : 0.25%o.w.f.		Viable bacterial count (Immediately after inoculation)	Viable bacterial count (After 18h)	Bacteriostatic activity value	Bactericidal Activity Value	Immediate effectivity
Standard cotton		1.2×10 <sup>4</sup>	4.4×10 <sup>5</sup>	—	—	—
L0	Untreated	1.2×10 <sup>4</sup>	4.0×10 <sup>3</sup>	2.0	0.5	×
	555 : 30g/L	<2.0×10 <sup>2</sup>	<2.0×10 <sup>2</sup>	>3.3	>1.8	○
L10	555 : 30g/L	6.4×10 <sup>3</sup>	<2.0×10 <sup>2</sup>	>3.3	>1.8	○
Dey : 3.00%o.w.f.		Viable bacterial count (Immediately after inoculation)	Viable bacterial count (After 18h)	Bacteriostatic activity value	Bactericidal Activity Value	Immediate effectivity
Standard cotton		1.2×10 <sup>4</sup>	4.4×10 <sup>5</sup>	—	—	—
L0	Untreated	1.0×10 <sup>4</sup>	9.6×10 <sup>4</sup>	0.58	-0.9	×
	555 : 30g/L	<2.0×10 <sup>2</sup>	<2.0×10 <sup>2</sup>	>3.3	>1.8	○
L10	555 : 30g/L	4.4×10 <sup>3</sup>	<2.0×10 <sup>2</sup>	>3.3	>1.8	○