

## Bio trunking

### General information

Certain microbial organisms are harmful to people and can proliferate, via surfaces, to spread infection and disease. We have a responsibility to control such organisms wherever possible, particularly in environments such as hospitals, care homes, medical units, surgeries, schools, sports and health centres.

Microbial organisms can also cause product deterioration, discolouration and bad odours and antimicrobial treatments help to prevent these effects.

Marshall-Tufflex antimicrobial Bio trunking incorporates silver ions with the PVC-U compound, providing integral antimicrobial protection that prevents 99.9% of harmful bacteria growth.

### Material – PVC-U

PVC-U is flame retardant and self-extinguishing. It is a 100% recyclable material. It complies with the requirements of BS 4761 Parts 6 and 7 and BS 7671:2018.

### Material – silver ion additive

Silver ions have been proven to exert recognised bactericidal effect. When incorporated within materials such as PVC-U, silver is toxic to multiple components of bacterial cell metabolism, damaging the cell wall and membrane permeability.

## PVC Material Test Results

**LABORATORY** Anti-Microbial Test Division, Kyoto Biseibutsu Kenkyusyo, Yamashina-ku, Kyoto 607-8482, Japan  
**TEST ORGANISM** MRSA (Methicillin Resistant Staphylococcus aureus) Escherichia coli  
**STANDARD** ISO 22196 / JIS Z 2801:2000

Quantitative Assessment of Activity – MRSA (Methicillin Resistant Staphylococcus aureus)				
	Number of live organisms (Colony Forming Units)		% reduction of Colony Forming Units, expressed as comparison with control	
	0 hours	24 Hours		
Control – Untreated polyethylene film	110,000	96,000	–	–
PVC	110,000	<10	>99.98% Reduction	VERY GOOD

Quantitative Assessment of Activity – Escherichia coli				
	Number of live organisms (Colony Forming Units)		% reduction of Colony Forming Units, expressed as comparison with control	
	0 hours	24 Hours		
Control – Untreated polyethylene film	110,000	14,000,000	–	–
PVC	110,000	<10	>99.99992% Reduction	EXCELLENT

## ABS Material Test Results

**LABORATORY** Thomson Research Associates Inc., Ontario, Canada  
**TEST ORGANISM** Klebsiella pneumonia, Staphylococcus aureus  
**STANDARD** ISO 22196 / JIS Z 2801:2000

Quantitative Assessment of Activity – K. pneumoniae				
Concentration of starting inoculum		1.92 x 10 <sup>5</sup>		
Sample Description	No. Bacteria Recovered	Log Value	R=[log(B/C)]	% Reduction
Inoculum Control	8.39 x 10 <sup>6</sup>	6.9	–	–
ABS	<2.00 x 10 <sup>1</sup>	<1.3	>5.6	>99.9%

Quantitative Assessment of Activity – S. aureus				
Concentration of starting inoculum		1.92 x 10 <sup>5</sup>		
Sample Description	No. Bacteria Recovered	Log Value	R=[log(B/C)]	% Reduction
Inoculum Control	1.00 x 10 <sup>6</sup>	6.0	–	–
ABS	1.04 x 10 <sup>2</sup>	2.0	4.0	>99.9%