

Product Data



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HK Research Anti-Microbial Additives for Unsaturated Polyester Gel Coats

HK Research has the technology to transform any of the gel coat product lines to achieve antimicrobial properties. This enhancement does not affect the inherent properties of any line of gel coats (does not affect water resistance, UV resistance, flexibility, etc). Once formulated for antimicrobial properties, the gel coat will have an “AMA” product code designation. Please note the following test proving antimicrobial properties in AMA1523, an in-mold, marine clear gel coat and AMA2484, a post-applied surface coat. The properties of this additive will have similar effects on all lines of HK Research gel coat. Please contact your HK Research representative if you are interested in antimicrobial properties for your gel coat needs.

REPORT ON ANTI-MICROBIAL TEST RESULT

1. Sample: Plates

No.	Sample
1.	AMA2484 Blank
2.	AMA2484
3.	AMA1523 Blank
4.	AMA1523

2. Outline of test:

The test was executed referring to “JIS Z 2801-2010.”
<Bacteria used for test>

Escherichia coli NBRC3972

Staphylococcus aureus NBRC12732

3. Test result:

Table 1. Test result of Anti-microbial effect against *Escherichia coli*

Sample	Number of living bacteria		Antimicrobial activity value against each Blank	Reduction %
	At beginning (Per cm ²)	After 24 hours (Per cm ²)		
1. AMA2484 Blank	1.4×10^4	1.9×10^3	—	—
2. AMA2484	1.4×10^4	<6.3	>2.4	>99
3. AMA 1523 Blank	1.4×10^4	2.5×10^3	—	—
4. AMA 1523	1.4×10^4	<6.3	>2.6	>99
Control (Film only)	1.4×10^4	1.8×10^6		

The information and data given in this bulletin are based on tests, which are considered to be reliable and accurate. Because of environmental conditions beyond our control, however, no warranty is given concerning the results obtained by the user of HK Research products. Each user should satisfy himself, by adequate testing, of the suitability of HK Research products for his particular application.

Table 2. Test result of Anti-microbial effect against *Staphylococcus aureus*

Sample	Number of living bacteria		Antimicrobial activity value against each Blank	Reduction %
	At beginning (Per cm ²)	After 24 hours (Per cm ²)		
1. AMA2484 Blank	1.8×10^4	7.0×10^2	—	—
2. AMA2484	1.8×10^4	<6.3	>2.0	>99
3. AMA 1523 Blank	1.8×10^4	7.0×10^2	—	—
4. AMA 1523	1.8×10^4	<6.3	>2.0	>99
Control (Film only)	1.8×10^4	1.5×10^5		

4. Consideration:

Sample No. 2 and 4 showed antimicrobial efficacy against both *Escherichia coli* and *Staphylococcus aureus* as its activity value exceeded the standard value of 2.0, which means these sample have a >99% bacterial reduction rate.