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SAINT-GOBAIN SOLAR GARD LLC
TEST REPORT

SCOPE OF WORK
JIS Z 2801/ISO 22196:2011 - Measurement of antibacterial activity on plastics and other non-porous surfaces

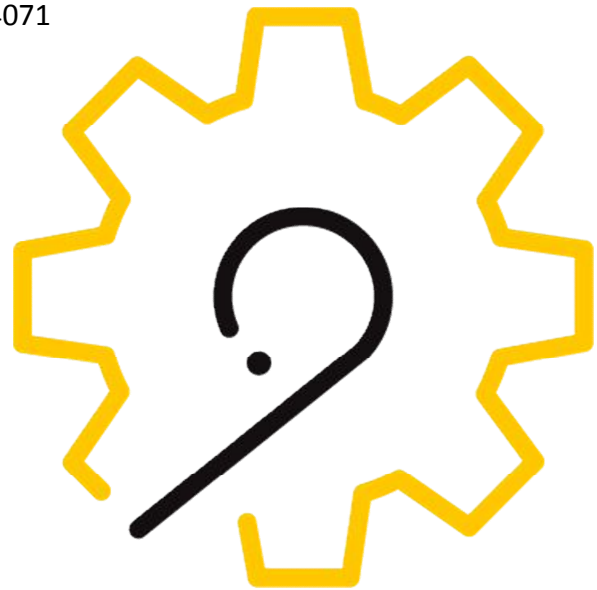
PRODUCT:
4mil Antimicrobial Film TL3-AM PET Lot# 5404071

REPORT NUMBER
104448801COL-003

ISSUE DATE
16-DECEMBER-2020

PAGES
3

DOCUMENT CONTROL NUMBER
GFT-OP-10h (6-July-2017)



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MICROBIOLOGICAL PERFORMANCE TEST REPORT

Client		Saint-Gobain Solar Gard LLC 4540 View ridge Avenue San Diego, CA 92123
Project No.		G104448801
Sample	Product	4mil Antimicrobial Film
	Model	TL3-AM PET Lot# 5404071
	Identification No.	COL2008311016-001
	Date Received	August 31, 2020
	Condition	Good
	Production or Prototype	Production
Procedural	Tested By	Allison Coyle
	Reviewer	Nicholas Unger
	Dates Tested	November 30, 2020 – December 4, 2020
	Report Date	December 16, 2020
Standard	JIS Z 2801/ISO 22196:2011 - Measurement of antibacterial activity on plastics and other non-porous surfaces	

Test Parameters:

Organism	ATCC No	Initial Concentration
Escherichia Coli	8739	5.30×10^5 cfu/mL
Staphylococcus aureus	6538	9.44×10^5 cfu/mL

Test Inoculum Volume	Viable E. coli in Inoculum	Viable S. aureus in Inoculum	Polymer Type	Polymer Thickness
0.4 mL	5.30×10^5 cfu/mL	9.44×10^5 cfu/mL	Para Film	0.127mm

Test Parameter	Definition of Term
U_0	Is the average of the common logarithm of the number of viable bacteria, in cells/cm^2 recovered from the untreated test specimens immediately after inoculation.
U_t	Is the average of the common logarithm of the number of viable bacteria, in cells/cm^2 recovered from the untreated test specimens after 24 h.
A_t	Is the average of the common logarithm of the number of viable bacteria, in cells/cm^2 recovered from the treated test specimens after 24 h.
Antibacterial Activity Value	Is calculated utilizing the following equation: $= (U_t - U_0) - (A_t - U_0) = U_t - A_t$

MICROBIOLOGICAL PERFORMANCE TEST REPORT

1. 4mil Antimicrobial Film – TL3-AM PET Lot# 5404071

S. aureus Results	
Test Parameter	**Result**
Initial U_0	**5.97**
24 Hr U_t	**3.19**
24 Hr A_t	**1.00**
Antibacterial Activity Value	**2.19**
Percent Reduction	**99.4%**

E. coli Results	
Test Parameter	**Result**
Initial U_0	**5.72**
24 Hr U_t	**4.11**
24 Hr A_t	**1.00**
Antibacterial Activity Value	**3.11**
Percent Reduction	**99.9%**

Note: Antibacterial Activity Values are presented in Log form as per standard requirements. A value of 1.00 would equate to a 90% reduction. A 2 would be 99%, a 3 99.9% and so forth.

Test Performed by:

Allison Coyle
Chemist
Columbus Office

Report Approved by:

Nicholas Unger
Staff Engineer
Columbus Office