ThermoVeil® for Healthcare

A Report by Morton Thiokol/Ventron Laboratory
on ThermoVeil's Resistance to Micro-organisms

The Resistance of MechoShade ThermoVeil to Micro-organisms

A Morton Thiokol/Ventron Laboratory Report for
MechoShade Systems, Inc.
42-03 35th Street
Long Island City, NY 11101

Technical Service Laboratory Report
No. 88-286, July 15, 1988

Introduction

One sample of vinyl coated fabric identified as MechoShade ThermoVeil for hospital drapery and shades application was submitted by a representative for MechoShade Systems for evaluation of resistance to bacterial and fungal microorganisms.

Summary

The sample of MechoShade ThermoVeil demonstrated excellent resistance against bacterial and fungal organisms as tested in accordance with ASTM G-22-80 and ASTM G-21-85. This sample also showed highly effective activity against *Staphylococcus aureus* in a bacterial zone of inhibition test.

Results

The sample was tested for resistance to micro-organisms as described in the appendix.

	Bacterial Resistance	
Sample	*Staphylococcus aureus* Zone of Inhibition (mm)/Growth	*Pseudomonas aeruginosa* ASTM G-22-80 Bacterial Growth
MechoShade ThermoVeil	8/NGCA	No Growth

	Mildew Resistance ASTM G-21-85 Fungal Growth
MechoShade ThermoVeil	No Growth

Note: Photographs of the tests are enclosed [shown above].

(signed) N.F. Hamilton

(signed) F.S. Moy, Supervisor

Continued ☞

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Appendix I

Mildew Resistance

ASTM G-285

The samples were placed on (non-nutrient) material salts agar and inoculated with a mixed fungal spore suspension of:

Aspergillus niger	ATCC 9642
Penicillium funiculosum	ATCC 9644
Chaetomium globosum	ATCC 6205
Aureogasidium pullulans	ATCC 9348
Gliocladium virens	ATCC 9645

After 21 days incubation at 28° C., antifungal activity was evaluated by visually rating the degree of fungal growth on the samples.

Surface fungal growth is rated by the following scale:

No Growth	(NG)
Traces of Growth (less than 10% coverage)	(TG)
Light Growth (10% to 30% coverage)	(LG)
Moderate Growth (30% to 60% coverage)	(MG)
Heavy Growth (60% to complete coverage)	(HG)

ASTM Rating

0 = No Growth
1 = Traces of Growth
2 = Light Growth
3 = Moderate Growth
4 = Heavy Growth

Bacterial resistance, Ventron Method B-20

The samples were placed on nutrient agar inoculated with *Staphylococcus aureus,* ATCC 6538.

After 24 hours of incubation at 37 degrees C., antibacterial activity was evaluated by measuring (in mm) the size of a clear zone of no growth (Zone of Inhibition) around each sample, and visually determining growth in contact areas.

Bacterial growth is rated by the following scale:

No Growth Contact Area, (NGCA)

This is a designation frequency used in bacterial tests. Bacterial organisms are difficult to determine on the sample itself, so the area immediately under the sample is examined for growth. This is usually a passing designation and indicates that there were no bacterial colonies found under the sample.

Growth Contact Area, (GCA)

This indicates failure of the sample since colonies of bacteria are detected immediately under the sample in contact with the same.

Bacterial Resistance, ASTM G-22-80.

The sample was placed on mineral salts agar inoculated with *Pseudomonas aeruginosa* ATCC13388 (50,000 cells/ml). A second layer of seeded agar was poured over the sample and allow to solidify. After 21 days incubation at 37 degrees C., antibacterial activity was evaluated by rating the bacterial growth on the sample.

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