



SB Aero | Aero Business of

 **SUMITOMO BAKELITE CO., LTD.**

Antibacterial Grade
PVC Material “Sumilite FRS” for Aero Interiors

 **SUMITOMO BAKELITE CO., LTD.**

High Performance Plastic Products Business Unit
Aero Materials Dept.

5/Aug/2021

SUMITOMO BAKELITE CO.,LTD. CONFIDENTIAL

Thermoforming Sheets for Aero Interiors "SUMILITE FRS"



Thermoplastic Grade for Aircraft Interior Materials

Testing Requirement	SUNLOID® KD 1000series	SUMILITE® FRS Low smoke grade	SUMILITE® FRS Antibacterial grade
Thickness (mm)	1.0~	1.0~3.0	1.0~3.0
Vertical Burn (60sec) FAR 25 Appendix F Part I	Pass	Pass	Pass
OSU Heat Release FAR 25 Appendix F Part IV	—	Pass	Pass
Smoke Density FAR 25 Appendix F Part V	—	Pass	Pass
Toxicity ABD0031, AIM3.0005 (BOEING BSS 7239)	—	—	—



Lavatory
Floor pan



Economy seat
part

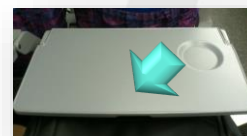
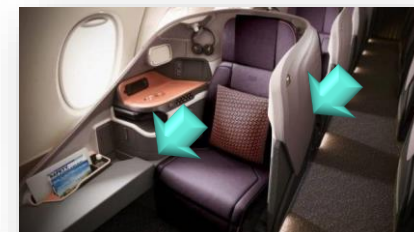


Table of the
SHINKANSEN



Premium seat part

Antibacterial Grade for Aircraft Interior Materials

Polyvinyl chloride compound for injection molding adapted to aircraft FAR standards.

Properties		Method	SUMILITE[®] FRS Antibacterial Grade (Development)
Mechanical Properties	Specific Gravity	ASTM D792	1.45g/cm ³
	Tensile Strength	ASTM D638	45MPa
	Flexural Strength	ASTM D790	80MPa
	Flexural Modulus	ASTM D790	2950Pa
	IZOD Impact	ASTM D256	60 J/m
	Deflection temperature	ASTM D648	72°C
	Water Absorption	ASTM D	0.37%
Regulation	Vertical Burn (60sec)	FAR25.853 Appendix F Part I	Pass
	Heat release THR/PHRR	FAR25.853 Appendix F Part IV	Pass
	Smoke density less than 200	FAR25.853 Appendix F Part V	Pass
Molding processing temperature			170~190°C

The above-mentioned physical property values are available for the developed product upon request.

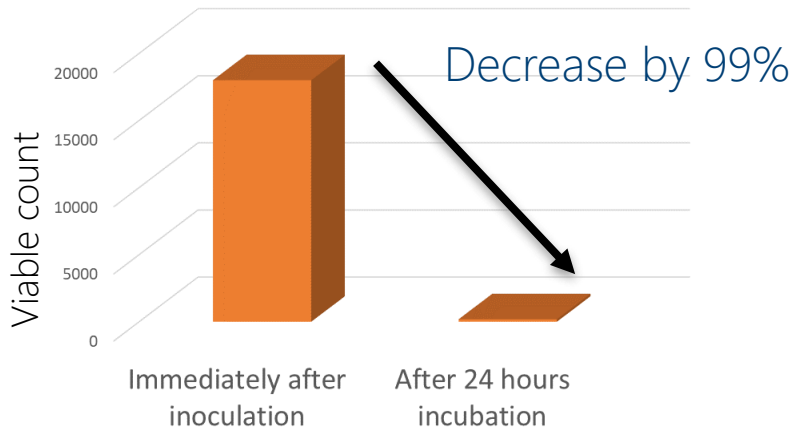
Proposal of materials for cabin class

Antibacterial Property

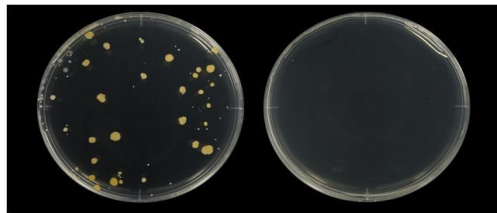
Sumilite FRS antibacterial grade sheet with antimicrobial performance in addition to characteristics such as impact resistance and good moldability.

Test Method: ISO 22196

Staphylococcus aureus



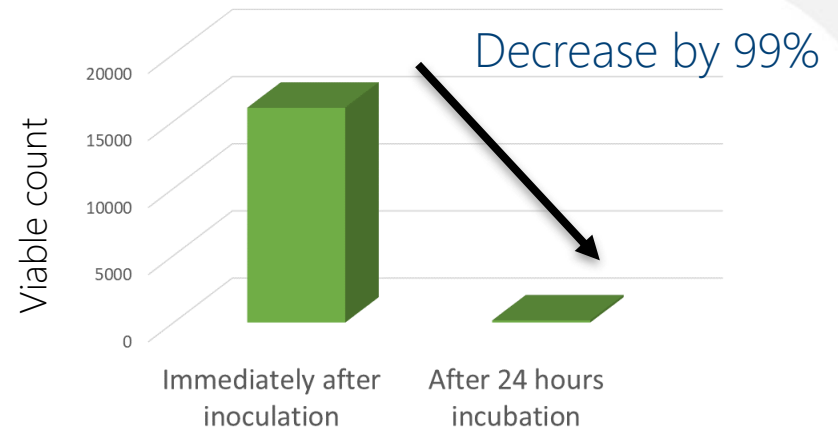
After 24 hours



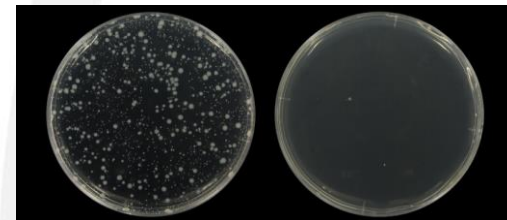
Non-Antibacterial grade

Antibacterial grade

Escherichia coli



After 24 hours



Non-Antibacterial Grade

Antibacterial grade

Thank you for your attention



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