

Durable, Easy-Clean, Antiviral and Antimicrobial Coatings

Integran Technologies Inc.

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TECHNOLOGIES INC.

AS9100C:2009 ISO9001:2008 CERTIFIED

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AVM Coatings

- Integran has recently developed a line of antiviral/microbial (AVM) polymer coatings for diverse applications.
- The AVM coatings rapidly and continuously kill pathogens on contact
 - reducing the spread of viruses, bacteria, and fungi by fomite transmission.
 - reducing the time and effort needed to clean, sanitize and disinfect surfaces.
 - reducing the amount of cleaning, sanitizing and disinfecting products that are needed.



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AVM Coatings

- AVM coatings:
 - utilize EPA Registered antimicrobial additives.
 - have antibacterial efficacy verified by independent laboratory testing against MRSA based on ISO 22196. Additional antimicrobial and antiviral testing is ongoing.
 - are Fluorocarbon-free and low-VOC.
 - utilize Integran's patented and proprietary hydrophobic/easy-clean polymer technologies
 - US 20210017395 (allowed); US 20210017399 (allowed)



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AVM Coatings

- Integran's AVM coatings allow for simple, one-step application of antiviral/microbial properties onto almost any surface.
 - existing surfaces/items can be coated in-situ, without the need for expensive renovations or replacements.
 - newly manufactured surfaces/items can be spray or brush coated as a cost-effective manufacturing step.
- Typical application surfaces and items include hand-held devices, railings, door handles, countertops, appliances, faucets, waste-containers, & other high-contact-surfaces.
- Application industries include:
 - Healthcare: hospitals, ambulances, offices, clinics
 - Transportation: airports, planes, buses, trains/subways
 - Public/Private Buildings: schools/universities, office spaces, event centers, fitness centers
 - Consumer Goods
 - Military and Defence



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AVM Coatings

- Three coating options are available:

COATING	PHYSICAL CHARACTERISTICS	AVM EFFICACY (Bacteria Colony Forming Unit Reduction after 24 hrs)	INTENDED APPLICATIONS
AVM-S26	<ul style="list-style-type: none">• Durable, easy-clean/non-stick coating• Opaque; available in grey and black colours	> 99.99%	<ul style="list-style-type: none">• General purpose coating with high AVM efficacy and non-stick properties.
AVM-S27	<ul style="list-style-type: none">• Durable coating• Opaque; available in grey and black colours	> 99.99%	<ul style="list-style-type: none">• Best suited for applications where a non-stick/slippy surface cannot be used (i.e. hand rails).
AVM-S31	<ul style="list-style-type: none">• Clear coating	> 99.99%	<ul style="list-style-type: none">• Intended for clear coating applications such as electronic touch-screens.



AVM Coatings



Uncoated Aluminum
Door Handle



Aluminum Door Handle
spray coated with AVM-S26

- Before and After pictures of a door handle coated with AVM-S26 in black colour.
- The coating dries in a couple hours and is ready for use.



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AVM Coatings

- Hydrophobicity, abrasion resistance, chemical resistance, & tape peel-adhesion test results.

Coating	Water Contact Angle	Taber Abrasive Wear Test (ASTM D4060) <i>(coating volume loss)</i>	Chemical Wear Test (ASTM 5402) <i>(water contact angle after 200 double rubs with chemical)</i>	Tape Peel Adhesion Test (ASTM D3330) <i>(Average force required to peel tape off surface; 3M 300LSE adhesive)</i>
AVM-S26	100°	14.3 mm ³ /1000 cycles	93° - isopropanol 98% 99° - peroxide 3%	1.48 N/cm
AVM-S27	80°	9.1 mm ³ /1000 cycles	76° - isopropanol 98% 80° - peroxide 3%	5.93 N/cm
AVM-S31	-	-	-	-
MilSpec PU (MIL-PRF-85285)	72°	15.6 mm ³ /1000 cycles	63° - isopropanol 98% 71° - peroxide 3%	5.57 N/cm



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