



AEROSPACE INDUSTRY

Antibacterial and Antiviral adhesive films activated by pylote technology

BECAUSE HYGIENE IS MORE IMPORTANT THAN EVER

Building on its existing offer of adhesive decorative laminates and protective films for the cabin, ADHETEC has integrated to the coating of its cabin products a natural and non-toxic antimicrobial technology developed by PYLOTE, a long time expert in mineral, to ensure a safe and clean environment for passenger well-being on board. The antimicrobial range of foils enables the almost timeless neutralization of bacteria, viruses, mold and yeast by contact to the surface. Airlines can choose among a selection of products, printable or clear, depending on the surfaces to protect. The printable products will offer valuable branding and advertising opportunities to the passengers in the cabin.

► PROTECT, COMMUNICATE & ENHANCE

- ◆ Contribute to the protection of cabin parts: the films increase their durability
- ◆ Proven long term antimicrobial efficiency of the surface, including Human Coronavirus
- ◆ Destroys >99.999% of bacteria & >99.9% of viruses by direct contact: does not release any volatiles
- ◆ Natural antimicrobial technology, user friendly
- ◆ Standard cleaning methods (wipe as usual)
- ◆ Easy installation (die cuts) and removal during maintenance operations



13423-AM

- ◆ Printable film with antibacterial and antivirus properties in the surface varnish
- ◆ Customizable to any design of your choice
- ◆ Communicate & decorate for an improved brand image
- ◆ Made for flat and single-curved surfaces
- ◆ Short lead time from final proof to delivery
- ◆ Easy to apply and to remove in service

10447-AM

- ◆ Smooth transparent adhesive film with antibacterial and antivirus properties in the surface varnish
- ◆ Protect different zones like IFE screen, armrest, seatshell, galley worktops
- ◆ Continuous tactile functions
- ◆ Flexible to adapt to curved shapes and surfaces
- ◆ Leaves no residues upon removal
- ◆ The film protection will be seen by the passengers and will provide them a safe onboard experience



10801

- ◆ Transparent film with antibacterial and antivirus properties in the surface varnish
- ◆ Grained finish like the tray table
- ◆ The film will be seen by the passengers and will provide a safe onboard experience without changing the design in the cabin
- ◆ Easy to apply and to remove without glue residues
- ◆ Improve durability of the tray table against normal tear and wear

► FEATURES

DESCRIPTION	UNIT	VALUE	METHOD
Adhesion system of the product pattern	NA	Grade 0	Cross-cut test 1mm
Adhesive strength	N/cm	3 to 5	Peel strenght 180° at 300mm / min 24h after application on steel
Antimicrobial and antivirus*	NA	Pass	Escherichia coli ATCC 8739 Coronavirus humain 229E ISO 22196 / JIS Z 2801 ISO 21702
Humidity resistance	NA	No damage: no adhesive residue	ISO 9142 Climatic cycle: 48h 15h +/- 1h at 40°C and 95% HR 3h +/- 1h at -20°C 6h +/- 1h at -70°C 15h +/- 1h at 40°C and 95°C HR 3h +/- 1h at -20°C 6h +/- 1h at 70°C
Chemical resistance	NA	No damage: no delimitation, no effect on readability	Immersion 168h at 23°C in cola Immersion 168h at 80°C in coffee Immersion 1000h at 23°C in water Immersion 168h at 23°C in the cleaning product AMS1550 TG3000 50 rubs with isopropylic alcohol 20 rubs with acetone
Scratch resistance	NA	6N necessary for light scratch mark	Scratch test with a sclerometer 1, 2, 4, 6, 8, 10, 16N
Rub resistance	NA	No damage	Rub test with a plynometer: 50 rounds trip
Impact resistance	NA	No damage, just light mark	Height of fall: 1000mm Diameter of the ball: 20mm
Vertical flammability 60s	NA	Pass on Alu 1mm Pass on HC 9,4mm	FAR25.853 Appendix F, Part I, (a)(1)(i)

 *Embedding the natural antimicrobial protection by Pylote: micron-sized mineral additives are mixed in our coatings. The antiviral and antibacterial combined action of the microspheres operates by contact with the surface of parts and equipments. It is the result of a reaction between moisture, air and the surface containing the antimicrobial treatment, killing germs. The microspheres are neither consumed nor extracted from the surface but kept active in the surface they have been integrated into.

The technology is natural and does not release toxic volatiles in the air, is safe for all, even small children.

➤ FREQUENTLY ASKED QUESTIONS

Q: What type of antimicrobial protection do the films provide?

A: The films have antibacterial and antiviral properties, integrated into the products using micron-sized additives in our external coatings. The microspheres integrated to the surface contact area allow the neutralization of bacteria, viruses, mold and yeast and the prevention of virus spread. Certificates available upon request.

Q: What is the lifetime of the antimicrobial properties?

A: The antimicrobial properties are active in the top varnish without time limitation. The varnish is very resistant to cleaning agents and normal tear and wear. The antimicrobial additives have been proof tested for over 50 months.

Q: When do I change the film?

A: The film may need to be changed on a regular basis due to normal tear and wear. It can be easily done during standard line maintenance. Consider 1 year usage in average.

Q: What are the benefits of a film compared to sprays?

A: Our process is automated, therefore it guarantees a homogeneous and sufficient application of the antimicrobial and antiviral treatment onto the entire surface of each part that we supply, unlike a manual spraying operation, which is more random and less accurate.

Our solution does not generate overspray in the cabin, making our product more user friendly.

Q: What is the surface cleaning process once the film is applied?

A: You may use your standard cleaning process: wet wipes, non abrasive cloths, mops, standard cabin cleaning products and methods. The antimicrobial microspheres integrated to our film surface treatment are resistant to the most aggressive disinfectants.

Q: Are the films flexible enough to fit the entire tray table including the beverage hole?

A: The printed film is made for flat or single-curved surfaces. However it can be supplied in two separate die-cut pieces to fit both the tray table and its built-in cup-holder.

The transparent film will be more flexible to fit simple curved shapes (like seat shells of business class seats).

Q: How long does it take to install the film?

A: The film has a pressure-sensitive adhesive and is very easy to fit. It can be installed during most maintenance operations.

Q: How are the films supplied?

A: The film is supplied as die cut pieces ready to fit.

Q: What are the weight and thickness of the films?

A: Meet the requirements in the cabin < 300 g/m².

Q: Are different designs and colors available?

A: The 13423-AM film is a fully customizable solution and printable to any design and color, strong value added for your brand communication.

The 10447-AM and 10801 are only available in clear version.

Q: Do the films leave residues when removed?

A: The film 13423-AM may leave glue residue from the adhesive layer depending on the time applied on the tray table. The cleaning process is simple and lean: use a standard paper masking tape on the adhesive side to pick up the glue residues or just rub gently with the finger, then wipe with a standard cleaning agent. There will be no damage to the surface.

Q: Can I consider bigger surfaces and stay compliant with FAR 25.853?

A: The development of our antimicrobial (AM) version of ADHESKIN®, our cabin decorative laminate range, is under progress (all FAR paragraphs).

Q: How are the antiviral and antimicrobial properties tested and who delivers the certificate? Is it recognised globally?

A: Activated surfaces provide immediate, continuous and permanent anti-microbial activity (more than 90% in 1 hour). Further specific Coronavirus tests performed by a French specialized laboratory show a reduction in the viral load of 3.46 log after 24 hours corresponding to the disappearance of more than 99.9% of germs. Performed by independent laboratories and certified according to international standards. Pylote technology is already certified on number of strains with a disappearance of more than 99.999%. Certificates available under request.



Contact us for any enquiry

FRANCE

Zone Bastillac Sud - BP 123
65 000 Tarbes Cedex
Tel.: +33 5 62 51 78 80
Fax.: +33 5 62 51 17 89

FRANCE

ADHETEC Colomiers
8 rue Jean Mermoz
31 770 Colomiers
Tel.: +33 5 62 51 78 80

U.S.A.

ADHETEC Inc.
12 620 Interurban Ave South
Tukwila WA, 98 168
Tel.: +1 206 620 2535

CANADA

680 Lemire
Drummondville, QC, Canada
J2C 7W9
Tel.: +1 819 477 4189