



Molon Labe Seating

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FOR IMMEDIATE RELEASE

COVID Mitigation: Aircraft Interior Companies Combine Their Innovative Technologies to Combat Covid19 on Aircraft

Press release

Advanced Materials and Advanced Seating to Combat Covid

Three pioneering aircraft interior companies have announced a collaboration to improve the safety of travellers concerned with COVID-19 infection. Tapis Corp from Armonk, NY, SIMONA Boltaron from Newcomerstown, OH and Molon Labe Seating from Denver, CO are working on a solution for safer travel.

The design aims to minimize the spread of COVID-19 on aircraft through the use of physical distancing, anti-microbial surfaces and respiratory protection.

They achieve this by combining Tapis's anti-microbial, Promessa Ultrafabric with thermoformed Boltaron 9815N FAR-rated anti-microbial treated sheet, and the staggered layout of Molon's S2 economy class seat design.



Upholstery, Promessa Antimicrobial Ultrafabric

The Promessa product, manufactured by Ultrafabrics and supplied by Tapis will cover the seat back, seat pan, armrests and headrest.

The headrest features a unique curved design that reduces contact with neighbouring passengers and creates a barrier to the transmission of corona virus particles. To reduce the risk further, the headrest is covered in Promessa which has anti-microbial technology built into the surface. Matthew Nicholls from Tapis Corporation explained how the technology works "The Promessa product has anti-microbial silver ion

technology built into the topskin of the product. It is inherent in the polymer to ensure maximum efficacy and prevent any leaching throughout the lifetime of the product”.



The Promessa material can also be cleaned with a wide range of EPA registered cleaners and disinfectants and is the reason why they are the market leader in the healthcare industry for surface materials. Nicholls continued “working with the Molon team was a great partnership of innovation and technology and together we believe we can restore passengers’ confidence in flying commercially and offer them a safe and sanitized experience on every flight.

Lightweight and Cleanable Hard Surfaces

With heightened focus on the cleanability of surfaces that passengers come into contact with, including tray tables, arm rests and video touch screen bezels, selecting a material that can withstand rigorous cleaning procedures and provide reliable durability from scratches and impact was key for the new economy class seat. New Boltaron 9815N FAR-rated material was specially engineered to withstand frequent cleaning with strong chemicals, in addition to UV-C disinfection and electrostatic fogging. 9815N is also offered as a standard with an anti-microbial treatment and can be customized in an unlimited range of textures and colors.

Molon Labe worked with SIMONA Boltaron’s scm360° prototyping and specialty design team to optimize the engineered design of the unique S2 seat shell design.

"When there is a unique seat configuration that could present engineering challenges for the thermoformed seat part, like the new Molon S2 seat, it's great for us to be involved early on in the design stage of the development process," said Mike Robinette, SIMONA Boltaron Director of Product Development.

"We were able to be very hands-on with the redesign of the 3-piece modular design, and make recommendations for optimizing the geometry of the part so that we could get the best possible material yield that would result in more efficient manufacturing and allow for more passenger space."

In addition to providing the materials, SIMONA Boltaron engineered the 3D tooling data, built the tool and thermoformed the prototype parts for the seat.



Molon S2 seat backs thermoformed out of anti-microbial treated Boltaron 9815N

Social Distancing – Touchless Travel

Much attention has been given to touchless travel during ticketing, boarding and check-in but once seated this becomes difficult due to the confines of the cabin.

Molon's S2 seat with its staggered design help to reduce the physical touchpoints between passengers, including arms, elbows and legs.

Respiratory Protection:

Molon's large, one-sided headrest can act as a physical barrier that be rotated 180 degrees to open up the seats between traveling friends and family, or used to act as a physical barrier between unknown passengers. It also offers a patented headrest vent which would distribute fresh cabin air directly in front of the passengers face rather than from an overhead vent. This fresh air vent would have volume and direction adjustments similar to current overhead cabin air vents.

Animation of headrest: <https://www.dropbox.com/s/2f4eugsg62z0f4y/ML%20Seat-02%20-%20Animation%20-%20Final.mp4?dl=0>

Headrest vent provides fresh cabin air to passengers face



The unique attributes of this design include:

- All surfaces protected by Anti-microbial treatments to leather and plastics.
- All anti-microbial treatments able to withstand regular cleaning
- A large rotating, one-sided headrest that acts as a physical barrier between passengers, rotating 180 degrees to offer options for passengers traveling with friends and family.
- Staggered layout and arm rests to increase lateral space whilst reducing contact points between passengers.
- Patented headrest vents fresh cabin air from the seat's headrest directly towards the passenger's face with controllable flow rates and direction similar to overhead cabin vents.
- Option for cellphone (Bluetooth) controlled Inflight Entertainment System.

Tapis, SIMONA Boltaron and Molon expect this design will address the long-term concerns that have developed as a result of the global pandemic and plans to complete the design by the early of 2021. Our aim is to look at a long-term solution by making these post-COVID specific changes to our design addressing both passenger comfort and confidence.

For more information:

Dropbox link to images: <https://www.dropbox.com/sh/3z8xarxhlxsnkfm/AADCdP8l7pXY73skddATRfs1a?dl=0>

About:

Tapis:

Since 1977, Tapis Corporation has been a pioneer in the development of high -performance fabrics for aircraft interiors. The company's innovative materials maximize passenger comfort, durability, weight savings & sustainability. Tapis' products are found in the world's leading airlines and business jets. A woman owned business, Tapis' corporate culture is defined by superior customer service and a commitment to innovation.

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SIMONA Boltaron:

Based in Newcomerstown, Ohio, SIMONA Boltaron is a leading thermoplastic sheet manufacturer for the aerospace and mass transit industries, among other markets. The company is the only plastic sheet manufacturer in the aerospace industry that can extrude, calendar and press laminate sheet in a single location. Its unmatched press laminating process can emboss an infinite range of textures into thermoplastic sheets. SIMONA Boltaron offers value-added services in design for manufacturing and rapid prototyping through its scm360° supply chain management initiative and is ISO 9001:2015 and AS9100D certified. A division of Germany-based SIMONA AG, a leading global manufacturer of thermoplastics products. For more information, visit www.boltaron.com.

Molon Labe LLC is an aircraft seat manufacturer headquartered in Denver, Colorado. They specialize in staggered, economy class seats for short and long-haul markets.

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