

# **BOLTARON® FAR-RATED MATERIALS**

Lightweight thermoplastics for aircraft interiors



## ABOUT SIMONA BOLTARON

SIMONA Boltaron is a part of SIMONA Group, a premier manufacturer of thermoplastic plastic products, synonymous with quality, reliability, and precision for more than 160 years. Encompassing more than 35,000 items, our team of 1,500 employees is committed to finding the most effective material for customer applications, developing compelling product solutions and providing best-in class technical support.

Operating with sales offices in Europe, America and Asia, we maintain a fast, flexible and reliable delivery service. Anytime, worldwide.

Semi-finished sheet from SIMONA Boltaron is engineered to meet the challenges of the future. These materials make aircraft lighter, medical devices more durable and chemical plants safer. Boltaron® materials provide solutions across many industries, including:

- Aircraft, Bus and Rail Interiors
- Medical
- Specialty and Hobby
- Chemical Processing
- Telecommunications and Electronics
- General Thermoforming





**Dedicated to providing solutions  
for aircraft interior applications**

SIMONA Boltaron utilizes decades of expertise to provide material solutions that meet safety and regulatory requirements for aircraft interiors. For quality assurance, our technicians use the latest testing technology to produce comprehensive and cost-effective results directly on-site, including full flammability, smoke, and heat release.

**Unmatched production capabilities**

No other thermoplastic producer offers calendering, extrusion, and press lamination under one roof. The combination of these processes gives Boltaron aircraft sheet the unique design and forming characteristics that leading airlines and seating manufacturers demand. The company is also ISO 9001:2015 and AS9100 Rev D certified.

# WHY THE WORLD'S LEADING AIRLINES, AIRCRAFT MANUFACTURERS, AND AIRCRAFT INTERIOR MANUFACTURERS SPECIFY BOLTARON SHEET

Boltaron® aircraft materials meet the regulatory guidelines required by the FAA to be used as aircraft interior seat backs, window shades, privacy dividers and decorative trim and finish.

*But that's not all we have to offer.*

## Key benefits

### **Greater impact resistance at thinner gauges compared to other materials**

Boltaron materials can be downgauged to reduce weight while still maintaining rigidity and durability

### **Easy to thermoform, fabricate, machine bond, fasten, and repair**

Reliable consistency in processing and uniform wall thickness means less downtime and longer life cycle

### **Matching calendered, extruded and press laminated grades in gauges from .003 to 3.0 in (0.76 to 76.2 mm)**

Combination of these processes allows for greater customization possibilities

### **Durability**

Parts made with Boltaron are tougher in service and have excellent long-term appearance, looking newer longer

### **Unlimited colors, including solids, translucents and metallics**

Custom design capabilities can bring out your brand with low minimums and hands-on design support

### **Industry's widest range of textures**

Extruded and high-end press laminated textures in over 50 varieties from leathers and woodgrains to geometric finishes

### **Easy to clean**

These materials are inherently chemical resistant and can be disinfected frequently with no adverse effects to physical properties

### **Recyclability**

Boltaron thermoplastics can be recycled in the production and fabrication process, resulting in no waste to landfill. Parts can be designed for full recyclability at the end of use





Boltaron lightweight thermoplastic sheets have been used successfully in aircraft interior design for many years. For more information on specific projects completed in the past, please contact your local sales representative.

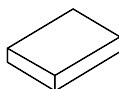


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#### **Material specifications**

Further information about Boltaron material properties can be found on our website at [www.simona-boltaron.com](http://www.simona-boltaron.com).

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## BOLTARON® AIRCRAFT RATED SHEET

Based on the regulatory requirement, application, part type and size, we can recommend an exceptional material solution from our product range.

### Full range of high impact sheet for aircraft interior components

SIMONA Boltaron's knowledgeable team is ready to assist with material selection to help you choose the right grade for a specific application or use. Consult the factory for other specialized FAR rated grades.

### 9000 Series

Our top-of-the-line aircraft material series. These materials meet the flammability, smoke, and heat release requirements of FAR 25.853 (a) and (d). All Boltaron 9000 Series materials meet some type of the following performance or decorative preferences:

| Boltaron 9000 Series |   |
|----------------------|---|
| 9200                 | Light Blocking Thermoplastic Sheet  |
| 9816 VIO             | Translucent Sheet   |
| 9815E                | Opaque Thermoplastic Sheet  |
| 9815N                | Next Generation Opaque Thermoplastic Sheet                                      |
| 9815F                | Film  |
| 9850                 | 55/55 Low Smoke and Low Heat Release Opaque Thermoplastic Sheet                 |
| 9850N                | Next Generation 55/55 Low Smoke and Low Heat Release Opaque Thermoplastic Sheet |
| 9865 TERREFORM       | Recycled Grade Thermoplastic Sheet  |

### 4000 Series

Enhanced impact performance. These materials meet the flammability requirements of FAR 25.853 (a). All 4000 Series materials meet some type of the following performance or decorative preferences:

| Boltaron 4000 Series |   |
|----------------------|---|
| 4330                 | High Impact Opaque Thermoplastic Sheet    |
| 4365 TERREFORM       | Recycled Grade Thermoplastic Sheet        |
| 4350 VIO             | Translucent Sheet                         |
| 4430 Opal            | Enhanced Pearl Effect Thermoplastic Sheet |
| 4800                 | Low Smoke Opaque Thermoplastic Sheet      |



### Material applications

In addition to meeting stringent specifications for flammability, smoke, and heat release, Boltaron sheet offers great impact resistance and extreme thermoformability in a broad range of custom colors, textures and design effects. These characteristics translate into maximum versatility with regard to the area of application and part type. Whether tray tables, seat backs, window shades, or parts customized to your specifications – we have the right material solution for you.

Here are just a few examples the key applications where Boltaron materials are used.

- 1**      Seat backs and shells
- 2**      Arm rests
- 3**      IFE bezels
- 4**      Window shades
- 5**      Dividers
- 6**      Tray tables
- 7**      Life vest shrouds
- 8**      Lavatory shrouds







4

1

3

6



Loop

### **Recycled. Remade. Reformed.**

This concept aircraft seat shell was made with Boltaron 9865 to provoke ideas for use of more sustainable materials throughout the aircraft interior. The material is limited to one base substrate color and texture, however it can be upgraded to have a custom print and pressed textures for a more luxury appearance.

## CLOSE THE LOOP WITH US

We love thermoplastics. And the environment. Our focus on sustainable production and product development recently led to the launch of a new grade of sheet with the highest percentage of recycled content tested to meet the requirements for use in an aircraft's interior.

### **Intrinsically Recyclable in a Sustainable Loop**

Boltaron materials are all recyclable at the end of use. By definition, thermoplastics are materials that can be molded at elevated temperatures, harden when cooled with the ability to repeat that process repeatedly. This process enables a sheet of flat Boltaron material to be thermoformed into an airplane seatback that after use can become part of the sustainable loop.

### **Boltaron® 9865 Terreform Recycled-Grade Formable FSH Sheet**

This new grade is a sustainable, lightweight solution for molded aircraft interior parts such as seat components, class dividers and bulkhead laminates, galley and lavatory components and more. 9865 is now available in 5 new colors with our VL texture. It can be decorated in a variety of ways, including protected prints and brand patterns.



Watch this video that animates how thermoplastics are continuously recycled in a loop.





# DESIGN CAPABILITIES

We go to great lengths to bring to life the inspired visions of our customers and challenge the traditional aesthetics of aircraft interiors. The result is a portfolio of custom design capabilities that transcend the standards for opaque thermoplastic sheet with eye-catching textures, metallics, pearlescents and decorative prints.

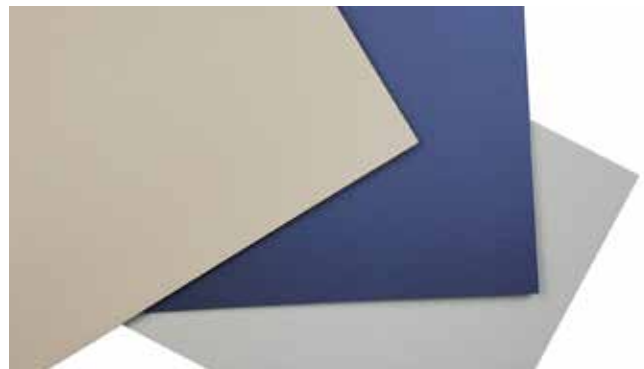
## Unlimited Colors

SIMONA Boltaron's state-of-the-art color laboratory specializes in producing quality colored sheet from standard gray and blue hues to dynamic, bright accent colors. Expert technicians and in-house technology offer custom color matching in a standard lead time of less than 3 days. Match to a physical sample or to a color reference number such as Pantone, NCS, or RAL.



## Pearls

This iridescent pearl surface effect brilliantly captures the light and provides excellent scratch resistance. The material's luster is even further enhanced after thermoforming. Choose a pearlescent hue from natural to faux finish.



## Impress Prints

Custom images can be embedded into the material such as brand patterns and woodgrains. We utilize a range of printing techniques, including digital printing, dye sublimation and screen printing. All processes can be protected with a cap layer for added durability.



## Metallics

This unique process permanently integrates a durable metallic cap layer including a real metal flake into a color matched substrate resulting in a deep, rich metallic effect. This effect, achieved through press lamination, offers great durability and excellent scratch resistance.



### VIO Translucents

Custom translucent materials meet the FAR 25.853 (a) and (d) flammability requirements and can be thermoformed to provide a safety barrier without sacrificing regulatory compliance or aesthetics. These materials are available in a wide range of thicknesses and can be customized with textures or decorative scratch-resistant prints.



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The Boltaron texture library is available in digital format for use in 3D rendering programs. Visit [www.simonavisionfactory.com](http://www.simonavisionfactory.com) to learn more.

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**VISION FACTORY**  
DISCOVER + VISUALISE + WORK

### Wide Range of Textures

SIMONA Boltaron offers more textures than any other film and sheet producer, opening a new range of design possibilities. Our press laminating process uses heat and pressure to emboss an infinite range of textures into thermoplastic sheet offline with low minimums. Press laminated custom textures can be reproduced from virtually any existing or newly created patterns, including repeated company or brand patterns. This capability gives designers the unequalled opportunity to create dramatic, sophisticated environments that are also entirely unique.

SIMONA Boltaron supplies the decorative textured sheet ready for forming, creating greater possibilities for imparting texture economically and rapidly. Choose from a library of unique pressed textures or provide a physical sample to match in the lab. Standard extruded textures are imparted in-line at low cost and low minimums.

Boltaron materials with extruded textures are available in medium to heavy gauge sheets suitable for most thermoforming, fabricating, and machining applications. This standard range of embossed textures was selected to complement the requirements of the aircraft interiors industry.



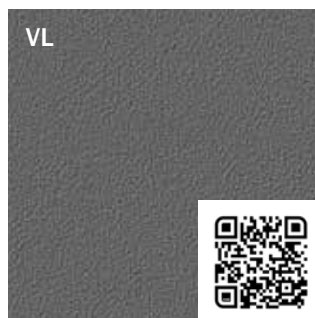
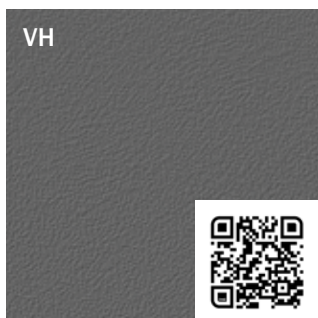
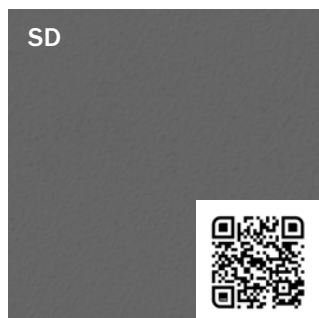
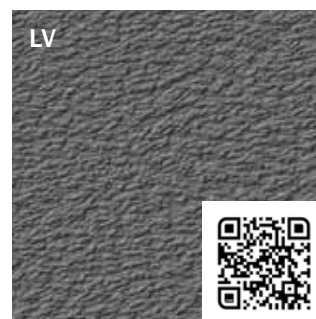
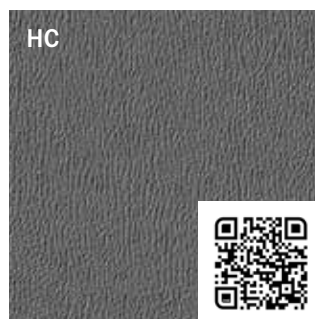
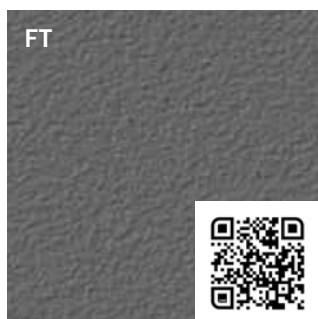
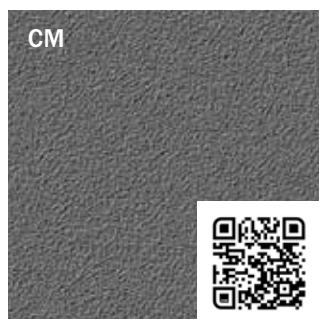
## THINK TEXTURES. **THINK BOLTARON.**

SIMONA Boltaron offers more pressed and extruded textures than any other film and sheet producer, opening a new range of design possibilities.

### Extruded Textures

We invite you to visit our Vision Factory website to download the digital design tools.

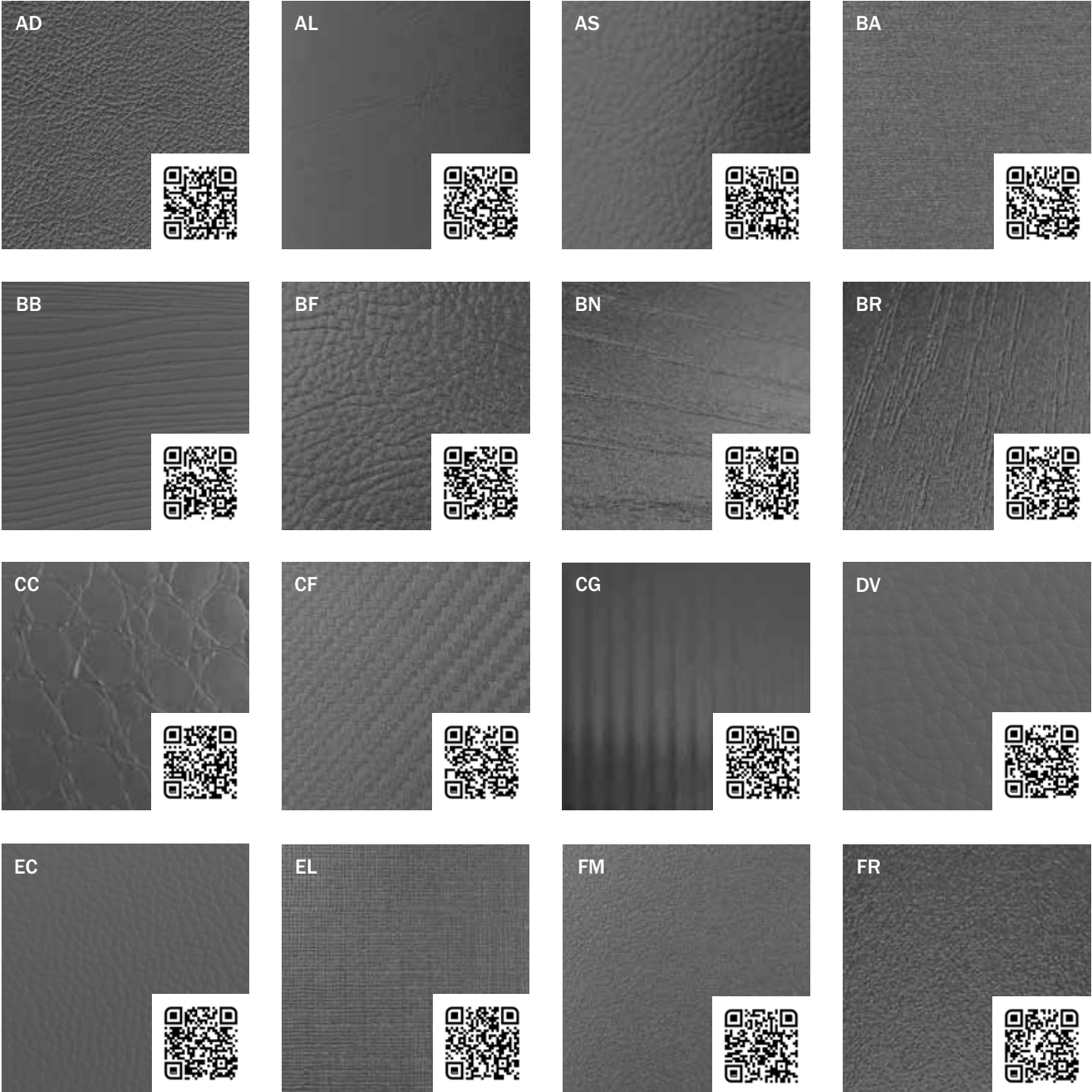
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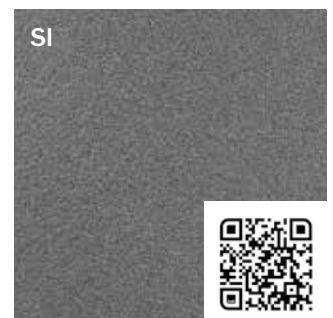
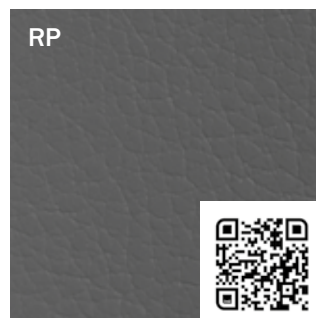
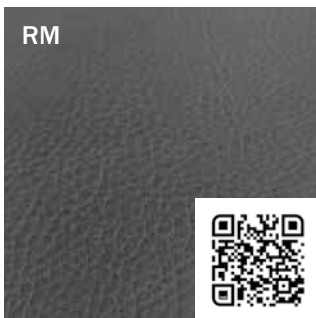
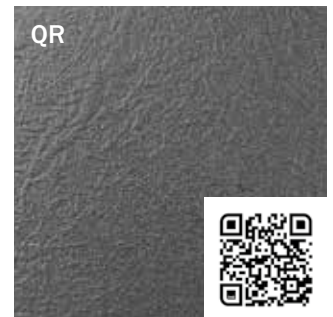
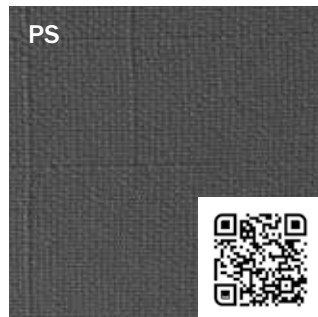
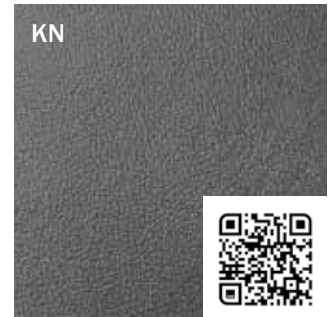
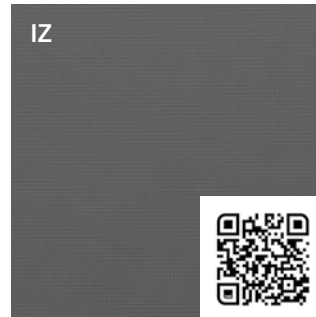
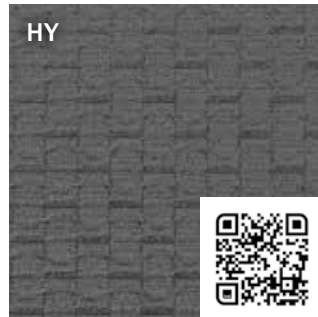
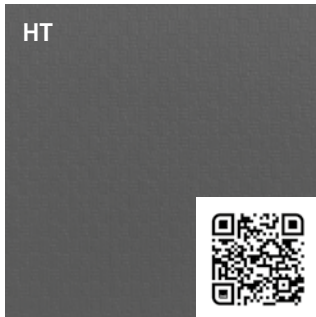


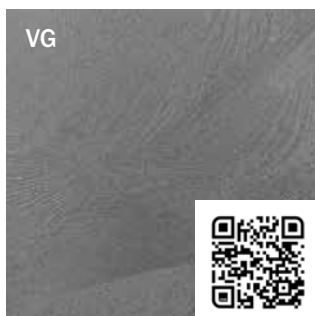
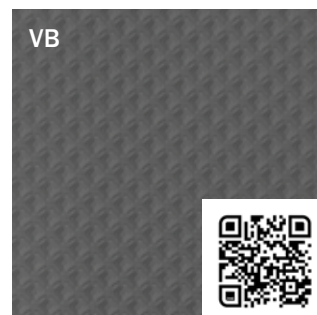
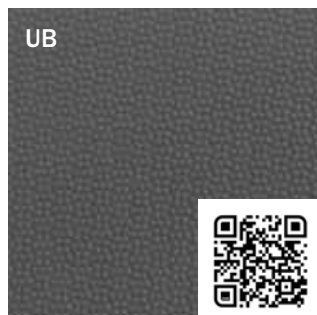
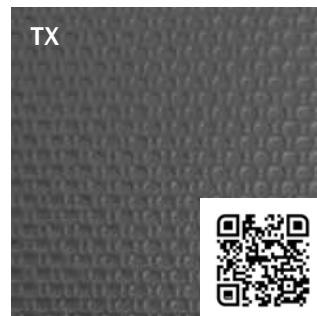
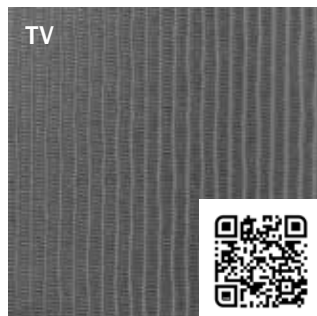
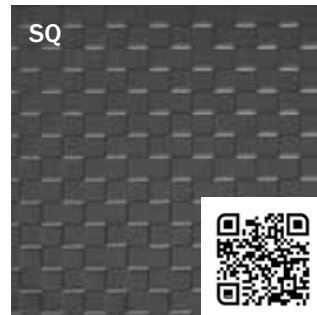
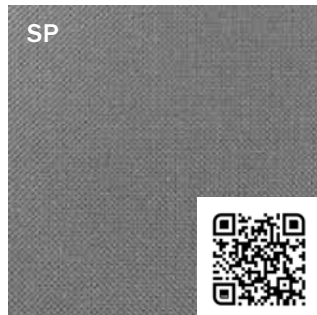
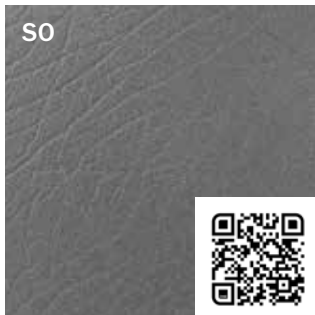


**Pressed Textures**

We invite you to visit our Vision Factory website to download the digital design tools.  
For this please scan the QR code accordingly.











## TECHNICAL SUPPORT AND SERVICES

Our team members are specialists in their field and put a great deal of effort into studying specific product applications. We would be delighted to share our know-how with you.

### **Hands-on from design to development**

SIMONA Boltaron works with designers, thermoformers, seat OEMs, and airlines to provide the highest quality aircraft rated sheet and aircraft interior parts in the industry. Thanks to our strong focus on aircraft interiors, we are able to work with our customers from early in the product development and material selection stage to design for manufacturability. This ensures manageable procurement costs, while also ensuring consistently high quality.

### **Material and product selection**

We offer a first-class support service around the globe. Our Technical Service Centre and our award-winning Customer Service teams are here to assist you every step of the way, providing comprehensive advice from planning to product and material selection.

### **Training on how to process our products**

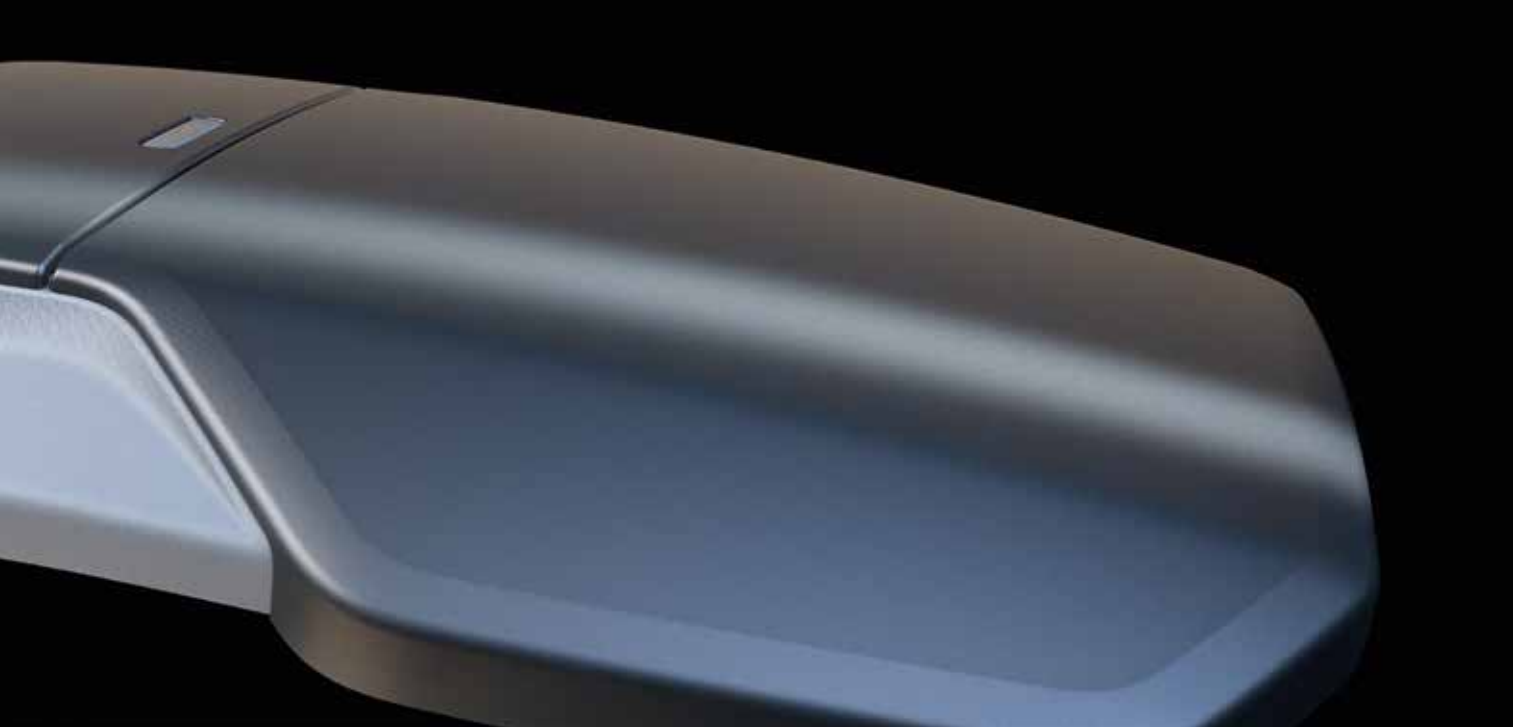
The SIMONA Academy is a highly professional and trusted partner when it comes to imparting specialist knowledge in the field of plastics engineering. Our certified plastic thermoforming experts will conduct technical application training for your staff members – on your premises or at our technical center.

### **Customized product solutions**

Customizing is one of SIMONA Boltaron's key strengths. Please get in touch with us so that we can develop tailor-made solutions for your projects in close collaboration with your team.

### **Interested**

For further details regarding our products and prices, please contact our Boltaron experts: [info-boltaron@simona-group.com](mailto:info-boltaron@simona-group.com).



## GLOBAL THERMOPLASTIC SOLUTIONS



Contact and more:  
[simona.de/worldwide](https://simona.de/worldwide)

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