

Lexan* XHR6000 Sheet



Higher safety, aesthetics and performance

Extremely low heat release Lexan XHR6000 sheet
for interior aircraft applications

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For decades, aircraft manufacturers have relied on SABIC Innovative Plastics Specialty Film & Sheet to deliver high-performance thermoformable sheet materials that combine outstanding performance with unyielding compliance to industry standards and regulations.

We're reaching new heights...

Providing the processing window of polycarbonate and the Ohio State University (OSU) 65/65 capability (like polyetherimide [PEI] resins), extreme low heat release Lexan XHR6000 sheet sets a new course for safety compliance, aesthetics and performance in interior aircraft applications.

• Broad Compliance

In addition to full flame/smoke/toxicity (FST) compliance, Lexan XHR6000 sheet exceeds the current OSU 65/65 heat release standard. It spares manufacturers and suppliers the time-consuming process of obtaining waivers for non-compliant materials, and clears the runway for emerging interior aircraft designs.

• Outstanding Aesthetics

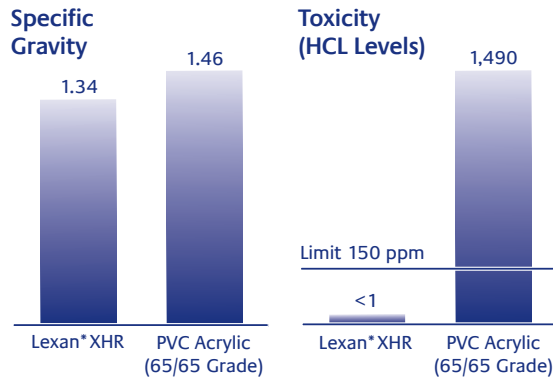
Lexan XHR6000 forms easily into deep draws, crisp angles and thin walls, and retains its superb performance properties when draped or thermoformed into complex 3-D shapes. Also, its opacity provides excellent opportunities for molded-in colors drawn from a broad palette of high chroma, pastel and bright whites. Its aesthetic value is supported by our world-class ColorXpress* service, which offers quick and precise color matching.

• Low Weight

Lexan XHR6000 sheet enables thinner walls that don't compromise dimensional stability or strength. The material is inherently lighter than competitive materials, offering a specific gravity of 1.34 versus 1.47 for OSU-compliant PVC/acrylic sheet systems, and enabling a 10% weight advantage without any gauge reduction.

• Improved Processing and Part Design

Lexan XHR6000 sheet not only meets aircraft compliance requirements, it also has inherently lower forming temperatures than polyphenylsulfone (PPSU). That means improved texture retention and the use of lower-cost tooling, which could translate into lower part costs and enhanced productivity. Plus, its robust smoke performance can help ease compliance testing for complex decorated parts that incorporate adhesives with films, fabrics or leathers.



Lexan*XHR sheet is 10% lighter than competitive 65/65 grade PVC Acrylic

Lexan*XHR sheet meets all industry standard toxicity tests (BSS7329, ABD0031)

Lexan XHR6000 sheet complies with FAA, Boeing and Airbus standards:

FAA regulation 25.853 Appendix F:

Part I; Section (a), 1, (i) - 60-Second Vertical Burn

Part IV - OSU 65/65

Part V - NBS Smoke Density, 4 min. ≤200

Part I; Section (a), 1, (ii) - 12-Second Vertical Burn

Airbus Smoke Toxicity ABD0031

Boeing Smoke Toxicity BSS7239



An Expanding Horizon of Applications

As new aircraft designs introduce larger seating and sleeping areas, an increasing number of interior components must comply with the OSU heat release standard, which applies to parts larger than two square feet. Also, the increase of interiors and seating in emerging airframe designs is adding to the list of parts that need to meet FST requirements.

But Lexan XHR6000 sheet's potential value doesn't stop there.



Its superb aesthetic and thermoforming properties can also help simplify the supply chain, and reduce production costs and weight by eliminating paint.

The list of potential applications is long, offering new design options for:

- Seating
- Cockpit panels
- Window shades
- Window surrounds
- Door shrouds
- Fuselage cladding

In the future, this cutting-edge Lexan sheet holds potential for emerging interior applications as aircraft designs introduce increasingly spacious sleeping and seating arrangements.



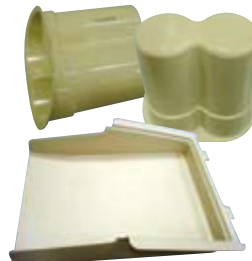
Case Study

High aesthetics, simpler processing

The problem:

The high temperatures required to thermoform polyphenylsulfone (PPSU) sheet limited aircraft component supplier C&D Zodiac to use metal tooling for prototypes.

In addition to being expensive and time-consuming to build, the tools needed to be reworked or replaced if the part design changed. Plus, PPSU's high thermoforming temperatures "washed out" textured patterns in the sheet, forcing C&D to instead build texture into the tooling.



The solution:

The company used Lexan XHR6000 sheet that, besides complying with all relevant standards for FST and heat release, can be thermoformed at a lower temperature than PPSU.

The result:

The lower temperatures required to thermoform Lexan XHR6000 sheet enabled less expensive tooling and shorter cycle times. This also allowed C&D to take advantage of texture in the sheet instead of incurring the cost of texturing the mold. Lastly, Lexan XHR6000 sheet improved aesthetics by enabling molded-in color, including bright whites.

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Ground Support from SABIC Innovative Plastics

SABIC Innovative Plastics is a global engineering plastics company with nearly a half century of extrusion experience through our Specialty Film & Sheet business.

Our value begins with a broad portfolio of sheet materials based on leading-edge engineering resins, which offer an impressive variety of qualities, including halogen-free flame resistance, lightweight dimensional stability, flexible design and outstanding aesthetics.

We back the value of our materials further with industry-leading customer service and technical support. Customers worldwide can also leverage our outstanding ColorXpress* service to answer questions about color selection, implement high-speed color-matching and even produce small color lots to test molding performance.

With Global Application Technology centers strategically located in the United States, Europe, China, Japan, Korea, and India, SABIC Innovative Plastics also offers unmatched value-added services, such as design support and in-house thermoforming capabilities for prototyping.

Our strong market insights and history of breakthrough innovations stem from working side-by-side with customers to help them develop, analyze and optimize materials and processes for custom applications in aircraft interiors.

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