

# SOARING ABOVE THE COMPETITION

**CASE HISTORY** 





## **APPLICATION**

Aircraft cabin interiors

#### **KEY CHALLENGES**

Thermoformed at lower temperatures, meet mandates for heat release, smoke, flame, and toxicity, improved aesthetic appearance, stain resistance

## **OEMS**

Boeing, Embraer, Bombardier

#### **SOLUTION**

High performance LEXAN™ XHR6000 sheet from SABIC

## **MANUFACTURER**

C&D Zodiac

#### **RESULTS**

SABIC materials help C&D stand out from the competition by allowing them to provide better service and value to their customers

### **CHALLENGES**

C&D Zodiac sought to meet the requests of OEMs to reduce the high cost and extensive time required to develop thermoformed components. To achieve this, they required a sheet material that could be thermoformed at lower temperatures. Other requirements were inherent textures and colors to improve aesthetics, meeting strict requirements for heat release (OSU standard), flame and smoke (FAR 25.853), and toxicity (specified by OEM), and excellent stain resistance and cleanability.

# SOLUTION

LEXAN XHR6000 sheet, a polycarbonate material from SABIC – This high performance, aircraft-grade, flame-retardant LEXAN sheet grade was specifically designed to meet stricter standards for heat release in the aviation industry. Specifically, the solution:

Addresses the need for lower temperature thermoforming capability, allowing for the use of wooden tools instead of
metal ones, which cut tool development time by about two-thirds. Additionally, wood can be modified or replaced
much more quickly and cheaply (about 40% less expensive) in the event that the OEM makes design alterations

## **SOLUTION** (continued)

- Provides bright white and other beautiful colors that improve appearance. The LEXAN™ sheet's inherent colors go through the entire part so they cannot be scratched off, as opposed to surface paints or cap layers
- Eliminates the need for expensive added-on textures. The low-thermoforming properties of the LEXAN sheet reduce the heat needed in the processing stage, which prevents its inherent textures from being damaged, thus allowing them to be utilized to improve aesthetics
- Offers robust OSU 65/65, smoke, flame, and toxicity compliance
- Resists common stains and cleans up easily with warm water, alcohol, or household cleaners

#### **RESULTS**

C&D Zodiac was able to significantly reduce development time and costs with SABIC's LEXAN XHR6000 sheet. The LEXAN sheet helped C&D Zodiac meet the full spectrum of their customers' requests, allowing them to provide better service and value to their customers through faster turnaround times, quicker response to changes, lower costs, and superior aesthetics for the newest aircraft models.



# **FURTHER INFORMATION**

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