LIGHTWEIGHT + COMPLIANT

NEW LIGHTWEIGHT LEXANTM LIGHT F6L300 SHEET BOOSTS FUEL EFFICIENCY

SABIC’s new high-performance patent pending LEXAN LIGHT F6L300 sheet is the lightest thermoplastic sheet option available today, that complies with flame, smoke and OEM toxicity. With a specific gravity of 0.85 g/cm³, it offers up to 40% weight savings when replacing traditional polyvinyl chloride and acrylic blend (PVC/PMMA) -based sheet products for potential applications such as seating parts, cockpit dashboard enclosures, partitions, luggage compartments and passenger service units. LEXAN LIGHT sheets meet typical industry flame, smoke density and toxicity requirements.

On average, an aircraft will burn about 0.03 kg (0.06 lb) of fuel per hour for each kilogram (2.2 lb) carried on board. Given that the total commercial fleet flies approximately 57 million hours per year, cutting just one kilogram per flight would save roughly 1,700 tons of fuel and 5,400 tons of carbon dioxide (CO₂) per year. 1 Using LEXAN LIGHT sheet to replace high-toxicity PVC/PMMA products on seating frames can help reduce weight by approximately 121.6 kg (268 lb) based on an aircraft with average of 190 seats, which can help the total commercial fleet save roughly 206,720 tons of fuel and 656,640 tons of carbon dioxide (CO₂) per year. This potential savings is due to LEXAN LIGHT sheet’s innovative closed cell structure, which can be thermoformed into complex 3D shape parts with very thin walls, down to 0.6 mm, offering substantial potential for overall weight savings and fuel efficiency across an airline fleet.

POTENTIAL BENEFITS:

- Offers up to 40% weight savings when replacing traditional PVC/PMMA blend based sheet products
- Complies with typical industry flame, smoke (FAR25.853) and Airbus/Boeing toxicity requirements (BSS7239, ABD0031)
- Innovative lightweight closed cell foam encapsulated by solid outer layers
- Can be thermoformed into complex 3D shape parts with very thin walls, offering substantial potential for overall weight savings and fuel efficiency across an airline fleet
- Samples available in standard gray and black colors
- Technical support from SABIC available for sampling and thermoforming

1. Source: Boeing, 2022
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