

Automotive thin wall foam for IPIT



17,600 minutes

That's how much time the average American spends behind the wheel of a car. It's equivalent to seven 40-hour work weeks, and collectively adds up to 84 billion hours each year¹. Statistics like these from around the world are drawing attention to the air quality found inside automobiles. With up to 60 percent less VOC emissions, our new low-VOC thin-wall foam for instrument panels and interior trim can help the automobile industry improve air quality from the inside out.

VOCs & aldehydes: Turning attention inward

VOC emissions inside automobiles can be up to three times higher than in other interior spaces². Prolonged exposure has been associated with eye, nose and throat irritation, allergic skin reactions, headaches, dizziness and fatigue³. Aldehyde is a VOC of particular concern. Many regulations and manufacturer guidelines limit collective VOC levels, as well as specific aldehyde levels. Dow's low-VOC thin-wall foam technology has been tested against both benchmarks and found to be up to 60 percent lower in overall VOC emissions and well under established aldehyde targets.

Lighter. Thinner. And now 60% lower VOCs.

Advances in Dow polyurethane foam for automotive interiors enable innovative cabin designs that increase passenger comfort while contributing to essential fuel efficiency. Now, our solutions also enhance indoor air quality. Dow scientists have developed a new thin-wall foam that matches best-in-class technology, while reducing VOC emissions by up to 60 percent.

As with many parts of the automobile, thin is "in" when designing automotive interiors. In addition to lowering weight and raising fuel efficiency, thin-wall systems create more spacious and comfortable cabins. They're also considered critical to the success of autonomous driving, as every extra inch or centimeter in the cabin is needed to add smart electronics and componentry.

New low-VOC technology from Dow takes thin-wall foam a sustainable step further – it delivers the highest degree of automotive design flexibility combined with significant VOC reduction when compared to competitive foams.

Best-in-class instrument panel & interior trim (IPIT) technology for VOCs & aldehydes

Two Dow foams based on new low-VOC thin-wall technology produced significantly lower VOC emissions (61% and 49% respectively) in blind testing⁴. Each foam was well under aldehyde targets for individual and combined parts per million (PPM).

Features & benefits

- Best-in-class for VOCs and aldehyde
- Weight and space savings vs traditional instrument panel systems
 - Up to 50% foam weight reduction
 - Up to 5 mm space savings vs traditional
- Available with renewable content
- Improved processing, including flow and de-mold time

Let's collaborate to innovate. Contact us, we are eager to partner with you to solve challenges.

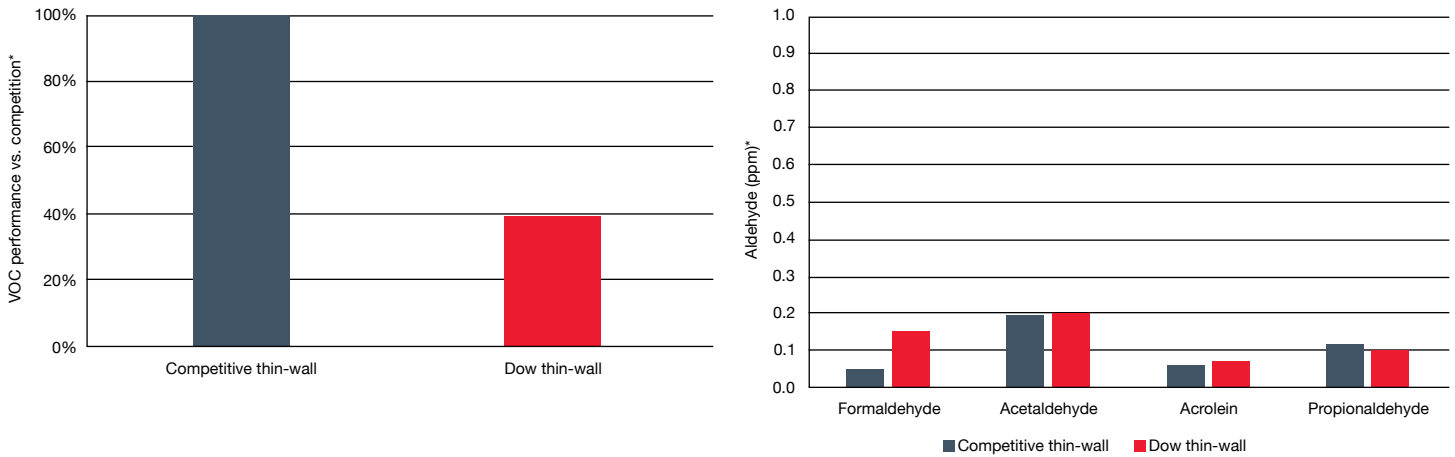
¹dmv.org (<https://www.dmv.org/articles/best-and-worst-us-states-for-driving>)

²UL LLC (<https://www.dmv.org/articles/best-and-worst-us-states-for-driving>)

³United States Environmental Protection Agency (<https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality>)

⁴VOC testing per VDA-278. Aldehyde testing per a modified version of Toyota's TSM0508G Method.

Figure 1. Dow thin-wall VOC & aldehyde performance vs. competitive thin-wall system



*VOC testing per VDA-278. Aldehyde testing per a modified version of Toyota's TSM0508G Method.

The graphic representations are presented here for illustrative purposes only and should not be construed as product specifications.

About Dow

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