

ALUMINUM: THE PERFORMANCE ADVANTAGE



Ferrari. Jaguar. Audi. All vehicles known for their high performance standards and all high aluminum content vehicles. Coincidence? Not at all.

All other factors being equal, vehicles made lighter with aluminum accelerate quicker and require shorter stopping distances than heavier vehicles. Aluminum also delivers improved stability and turning response, while reducing vehicle noise, vibration and harshness (NVH). Overall, lightweighting with aluminum increases the vehicle's performance and driving satisfaction and – best of all – maintains or even improves the vehicle's safety and fuel efficiency.

Bottom line: aluminum builds a better vehicle.

“Every new Mercedes-Benz model will be 5 percent lighter than its predecessor.”

Dieter Zetsche, Daimler AG CEO
“New CAFE law opens the door to industry surprises”
Automotive News, February 11, 2008

Here are other important performance advantages that aluminum provides:

- ▶ Aluminum is up to 50 percent lighter yet provides more structural stiffness than steel.
- ▶ Vehicles made lighter and with higher structural stiffness with aluminum accelerate more quickly, provide better stability and response and require shorter stopping distances than heavier vehicles.
- ▶ The rigidity of aluminum structures puts drivers in better contact with the road and provides more rapid and precise control.
- ▶ Reducing weight with aluminum can decrease the slip angle between tires and the road for any given turning situation, allowing a vehicle to respond more directly and safely to steering inputs.
- ▶ The design flexibility of aluminum is unparalleled, allowing designers to engineer optimum shape and performance for each specific application.
- ▶ Most aluminum alloys are naturally corrosion resistant for extended life well beyond their use today.



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