



## » APPLICATION BULLETIN

# UPGRADE YOUR RIDE

Vehicles are an integral part of our lives, serving as both a necessary mode of transportation and a reflection of our individuality. They provide us with unique opportunities for exploration, enabling us to venture into new territories and expand our horizons. Beyond transportation, cars continuously transform industries, economies, and social dynamics, influencing the way we live, work, and interact with one another. Vehicles are a fundamental part of our existence, from commuting to work and running errands to embarking on memorable road trips, fostering independence, connectivity, and a sense of adventure.

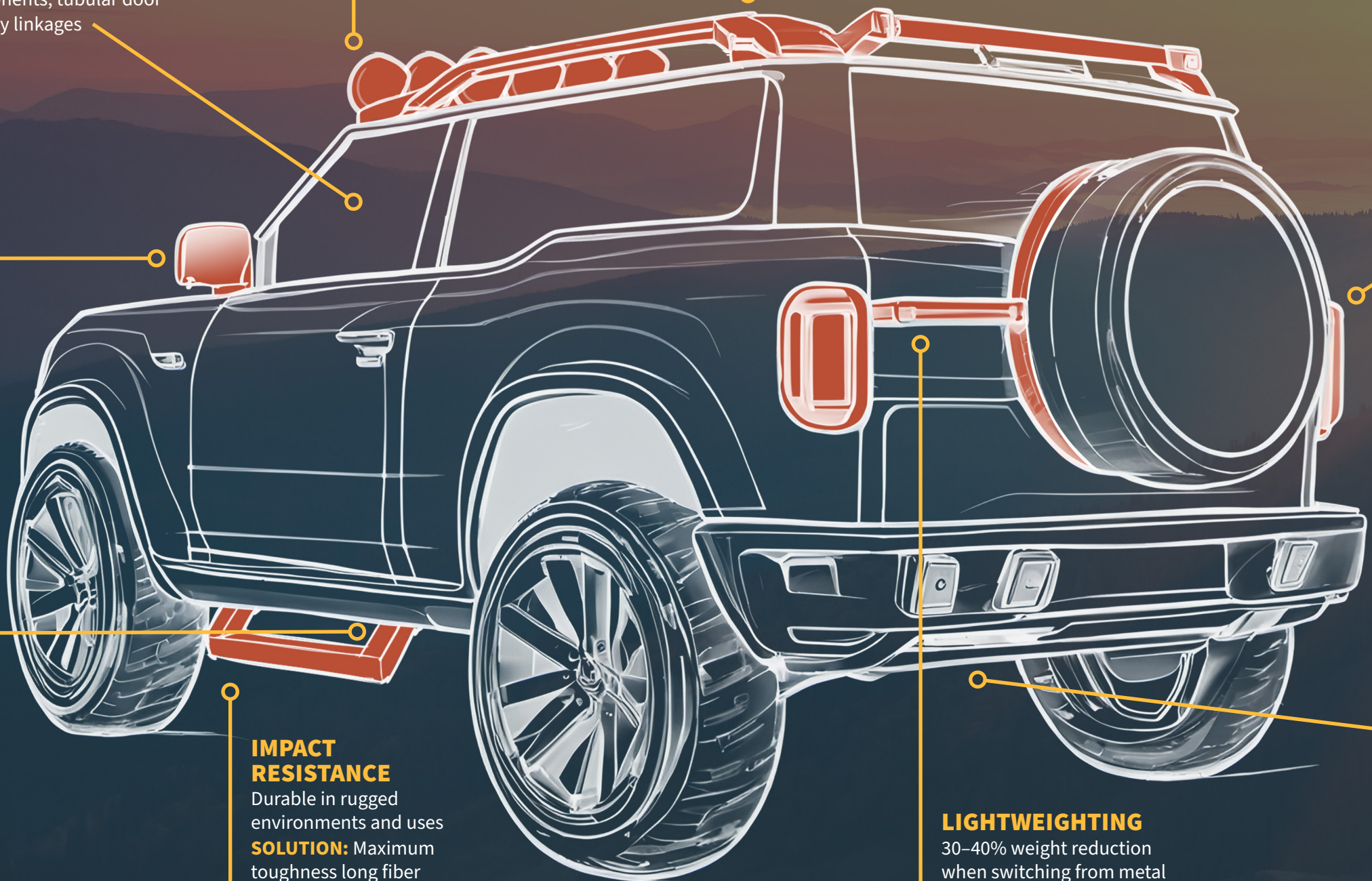
As automotive industry technology evolves, we're consistently innovating and improving the technology and materials used in vehicles and aftermarket parts to improve performance and utility. The benefits of using long fiber thermoplastic (LFT) composites

in these automotive applications to achieve these objectives are well documented. Compared to metal, LFTs can reduce a vehicle's weight by up to 40%, leading to significant fuel savings and emission reductions. These composites also offer superior corrosion resistance compared to traditional metals, providing longer service life and reduced maintenance costs, making them an excellent option for automotive applications. Furthermore, LFT composites are injection-moldable, providing a highly repeatable process that increases production efficiency and reduces scrap.

Our diverse range of advanced polymers and long fiber reinforced composites gives you the freedom to innovate, create high-strength components that eliminate unnecessary weight, and unleash fresh designs that offer superior performance while remaining economically viable to produce.

# NEXT-GEN UPGRADES

Transform your aftermarket parts with efficient, lightweight long fiber thermoplastic solutions that redefine performance with strength, toughness, and design freedom.



### MANUFACTURING EASE

Injection moldable, design freedom, insert molding, part consolidation

**SOLUTION:** Long fiber reinforced composites

**POSSIBILITIES:** Seating shells, seat base components, tubular door frames, accessory linkages

### SURFACE AESTHETICS

Color matches, fiber-rich or glossy surfaces, carbon fiber appearance

**SOLUTION:** Moisture-resistant long fiber reinforced composites

**POSSIBILITIES:** Lighting bars, side steps, bed steps, bike mounting brackets, cargo carriers

### SUSTAINABILITY

PIR/PCR content incorporation with high strength, lightweighting for fuel economy

**SOLUTION:** Recycled content long fiber reinforced composites

**POSSIBILITIES:** Roof rack structures, fender flares, rail covers, tail light protectors

### DIMENSIONAL STABILITY

Tight tolerances, minimal warp

**SOLUTION:** Long fiber reinforced composites with polyketone (PK)

**POSSIBILITIES:** Roof rack structures, running boards, brackets, component housings

### STRENGTH

High strength-to-weight ratio, comparable to metal

**SOLUTION:** Long fiber reinforced composites

**POSSIBILITIES:** Tubular door frames, accessory motor mounts, tailgate locking systems

### IMPACT RESISTANCE

Durable in rugged environments and uses

**SOLUTION:** Maximum toughness long fiber reinforced composites

**POSSIBILITIES:** Side steps, bed steps, roof racks, brackets, bed extenders, tie downs

### LIGHTWEIGHTING

30–40% weight reduction when switching from metal

**SOLUTION:** Long carbon fiber reinforced composites

**POSSIBILITIES:** Motor mounts, seating components, accessory mounts

### EXTREME PERFORMANCE

High and low temperature performance, maintained properties with UV exposure, moisture performance

**SOLUTION:** Long fiber reinforced composites

**POSSIBILITIES:** Tail light protectors, fender flairs, guards, underbody components

### CORROSION RESISTANCE

Metal replacement, eliminate secondary coatings

**SOLUTION:** Long fiber reinforced composites

**POSSIBILITIES:** Underbody skid plate components, fuel doors, fasteners

# GEAR UP FOR SUCCESS



From style to performance, Avient has aftermarket manufacturers covered. Engineered polymer formulations are designed to perform in demanding environments. Our long fiber composites offer an excellent opportunity for automotive aftermarket designers to enhance their components' performance, aesthetics, and sustainability. With the numerous benefits, including extreme performance, high impact resistance, high strength,

UV performance, and more, designers can create components that meet their unique requirements while also contributing to a more sustainable future.

At Avient, we are committed to supporting you as you bring your next groundbreaking automotive aftermarket idea to fruition. Together, we can elevate the driving experience, surpass expectations, and shape the future of automotive aftermarket components.

**1.844.4AVIENT**  
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