

GE Helps Glass Act Offer Motorcyclists a Refreshing Ride with Unique, New Mug Holder System

Delivering Extreme Performance with GE's LNP* Verton* Composite

Riding a motorcycle – especially a touring bike covering long distances – can be thirsty work. But motorcycles, unlike cars, do not come equipped with cup holders. That's why Glass Act, a company based in Lampasas, Texas, created the Butler Extreme Motorcycle Mug Holder system. This unique new product attaches to the driver's handlebar or passenger armrest, providing a strong and secure drink holder that prevents spills and keeps the mug from bouncing out on rough terrain. In designing the Butler system, Glass Act needed a material that could deliver exceptional toughness and dimensional stability, as well as attractive aesthetics. After experimenting with a wide range of plastics without success, Glass Act and its molder, Coastal Plastics, approached GE Plastics.



GE Plastics and Glass Act

The Challenge: Strength and Stability for the Open Road

Today's cars typically sport multiple cup holders so that drivers can safely and conveniently enjoy their favorite beverages on the road. However, motorcyclists, who may need refreshment even more than car drivers due to constant exposure to heat, cold, and wind, have had a difficult time figuring out how to bring along water, cold soda, or hot coffee. Michael Vine, President of Glass Act, a small Texas-based firm, conceived the idea of a mug holder system that could attach to motorcycle handlebars or passenger armrests, allowing bikers to keep beverages securely at hand. The Butler Extreme Motorcycle Mug Holder system includes a bracket, compression ring, and a special mug with cover and straw. The system is designed to hold the mug firmly in place on rough roads and in windy conditions.

"We originally developed the Butler system for off-road vehicles and heavy equipment, where conditions are truly demanding," said Vine. "But we had a problem – finding the right material for the compression ring and its related parts. It had to be extremely tough

and dimensionally stable to prevent the mug from rotating, bouncing up and down, or shaking from side to side." Vine also wanted a material that was lightweight, and resistant to road chemicals and cleaners used on the motorcycles. Finally, it had to look attractive and keep its good appearance even when exposed to UV light, temperature extremes, and other harsh conditions.

After testing such materials as short-fiber glass-filled polypropylene and nylon, and glass-fiber isoplast, Vine and his molder, Coastal Plastics, approached GE Plastics for a materials solution.

The Solution: GE's LNP* Verton* Composite for Good Looks and Great Performance

To deliver the properties Glass Act needed, the company selected GE's LNP* Verton* RF 7007 EM HS structural nylon 6/6 composite. The LNP Verton family of thermoplastic injection moldable thermoplastic specialty compounds provides long glass fiber reinforcement produced by a unique pultrusion process. Molded Verton specialty compound components offer exceptional mechanical performance,

combining rigidity and outstanding resistance to impact. Specific properties include excellent impact strength plus high stiffness, high creep resistance, good dimensional stability, and excellent surface finish. It is also resistant to degradation from UV light.

Widely utilized across many industries, Verton structural composites bring significant value to demanding applications requiring performance that is generally beyond the reach of standard reinforced injection-moldable materials.

Raymond Forester, LNP Product Marketing Manager for GE Plastics, said, "Verton composite has proved its toughness in such applications as ski binding base plates. It is an excellent candidate for a variety of applications in the most demanding environments. By molding the compression ring and associated components from this material, Glass Act finally found a thermoplastic that could measure up to the standards of serious bikers."

The Benefits: Enabling Expansion into New Markets

The Butler Extreme Motorcycle Mug Holder system featuring GE's LNP



LNP* Verton* Composite / Glass Act Case Study

Verton composite has been a big hit with motorcyclists, particularly owners of touring bikes. The system is offered in high-gloss black plastic to complement virtually any model and can even be used on snowmobiles. It is sold online, through dealers, and at trade shows and bike rallies.

Based on the success of its product in this sector, Glass Act decided to expand into other markets. The company requested that GE Plastics develop an off-white version of LNP

Verton RF 7007 specialty compound for a Butler Extreme system targeting boat owners.

"We wanted to make a version of the product that would look attractive on white power boats and sailboats," said Vine. "GE was willing to work with us – a small company – to create a new color so that we could succeed in the marine market. Our collaboration with GE has been extremely beneficial to Glass Act, and we look forward to further expansion with their support."

Details at:
www.glassact.com

About GE Plastics

GE Plastics (www.geplastics.com) is a global supplier of plastic resins widely used in automotive, healthcare, consumer electronics, transportation, performance packaging, building & construction, telecommunications, and optical media applications. The company manufactures and compounds polycarbonate, ABS, SAN, ASA, PPE, PC/ABS, PBT and PEI resins, as well as the LNP* line of high-performance specialty compounds. GE Plastics, Specialty Film & Sheet manufactures high-performance Lexan* sheet and film products used in thousands of demanding applications worldwide. In addition, GE Plastics' dedicated Automotive organization is an experienced, world-wide competitor, offering leading plastics solutions for five key automotive segments: body panels and glazing; under the hood applications; component structures and interiors; and lighting. As a Worldwide Partner of the Olympic Games, GE is the exclusive provider of a wide range of innovative products and services that are integral to a successful Games.

For further information:

Raymond Forester
Product Marketing Manager
GE Plastics

Tel: 940-367-0977
Fax: 615 230 8082
Email: raymond.forester@ge.com
www.geplastics.com



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