INNOVATION

First Use of Lexan® Polycarbonate

In 1975, National Cycle was the **first company in the world** to introduce and use GE's Lexan® FMR hardcoated polycarbonate material for motorcycle windshields. Polycarbonate advanced the design and durability of windshields, and the first modern styled, optically clear, custom windshield was created. We called it the **Heavy Duty™**.

What are the Benefits of Polycarbonate?

Outstanding impact strength! No other thermoplastic comes close to matching the impact strength of polycarbonate, making it the ideal material for motorcycle windshields. It is **20X more impact resistant** than acrylic plastic (Lucite®). You can check the data from the Free Falling Steel Dart Test and the IZOD Notch Test but **real world testimonials**, like the one from a customer who met a ball peen hammer at 75MPH attest to the outstanding impact strength of polycarbonate.

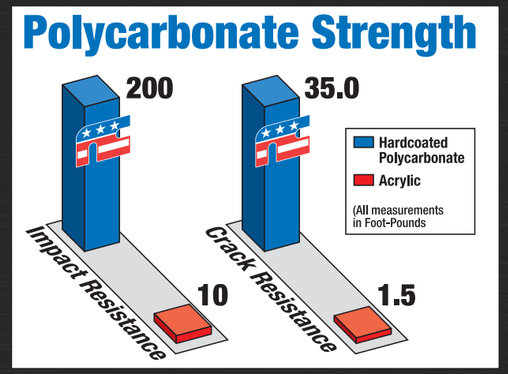
Note: National Cycle windshields are designed to provide wind protection and increased riding comfort, but not protection in the event of a collision with another vehicle, an animal, or any other object..

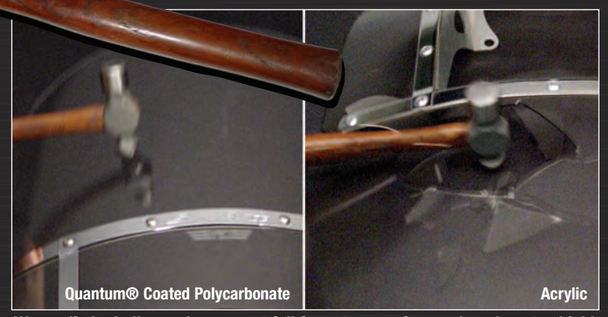
Why Hardcoat Windshields?

Many riders agree that strength is an important benefit, but ask, "**What affects the transparency of a windshield?**" However tough polycarbonate is, it's routinely subjected to surface deterioration from abrasion. Polycarbonate must be hardcoated to be optically clear enough for use as a motorcycle windshield. While most aftermarket companies use acrylic material, some companies use polycarbonate with the FMR hardcoating developed decades ago.

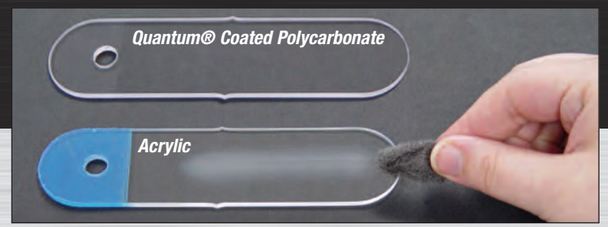
Introducing Quantum®: the New High Standard

Windshields will scratch and craze from debris, the environment, UV and daily wear. National Cycle made a "quantum" improvement in the surface characteristics of windshields exposed to years of wear. We start with a polycarbonate sheet, but it is our **exclusive Quantum® hardcoating** that has **defined the new state-of-the-art standard** in windshield scratch resistance and optical clarity.





We applied a ball peen hammer at full force to one of our polycarbonate shields (left) and to a competitor's acrylic shield (right). We're professionals – don't try this at home!



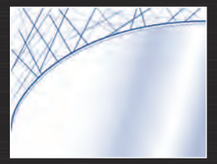
We use a steel wool scratch test to demonstrate the abrasion resistance of Quantum® coated polycarbonate (top) against acrylic (bottom).

Watch our video, "Polycarbonate vs. Acrylic: YOU Decide!", and see how our hardcoated polycarbonate windshields withstand the kind of abuse that reduces typical acrylic windshields to little pieces!

INNOVATION...

National Cycle's Quantum® Coated Polycarbonate Windshield Technology

What Makes Quantum Coated Windshields Better Than All the Others?



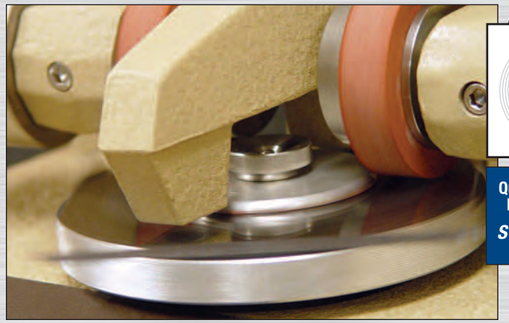
Superior Scratch Resistance

30X more scratch resistance than typical acrylic windshields is saying a lot! Think of it as 30X more miles per windshield. Even compared to FMR coated polycarbonate, Quantum has **10X** better scratch resistance. That's the kind of performance and strength you need from a motorcycle windshield!

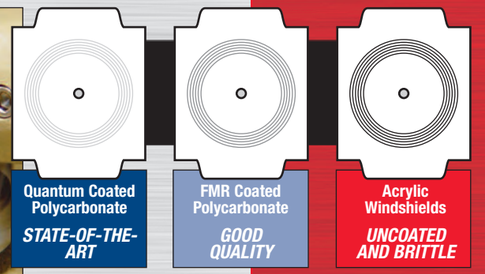
Glare-Free Optics

Think about riding into the sun or at night and not having to look through the glare of fine scratches that eventually show up on your screens. **Quantum coating gives your windshield much better optical definition and clarity**, and your windshield will stay that way a lot longer.

At left is a motorcycle windshield with typical surface wear and abrasions. This is not what you want in front of you when facing oncoming traffic!

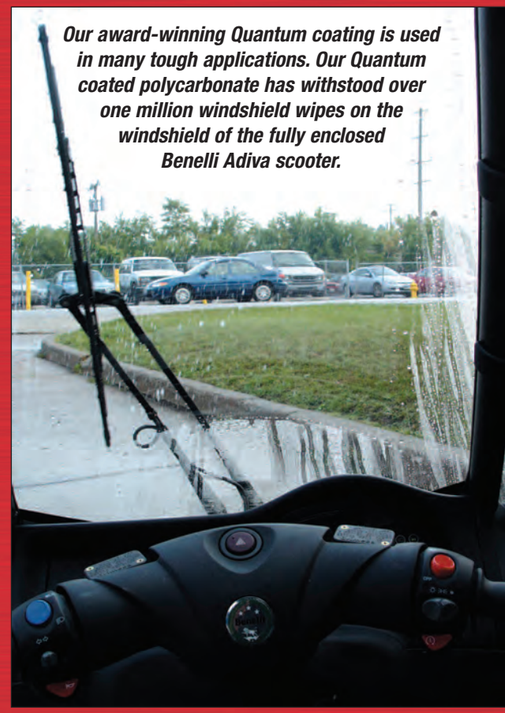


Scientific laboratory monitoring and measurement instruments test the surface wear on both hardcoated and uncoated windshield materials.



Quantum®

Our award-winning Quantum coating is used in many tough applications. Our Quantum coated polycarbonate has withstood over one million windshield wipes on the windshield of the fully enclosed Benelli Adiva scooter.



Quantum® is an exclusive product of National Cycle, Inc.

national cycle®

Innovative Motorcycle Accessories Since 1937