This Carbon Nanotube and Graphene Wiper Blade Keeps Your Windshield Clear from Drops, Dust, and Scratches

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One could argue that windshield wipers are safety devices. Just like your seatbelt and the airbag, a windshield wiper keeps you safe by clearing your vision while you're driving in inclement weather. However, seatbelts and airbags have very strict design guidelines and performance specifications… the windshield wiper doesn't. It plays a crucial role in enhancing driver visibility in the rain, but it's perhaps the weakest link in your car, and chances are that it almost never gets repaired or replaced when it needs to be.

While the issue with the windshield wiper is more of a systemic problem, the KIMBLADE NANO has a design and material solution. With 4 years of experience and a pretty successful Kickstarter campaign back in 2018 (and even being referred to as the 'Dyson' of windshield wipers), the team behind the KIMBLADE NANO has developed the most effective, efficient, and everlasting wiper design. It uses revolutionary materials and a tried and tested design to create a wiper that's more durable and much better at keeping your windshield crystal clear during precipitation.

The highlight of the KIMBLADE NANO is its use of CNT (Carbon Nano Tubes) in the wiper blades. The blades themselves are made of silicon, but sport a thin layer of CNT at their tip that allows the wiper to clean the glass with sheer perfection and minimal degradation over time. The silicone and CNT blades last MUCH longer than traditional rubber blades do, and they sport a rectangular edge that's much more efficient at picking up and sweeping water away from the glass windshield.

The rectangular edge is perhaps the most important bit of innovation in the KIMBLADE NANO. Unlike other wipers that use a squeegee-style flat surface, the KIMBLADE NANO's rectangular edge makes a more precise edge-contact with the windshield. In doing so, it doesn't spread or relocate the water the way other wipers do, it completely wipes it out of the way, giving you a clean pane of glass.

The rectangular profile of the KIMBLADE NANO even allows it to change directions as your wiper moves back and forth, moving smoothly as opposed to some wipers that end up creating that unpleasant rubbery noise as they drag against the glass surface like fingernails on a chalkboard.

Interestingly enough, not only do the blades efficiently wipe water away from the glass, they even coat the glass with a hydrophobic layer, allowing it to repel water even when the wipers aren't moving. This process helps preserve the life of the wiper, because water drops don't dry up on the glass, leaving hard water stains or dirt behind. This keeps the glass clean at all times and the wiper blades too, allowing them to last for years as opposed to rubber blades that give up within just the first month or two of the monsoons.

The KIMBLADE NANO is designed to be compatible with a wide host of cars, and their model selection tool makes it incredibly easy to find the right wiper for your car's brand and make. Each KIMBLADE NANO even comes with a set of cleaner and treatment wet-wipes that help remove fine contaminants and fill in any cavities or scratches, making the glass as good as new.

These wipes help increase the transparency of your windshield and preserve the quality of your KIMBLADE NANO over time. However, in the event that some debris accidentally damages your wiper blade, KIMBLADE NANO's easy-to-replace design lets you pop the silicone wiper blade and replace it with a new one in mere seconds.

Reinforced by Carbon Nano Tubes and Graphene, the KIMBLADE NANO allows the wiper blade to clean the glass with sheer perfection and minimal degradation over time.

No need to get a water-repellent coating for your windshield anymore. KIMBLADE wipers act as the water-repellent coating. The wiper uses a Rectangular blade (4-bar linkage structure) that produces a smooth and spotless window surface.

They have applied customized materials in two parts – one is where smooth movement is needed, and another is where it is in direct contact with the water-repellent coated glass.

Wiper blades have a complex structure with each component serving its own function. The upper part of the wiper blade is made of flexible and durable material that securely holds the wiper blade and allows it to be used for a long time without tearing. KIMBLADE's core technology, CNT-reinforced special silicone, is used at the tip of the blade, which touches the glass directly and wipes rain and water off the glass. The specially reinforced silicone minimizes tearing from foreign substances, works smoothly on the glass, and forms a coating film on the glass surface.

Kimblade wiper is made out of special double-layered silicon and is very stable regarding deformation and corrosion even when exposed to various environmental circumstances, enabling a user to experience reliability and convenience.

Adding CNT to Improve Durability – CNT is the next-generation material that has a tube-shaped atomic arrangement and has high strength, as well as thermal and electrical conductivity. Like reinforcing bars in concrete, CNT can be added to silicone as a reinforcing material to make CNT-silicon a composite material. This composite material was used to make the wiper blade so as to improve durability and increase mechanical strength while maintaining elasticity.

Quickly and effectively wipes away! One wipe instantly cleans and dries! Even when your wiper does not work, you can drive safely if you have a clear view. If raindrops can flow down instead of remaining on the glass, refraction of light is minimized and the view distortion is reduced.

Read the original article on Yanko Design.