

A Reminder of Why Graphene Works

Recently, our industry colleague HexArmor shared an article discussing graphene and concerns regarding misleading cut resistance claims in the market. We appreciate the transparency and critical questions raised about whether graphene delivers on its promises. However, we would like to address some inaccuracies in the article and share our own insights.



One notable inaccuracy concerns graphene's cost. The claim that "pure graphene" costs \$400 per gram is misleading. In reality, market prices for different forms of graphene – mono-layer, few-layer, or graphene oxide – are widely available and significantly lower than stated in the article.

Additionally, the assertion that graphene "does not work" is unfounded. **Graphene-enhanced materials are already being utilized across various industries**. For example, **HEAD** incorporates graphene into tennis rackets and skis, **Philips** integrates it into noise-canceling headphones, and **Lee**, a customer of **Kyorene**[®], has developed graphene-infused denim. Beyond sports and textiles, graphene is also enhancing semiconductors, batteries, sensors, construction materials, and solar panels. The widespread adoption of graphene across industries demonstrates its real, measurable benefits. Even the author of the article later clarified on LinkedIn, stating:

"We want to clarify that we did not claim graphene 'does not work.' In fact, we find the future of graphene in



materials science incredibly exciting and never stated that graphene is ineffective in all use cases."

We fully agree with the article's concerns regarding companies misrepresenting their materials and expertise. The case study by **The Graphene Council**, which tested five commercially available graphene gloves, revealed that only **one** company actually incorporated graphene into its products. The author confirmed this by stating:

"Despite our competitors' complaints and continued misdirection attempts, the simple fact remains: 4 out of 5 gloves tested did not contain graphene. The Truth in Safety blog is vital in our battle against low-cost PPE providers using false claims to gain trust."

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Kyorene[®] was the only company in this study that actually used graphene in its products, and we take pride in producing mono-layer graphene. Graphene textiles offer a range of proven benefits beyond just strength enhancement. Properties such as thermal regulation, odor neutralization, bacteriostatic effects, and UV protection make graphene textiles a game-changer in the industry.



Lastly, we strongly agree with HexArmor's concerns about misinformation regarding cut resistance. Mislabeling

protective gloves with exaggerated cut resistance levels– sometimes inflating ratings by 2 to 3 levels– is a serious issue that must be addressed. However, this issue is unrelated to graphene itself. Cut-resistant gloves undergo rigorous standardized testing, and we believe in the importance of substantiating all claims. **At our company, every product undergoes thorough in-house and third-party testing to ensure compliance with safety standards**.

At the end of the day, our mission is to protect workers. If some companies prioritize short-term profits over safety by misrepresenting cut resistance levels, we encourage users to conduct their own random tests to verify product claims. Such misleading and unethical practices have no place in the industry.

This has been an insightful exchange with our industry colleagues. Together, let's work toward a safer environment for all!

