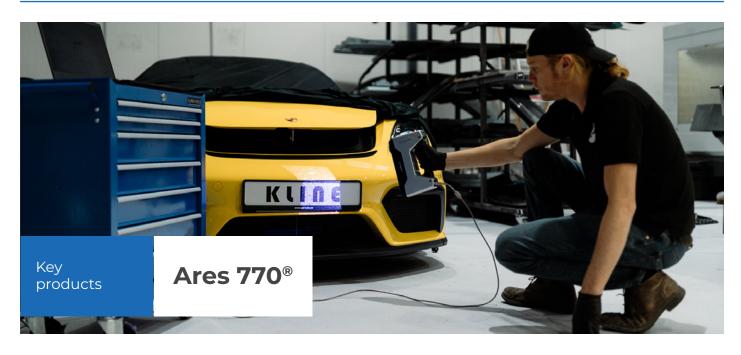




## Setting new standards in exhaust design with Kline Innovation

A collaboration in unparalleled performance and craftsmanship



## Challenge

In the world of luxury supercar manufacturing, excellence isn't just an expectation - it's a requirement. Iconic brands like Porsche and Lamborghini are synonymous with performance, precision, and prestige, pushing the boundaries of engineering and design to deliver vehicles that are not just cars, but masterpieces of automotive innovation.

At the heart of these supercars lies an unwavering demand for the finest components, where every part must withstand extreme conditions while contributing to the vehicle's overall performance and aesthetic appeal. As manufacturers strive to achieve weight reduction without sacrificing strength or elegance, the choice of materials and tooling becomes critical.

Kline Innovation is a trailblazer in the design and manufacture of exhaust systems crafted from titanium, Inconel, carbon fibre, and stainless steel, and carbon fibre aero body kits for enhanced aerodynamics, increased downforce and aesthetics. Established as a leader in high-performance solutions, Kline is renowned for their expertise in race cars, supercars, and concept vehicles.

Kline identified the need to harness a sustainable, cost-effective alternative tooling material that would guarantee the superior performance and finish of its carbon fibre-reinforced polymer exhaust tips, and aero body panels and wings, while also supporting them in meeting their wider environmental targets.









## **Solution**

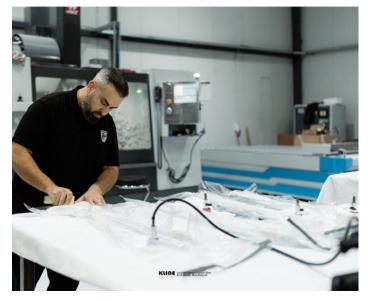
Kline proudly partnered with Base Materials, a globally trusted manufacturer in the automotive industry for over 20 years. Known for supporting manufacturers with vehicle production, prototype creation, and concept modelling, Base Materials has established itself as a go-to for automotive innovators.

To elevate their carbon fibre exhaust tailpipes, and aero body kits, Kline turned to Base Materials' Ares 770®, a cutting-edge, cost-effective, sustainable tooling material that delivers a flawless surface finish for master models. This innovative resin system, engineered using bio-based raw materials, is not only versatile - serving industries from automotive to aerospace - but is designed to withstand temperatures up to +130 °C. Ares 770® features a fine surface structure, a low coefficient

of thermal expansion, exceptional dimensional stability, and an inert surface that ensures compatibility across a wide range of applications.

Facilitating a high-quality component surface finish, Ares 770®, provided the ideal solution for the manufacture of the master models used for the production of Kline's carbon fibre products.

The partnership between Kline and Base Materials has proven instrumental in reinforcing Kline's reputation for creating exceptional exhaust systems and carbon aerodynamic components, known for their quality and performance. With an additional benefit of also supporting their sustainability and environmental initiatives.





"Our partnership with Base Materials showcases our commitment to providing unparalleled benefits through the use of premium, sustainable, materials designed with the utmost attention to detail. Our collaboration further strengthens our status as the standard bearer of performance and craftsmanship in exhaust systems and aero body kits for luxury supercars."

**CHRISTIAN MARYAN-GREEN** 

Managing Director / Technical Director at Kline Innovation