## **CLASSIC DRIVER**

## Paris 2010: Lamborghini Sesto Elemento



The figures speak for themselves: a kerb weight of 999kg, plus a V10 engine putting out 570HP, combining to give you 0-62mph in an extraordinary 2.5 seconds.

For the past few weeks, Lamborghini has been releasing 'teaser' pictures of its new supercar concept, or 'technology demonstrator', the Sesto Elemento. A body panel here, an engine cover there... all, seemingly, in carbonfibre. And that's no coincidence. Carbonfibre is at the heart of the Sesto Elemento (or 'sixth element' – carbon being the sixth element in the Periodic Table), allowing a sub-tonne kerb weight, despite the V10 engine and all-wheel drive.

Hence the 0-62mph acceleration time of just 2.5 seconds. Not to mention the likely effect on fuel consumption of this super-lightweight car. And now, this fascinating new concept is revealed in its full glory, at a public unveiling in Paris this week.



According to Lamborghini CEO Stephan Winkelmann, top speed is no longer the big issue. Most supercars claim more than 180mph, hence handling and acceleration have become the vital factors. Driving enthusiasts are bound to agree with him – and will no doubt welcome Lamborghini's moves to reduce weight through the innovative use of carbonfibre.

In Sant'Agata Bolognese, the House of the Bull has been investing a lot of time and effort in developing carbonfibre technologies. The Sesto Elemento is a showcase for what they've achieved and, says Winkelmann, it "shows how the future of the super sports car can look – extreme lightweight engineering, combined with extreme performance results in extreme driving fun."





The basis of the car is a solid, stiff, safe and lightweight carbonfibre monocoque cell, while the entire front frame, exterior panels and crash boxes are made from CFRP [carbonfibre reinforced plastic]. The major suspension components and the rims are in carbonfibre, while the tailpipes are made from Pyrosic, an advanced glass-ceramic matrix. Even the propshaft is made of CFRP. The resulting low weight means a car that not only accelerates faster, but also has better handling and braking.

Every line of the concept has a clear function, from the two vertical ribs at the front, which improve stiffness and guide the cooling air directly to the radiator and brakes, to the partially double-lipped front spoiler, and 'distinctively formed' air intakes.

The minimalist approach also extends to the interior, where the conventional seat frame has been entirely removed. Instead, the forged composite tub provides a base for the seat cushions, upholstered in hi-tech fabric, which are fixed directly to the carbonfibre monocoque.



But the Sesto Elemento is just a first taste of what is to come – not just for Lamborghini, but potentially across the entire supercar market, as the company's Advanced Composites Research Center (ACRC) in Sant'Agata Bolognese develops further innovative construction and production methods for carbonfibre elements in automobile design.

Text: <u>Charis Whitcombe</u> Photos: Lamborghini

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