

Ford reveals whipped cream-inspired airbag to mitigate injury risk in side-impacts, accounting for a quarter of all crashes

Brussels, 06 March 2026 – Side-impact collisions account for around a quarter of all crashes and can result in severe injuries to vehicle occupants. ¹ In an effort to help mitigate this risk and offer increased protection in these types of crashes, Ford has revealed a groundbreaking new centre side airbag technology in its all-electric Explorer.

The airbag design also takes inspiration from whipped cream canisters, using a cold-gas inflation system to deliver rapid inflation while avoiding the high temperatures that can occur with airbag deployment. The innovative design has contributed to the Explorer earning a five-star safety rating from the independent authority Euro NCAP.

Side-impact collisions carry significant risk even at low speeds, as the minimal space between the impact point and the occupant means less crush zone to absorb the crash energy compared to a front or rear collision. This can result in greater forces being transferred to the occupants, making head and chest trauma the leading cause of life-threatening injuries in these events. Side impacts account for 35-40 per cent of all serious and fatal passenger injuries in the EU, and with nearly half of those injuries occurring on the far side of the vehicle from the crash, innovations in occupant protection are more crucial than ever. ¹

Traditional airbags use a pyrotechnic charge that generates gas to inflate the bag, with the side effect of also generating high temperatures due to the speed of deployment. Ford engineers, working with a supplier that began by creating gas canisters for whipped cream, developed a new “cold gas” inflation system. This technology allows the airbag to deploy at much lower temperatures while still delivering the rapid inflation needed to protect passengers in milliseconds.

"At Ford, we are always looking for creative solutions to make our vehicles even safer," said Christian Giesen, vehicle safety engineer at Ford of Europe. "This new centre side airbag is a perfect example of that ethos. By rethinking the technology, we were able to add a significant layer of protection for our customers. The fact that we found inspiration in a whipped cream can shows that great ideas can come from anywhere."

Ford has a long history of pioneering safety innovations that become industry standards, from introducing safety glass in 1927 to being one of the first to make anti-lock brakes standard in 1985. This latest advancement in the all-electric Explorer continues that legacy of leadership.

¹ Euro NCAP <https://www.euroncap.com/en/car-safety/the-ratings-explained/adult-occupant-protection/lateral-impact/far-side-impact/>

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