News Release

BASF, Toyota and Vuteq receive the 2026 SPE Automotive Innovation Grand Award for the 2026 Toyota Tacoma truck bed

- **BASF, Toyota, Vuteq, Cascade Engineering, Haidlmair and ENGEL combine unprecedented manufacturing scale, material science and sustainability**
- **Paint-free, 50% short-glass-fiber-reinforced PA6 alternative to painted long-glass-fiber SMC**
- **Twelve-thousand-ton injection molding platform enables a single-piece bed with three overmolded structural supports and no fasteners**

WYANDOTTE, MI, November 5, 2026 – BASF, Toyota and Vuteq have won the 2026 Society of Plastics Engineers (SPE) Automotive Innovation Grand Award for the most innovative product in all competition categories, as well as the body exterior category, for the injection-molded thermoplastic truck bed on the 2026 Toyota Tacoma™ short-bed model. The program is an alternative to the painted thermoset sheet molding compound (SMC) design with a seamless polyamide (PA6) thermoplastic solution developed around three connected innovation pillars: large-part manufacturing scale, material innovation and sustainability, resulting in a reduced final part cost and enhanced manufacturing efficiency.

“At Toyota, we’re always looking to build upon our existing flagship products,” said Greg Donovan, Principal Engineer – Tacoma, Toyota. “For us, that begins with engineering and manufacturing. This award-winning Tacoma truck bed demonstrates how collaborative engineering and innovative technologies can help meet demanding

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vehicle requirements while advancing manufacturing efficiency and our sustainability goals."

Pillar 1: Manufacturing at a scale not previously available

Producing the truck bed at this scale required the world's largest injection molding machine ever built. ENGEL created the duo 12000 US platform with 110,000 kN/12,000 US tons of clamping force specifically for the component. The production system combines dual injection units with a mold weighing approximately 125 tons and a shot size of approximately 30 kg.

Three pre-molded arched structural crossmembers are loaded into the mold before the main shot. The bed material overmolds these supports, creating an integrated assembly without mechanical fasteners. This reduces secondary assembly while preserving the structural architecture required by the application.

Advanced simulation, physical testing and strong correlation between CAE predictions and measured performance were essential to the program's success. The scale and complexity of the application pushed the boundaries of conventional analysis, requiring accurate prediction of mold filling, fiber orientation, dimensional stability and structural performance. BASF's Ultrasim® software and CAE capabilities helped optimize the design and provided confidence throughout development and validation.

Pillar 2: A material innovation to overcome traditional performance trade-offs

BASF's Ultramid® B3ZG10 HSP UV Ccycled®* 5 is a 50% glass-fiber-reinforced, impact-modified PA6 engineered to combine performance attributes rarely achieved in a single material solution. Developed as an alternative to painted long-glass-fiber SMC, the formulation delivers exceptional flow for molding very large, complex parts while achieving a molded surface quality that enables paint elimination. The material also provides stiffness, point-load impact resistance, long-term structural durability and UV-weathering performance needed to maintain both appearance and functionality in exterior vehicle applications. This balanced performance helps overcome traditional trade-offs between flow, surface appearance, toughness and structural performance in highly glass-fiber-reinforced polyamides.

Pillar 3: Sustainable design goals

Ultramid B3ZG10 HSP UV Ccycled* 5 is manufactured under BASF's Ccycled* offering. Recycled raw materials recovered within BASF's chemical production system are attributed to the Ultramid product used in making the truck bed through a mass-balance approach.

Vuteq is investigating a recycling supply chain to support recovery and reuse of qualifying thermoplastic manufacturing scrap as the truck bed production ramps up. Because the truck bed is manufactured from a thermoplastic material, qualifying manufacturing scrap can potentially be recovered, remelted and blended with virgin material for use in future truck bed production, creating opportunities for material reuse while maintaining application requirements, subject to material and production specifications.

Toyota and BASF have signed a Memorandum of Understanding (MOU) to explore pathways for recovering, processing and reusing thermoplastic truck bed material at vehicle end of life. Future implementation remains subject to technical validation, collection infrastructure and commercial feasibility. The Ccycled* Ultramid, paint-free process, material reuse and streamlined manufacturing support Toyota's broader 2050 sustainability goals, including increased recycled material utilization and CO_2 reduction.

"In addition to improved sustainability, injection molding structural resin allows us to simplify the manufacturing process by minimizing post-processing steps," said Steve Parkhill, President – Vuteq Technical Center Americas. "Vuteq is pleased to bring our expertise to this product, to implement the precise control of molding and part handling required to bring this ambitious vision to reality and deliver with the quality and efficiency that is our hallmark."

"At BASF, we are more than a material supplier," said Matthew Parkinson, Ph.D., Head of Technical Development – Engineering Plastics, BASF Performance Materials. "Through close collaboration with our customers and their customers, we continue to push the boundaries of innovation."

Collaboration translated an ambitious concept into production reality. Through close

collaboration among Toyota, Vuteq Corporation, BASF, Cascade Engineering, Haidlmair and ENGEL, the award-winning truck bed transformed a conventional painted thermoset assembly into an innovative thermoplastic manufacturing platform and established a new benchmark for large-scale structural thermoplastic applications.

*For more information on BASF's mass balance approach, visit The Mass Balance Approach.

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About BASF

BASF Corporation, headquartered in Florham Park, New Jersey, is the North American affiliate of BASF SE, Ludwigshafen, Germany. BASF has more than 13,300 employees in North America and had sales of $18.1 billion in 2025. For more information about BASF's North American operations, visit www.basf.com/us.

At BASF, we create chemistry for a sustainable future. Our ambition: We want to be the preferred chemical company to enable our customers' green transformation. We combine economic success with environmental protection and social responsibility. Around 95,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio comprises, as core businesses, the segments Chemicals, Materials, Industrial Solutions, and Nutrition & Care; our standalone businesses are bundled in the segments Surface Technologies and Agricultural Solutions. BASF generated sales of around €60 billion in 2025. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the United States. Further information at www.basf.com.