



### **Maximizing efficiency, while reducing development times**

Sika Automotive, a preferred partner for leading OEMs and automotive component suppliers, needed to streamline prototyping and pre-series production for their innovative heat-expandable acoustic inserts. 3devo's Composer 350 Filament Maker, capable of extruding heat-reactive, low-temp materials, has helped Sika switch to in-house 3D printing.

**“With the support of a reliable filament extruder trimmed to our proprietary materials, we’ve been able to accelerate the introduction of 3D printing applications for our acoustic sealing solutions, thus enabling our automotive OEM customers to reduce development time and efforts.”**

Jose Bautista

**Global Product Manager (Acoustic and Sealing Foams)**

## **Bringing autonomy to Sika's pre-series production Background**

Sika Automotive is a global leader in automotive bonding, sealing, damping and reinforcing solutions. The company develops lightweight, robust and customized chassis components for prominent German, French and U.K. OEMs. Sika's state-of-the-art acoustic inserts are engineered using a proprietary material called SikaBaffle®. 3devo's Composer 350 allows them to process this heat-reactive, highly expandable thermoplastic into 3D printable filament, thus paving the way for efficient and streamlined in-house prototyping and pre-series production.

### **Challenge**

Sika's complex expandable cavity sealers for vehicle body-in-white are made using SikaBaffle®, a highly expandable, heat-reactive thermoplastic. A typical cavity sealer requires 5-10 design iterations. Injection molding these prototypes was a lengthy and resource-intensive process, prompting Sika to consider in-house 3D printing as an alternative. For this, they required a cost-effective filament extruder that could process medium melt flow index polymers like SikaBaffle® without changing its chemical composition.

### **Solution**

In order to 3D print their cavity sealers, Sika needed a filament maker that could successfully process SikaBaffle®, a material that had already been tested and was available in pellet form. A low melting point of 90°C made SikaBaffle® incompatible with most extruders. The 3devo Composer 350, however, was able to successfully extrude the material. It joined Sika's manufacturing facility in December 2018, along with the German RepRap 3D printer.