

Sustainable Solutions for NVH Challenges



How can you solve chassis and powertrain NVH challenges while also supporting Sustainability goals? DuPont can help.

Depending on a vehicle's make and model there can be a large number of chassis and powertrain components that can potentially buzz, squeak, rattle, or vibrate. Many of those components can be adhesively bonded to alleviate those NVH challenges. Typical solvent-based primers and adhesives for rubber-to-metal bonding exhibit great performance. However, there are also water-based options – with similar performance – that help OEMs and their suppliers meet growing sustainability goals.

Challenge

When it comes to Sustainability, the automotive industry has set objectives to act on climate, enable a circular economy, and create solutions, components, and vehicles that are safer by design. OEMs require suppliers to act on climate change and are prioritizing projects and contracts with those that are actively participating in Sustainability initiatives.

A customer came to DuPont to identify a solution for bonding a large number of chassis and powertrain components – especially safety parts like clutch and engine mounts, gaskets, and steering controls – to create both a durable bond AND solve NVH challenges with a product that meets Sustainability goals.

Solution

DuPont answered the challenge with its MEGUM™ water-based one-coat bonding agent. First to market with water-based bonding agents, DuPont knew it could deliver on creating a competitive advantage

for their customer by providing a sustainable bonding solution that was based on a proven performer.

The customer was introduced to a second generation HPWB (high performance water-based) formulation that ultimately won the business for the one-coat primer used to bond crucial safety parts and other chassis and powertrain components.

Results

The new primer helped achieve a smoother, more comfortable, and quieter ride while delivering a solution that supported its customer's sustainability goals. Beyond providing a solvent-free bonding solution, MEGUM™ water-based bonding agents eliminate the need for an on-site incineration plant that would be necessary with a solvent-based product. The water-based bonding agent was also compatible with the existing line equipment.

MEGUM™ bonding agents are used in many bonding applications combining the unique properties of the rubber with the properties of the metal or non-metal substrate. Components bonded with MEGUM™ are used in a wide variety of automotive and industrial applications including:

- Vibration control elements: springs, bumpers, bushes, suspension systems, clutch mounts, flexible couplings, and engine mounts
- Corded-rubber belts and hoses
- Seals and gaskets
- Bearing elements for buildings and bridges
- Rollers
- Solid rubber tires
- Track pads for construction vehicles, linings, and protective coverings
- Metal-supported profiles

Depend on an industry leader

DuPont has a long and rich heritage in innovative adhesives technology. We are well positioned to propose a variety of innovative materials and technologies that address the need for sustainable advanced mobility solutions without compromising on safety, durability, or performance.

Ask us how to help you solve your next challenge.

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