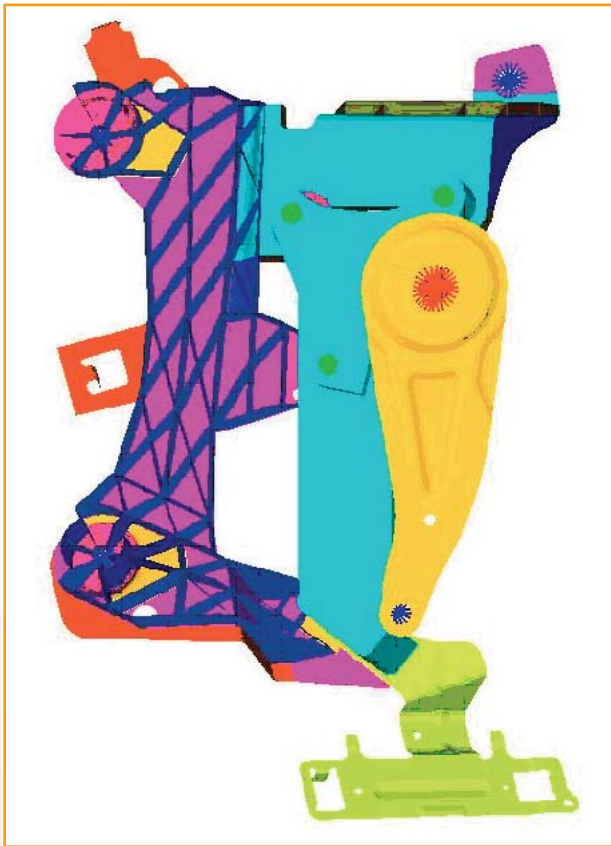


High Modulus/High Performance



High Modulus/ High Performance Supports Metal to Plastic Designs



*Automotive Plastic Door Lifter Design
(CAD representation)*

The Beneficial Evolution of Metal to Plastic Parts:

BASF uses cutting edge computer aided design (CAD) and engineering tools to analyze the conversion of metal to plastic parts, which reduces the weight and cost of high performance structural components. One example is the liftgate found on SUV, CUV and hatchback vehicles. The design flexibility of the CAE software allows the bracket to be analyzed, and optimized for improved noise and vibration performance.

This metal to plastic parts conversion benefits the customer and consumer by merging and combining parts, reducing and eliminating assembly operations and decreasing the weight. For example, the weight of a typical steel lift gate bracket is 4.0 lbs., while the plastic version only weighs 2.0 lbs. This is a 50% weight reduction! This benefits the environment and the consumer as it contributes to decreased amounts of CO₂ being released into the atmosphere and improves gasoline mileage per gallon.

The Benefits Include:

- Part consolidation
- Reduction or elimination of assembly operations
- Potential for cost savings
- Reduced tooling costs vs. metal
- Design flexibility
- Weight/Mass reduction
- NVH improvement
- Leading edge designs and engineering

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