



FIAT CHRYSLER AUTOMOBILES



YAPP USA Automotive Systems, Inc.

**COMOLDCO CORPORATION**

Quality Compression Molding



## inquiry

Fiat Chrysler Automobiles (FCA), the seventh-largest automaker in the world, designs, engineers, manufactures and sells passenger cars, light commercial vehicles, components and production systems worldwide. YAPP USA Automotive Systems, Inc. is a world class, Tier 1 automotive supplier specializing in design, engineering and manufacturing of automotive fuel system solutions. Comoldco specializes in quality compression molding of reinforced thermoset materials. IDI Composites International and their 3i Composite Technology Center were contacted to formulate a compound that would replace a traditional metal material to meet the demanding applications required by an impact / heat shield on various models of passenger cars.



**Thermoset Composite  
Automotive Impact Shield**

## idea

Working together in a collaborative effort, IDI customized and tested a line of IDI's thermoset composites that could replace and outperform the traditional material being used. They selected a Sheet Molding Compound (SMC) due to its superior flow properties and moldability along with several other chemical properties and unique performance characteristics that were engineered into the formula. The resulting impact shield offers superior corrosion resistance and is lighter weight than metal, and can withstand the high temperature environment it will be used in while maintaining excellent impact resistance.

## innovation

Through a joint effort utilizing IDI's state-of-the-art testing, prototyping and manufacturing capabilities, the resulting part was a dynamic, low density, high strength and lightweight conversion from traditional materials, such as metal, and incorporates the high performance of thermoset composite materials.

# **IDI** 3i Composites Technology Center

The IDI 3i Composites Technology Center is the research and development division of IDI. It will generate and prove new ideas, approaches and materials to address the engineering and performance challenges of both our customers and the industry. It will design, develop and manufacture thermoset composite compounds for innovative customers seeking to go beyond the value limitations of conventional materials.

## **IDI Composites International®**

IDI Composites International (IDI) is the premier global custom formulator and manufacturer of thermoset molding compounds for molders and OEMs. The company provides customized polyester/vinylester-based sheet molding compounds (SMC) and bulk molding compounds (BMC).

# **Global Solutions – Global Locations**



**North America**  
Noblesville, IN

**Europe**  
Vineuil, France

**United Kingdom**  
Oldbury, UK

**Asia/Pacific**  
Shanghai, China

**Caribbean & South America**  
Aguirre, Puerto Rico

**Mexico**  
Mexico City, Mexico