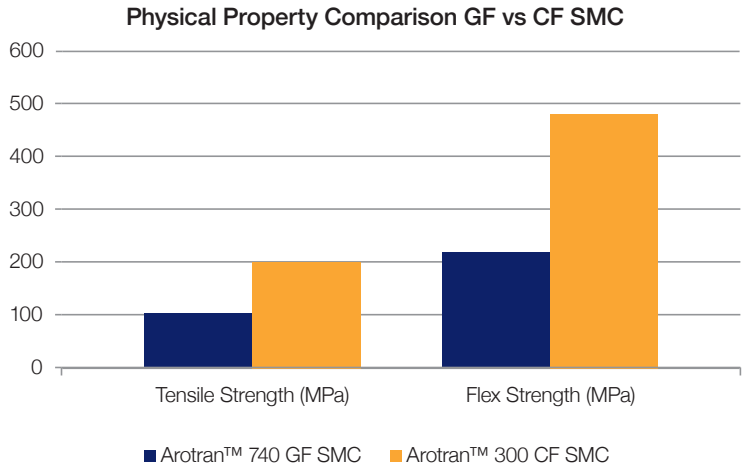
AROTRAN™ 300

CARBON FIBER SMC RESIN SYSTEM

At INEOS Composites, we strive to be good partners by meeting the expectations that are important to our customers. Today, that means we're focused on reducing our environmental footprint, while continuing to provide the innovative products and sustainable solutions our customers require.

The automotive industry needs to quickly meet the National Highway Traffic Safety Administration's (NHTSA) Corporate Average Fuel Economy (CAFE) standard requirements. The goal of CAFE is to continue to reduce energy consumption by increasing the fuel economy of cars and light trucks, thereby reducing the amount of pollutants released into the atmosphere. NHTSA's new standards rapidly increase over the next several years, which is driving original equipment manufacturers (OEM) to design and produce lighter vehicles. According to the U.S. Department of Energy's Vehicle Technologies Office, a 10% reduction in vehicle weight can result in a 6–8% fuel economy improvement. However, traditional lower-density sheet molding compounds (SMC) may not provide sufficient strength and toughness for structural applications.

The Arotran™ 300 resin system was developed to address the automotive industry's need for lightweight, high-strength resin systems utilizing carbon fiber (CF). Parts made with this resin technology will produce carbon fiber SMC structural composites with very high mechanical properties. The resin system is based on epoxy vinyl ester chemistry and nano-composite technology. Mass reduction, low tooling costs, noise reduction, and heat and corrosion resistance are all deliverables with the use of the Arotran™ 300 resin system in structural applications.



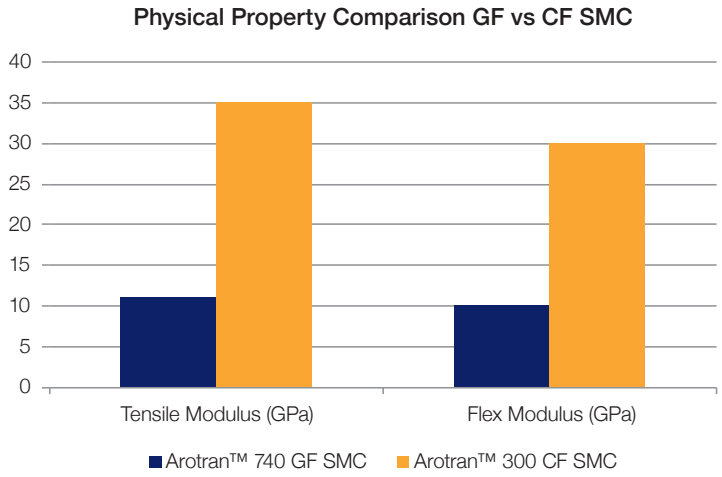
Applications

- Deck lid inner
- Bumper impact beam
- Cross member
- Drive shaft
- Leaf spring
- Wheels
- Wiper system carrier
- GOR/GOP/headlamp support
- Closure inners
- Oil pans

Benefits

- Low mass
- Excellent strength-to-weight ratio
- Corrosion resistance
- Design flexibility

INEOS' Arotran™ 300 carbon fiber-based SMC resin system has significantly higher tensile and flex properties compared to glass fiber (GF) materials.



Worldwide resources dedicated to helping the automotive industry design and manufacture the cars of tomorrow.

From door panels to deck lids and valve covers to heat shields, INEOS' products and technical abilities will help in the manufacture of lightweight parts. While primary research and development activities are based in the United States, we also maintain product development teams in Asia and Europe to ensure we develop solutions suited to our global customer base.

INEOS' technical service team has an industry-leading reputation for solving problems and helping customers improve processes. We will work closely with our customers to understand specific application challenges and recommend the best product to meet business objectives. Whether focused on product design, process optimization or new product development, INEOS prides itself on building partnerships that lead to innovative solutions. Visit ineos.com/composites to learn more.

GLOBAL PRESENCE

Global Headquarters
INEOS Composites

North America
Dublin, OH USA
Tel: +1 614 790 9299
Americascustomer.composites@INEOS.com

Regional Centers

Asia Pacific
Shanghai, P.R. China
Tel: +86 21 2402 4688
ASIAcustomer.composites@INEOS.com

Europe
Barcelona, Spain
Tel: +34 93 206 5120
EMEAcustomer.composites@INEOS.com

India
Navi Mumbai
Tel: +91 22 6148 9696
EMEAcustomer.composites@INEOS.com

Latin America
Araçariguama, São Paulo, Brazil
Tel: +55 11 4136 6477
Americascustomer.composites@INEOS.com

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