



Advanced Composite Specialties

COMPOSITE HOOD MANUFACTURER



Advanced Composite Specialties Inc. (ACS) is an OEM composite supplier offering automotive component solutions. Our specialty has been developed in composite manufacturing for automotive and transportation markets where high quality and competitive cost are basic customer requirements. Having built over 50,000 components for various OEM automotive customers over the last 10 years has enabled us to apply this knowledge to any new application where composite properties are favorable to getting a low cost, lightweight, and durable part to market. ACS assists its customers in product development, design, engineering, manufacturing, tooling design and fabrication.

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The difference is underneath...

Light-weight OEM spec RTM (Resin Transfer Molding) composite material with a primed finish, on average 30% lighter than original steel hoods.

Unlike aftermarket hoods inner skin has cut outs to reduce weight.

OE tested for manufacturing repeatability, durability and performance.

Fully functional with either cold-air intake scoop (s) or heat extractor (s).

Internal water-control system prevents rain from getting onto critical engine components.

Easy bolt-on installation, no modifications required.

Accepts original hood gas strut or prop rod.

OEM-style crush initiators.

Excellent vehicle fit maintaining all factory gaps.

Coated latch and fully-adjustable, coated metal hinge mounting hardware.

All trim, drill and bonding operations using CNC robots.



OEM Production

As Ford ramped up production of the new Ford GT, ACS developed RTM tools in order to produce over 225 hoods per month, and drastically reduce the assembly's fall out rate by 80%.

A few advantages of ACS RTM Hoods are :

- installs in minutes
- easier part to paint
- composite consistency for durability
- smooth surface finish on both sides of panels
- part thickness is controlled due to closed molding process
- resistance to heat distortion is much greater
- stronger mechanical properties



Advanced Composite Specialties RTM Hood Manufacturing



Resin Transfer Molding (RTM) – ACS applies this manufacturing method in the production of large exterior components such as automotive hoods, spoilers and side panels up to 50 sq.f. in surface area. Special production runs can be set from 100 up to 10 000 assemblies annually, each panel having the same quality and properties.

Fiberglass mats are placed in a female / male heated tool, once the press is closed resin is injected through a port. Parts are cured under pressure and heat to obtain the best possible composition. Unlike hand lamination or infusion ACS's RTM process keeps the operator involment to a minimum to obtain a perfect part on each cycle.

Parts have consistent part thickness and glass composition. Similar to SMC ACS's RTM panels have a smooth class A finish on both sides.



Every hood skin is trimmed using a CNC robotic water-jet cutter to insure consistency and uniform hood gaps.



CNC robots apply just the right amount of OEM quality bonding glue to the precise location, providing the highest quality hoods in the industry.



All hood mounting hardware is specifically designed to fit each vehicle application and is coated to prevent rust and reinforced for maximum strength.



All orders are quickly filled, thanks to an efficient manufacturing and shipping process.



Every ACS hood is hand prepped and primed to OEM quality standards.