

# COMPOSIFLEX SATCOM COMPOSITE



## Communication & Radar Composites

Advanced composites are used in a variety of electronics applications including communication, radar, and other sensor devices. One growth area is the use of Ka, Ku and other satellite communication frequency bands. Carbon fiber is used to provide superior stiffness, dimensional stability over the operating temperature range, and light-weight properties. Fiberglass, quartz composites, and sandwich construction (including cores of honeycomb or foam) are often used due to radiolucent properties in applications involving various frequency bands.

## COMPOSIFLEX

The applications that we supports include:

- Radomes
- Antenna systems and embedded antennas
- Enclosures, payloads, and pods
- Solid and segmented parabolic dish antennas
- Telescoping legs and masts



## Advanced Composites and SATCOM

The use of advanced composites in satellite communications is growing rapidly to support Ka, Ku and other frequency bands. Carbon fiber is used to provide superior stiffness and light-weight properties.

To support challenging SATCOM antenna shape and surface tolerances, advanced manufacturing processes are required. Composiflex utilizes high quality molds and specially-developed manufacturing processes. Our cost-conscious approach yields parabolic dish antennas that meet demanding surface RMS specifications.

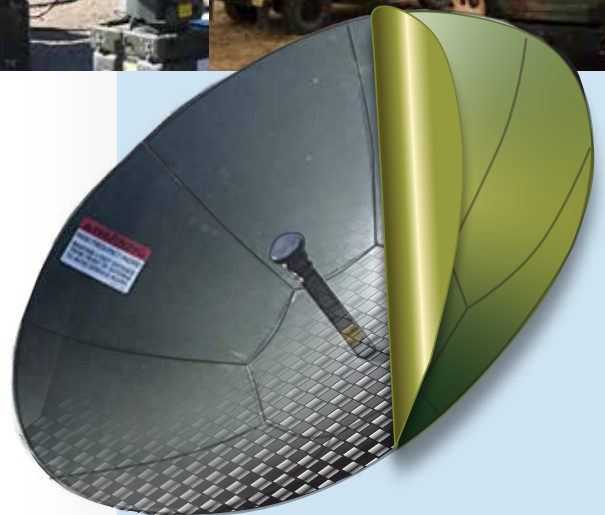
A variety of options are available to meet reflectivity and gain requirements. These options include conductive composite materials, reflective paints and coatings, and deposition treatments.

Composiflex supports both solid and segmented dish designs for military, maritime and commercial applications.

Please contact us to learn more about our capabilities.

## Certifications and Accreditations

- Nadcap Composites (LPR & PAR)
- AS9100 Revision D with ISO9001:2015
- ITAR Registered
- SAM Registered
- JCP Registered
- AMS2750 Pyrometry Compliant
- Clean and Environmentally Monitored Rooms (CCA& EMA)
- NIST SP 800-171 Compliant (score 110)
- Cyber Security CMMC Compliant to Level 3
- Registered on SPRS



To support communication and radar composite customers, Composiflex offers:

- Advice from engineers with decades of expert industry experience
- Material property testing to support FEA
- Verification testing
- Mechanical load and impact testing
- Program management
- In-house tooling design and manufacturing capabilities
- Complete vertical integration of manufacturing processes
- Metallization options for EMI and other performance requirements
- Component integration and assembly

## Production Processes

The optimal production process choice is based upon final part specifications and production volume. Standard production options include:



**Curing (Autoclave, Press and Oven):** Cured computer-controlled and recorded heat and pressure.



**Resin Transfer Molding (RTM)/VARTM and Light RTM:** Mold process that combines fibers and resin.



**Filament Winding:** Resin coated fibers wound on rotating mandrel.



**Engineering:** Analysis and testing to support your project.



**Press Molding:** Compression molded parts or flat panels.



**Tooling/Prototype:** Production and prototype tooling options available.



**Machining:** In-house CNC machining controls costs and lead time.



**Finishing & Other:** Surface prep, painting/coating, and other processes including final assemblies, sub-assemblies, and kits can be created.

## What Makes Composiflex World Class?

### Delight Our Customers

"Delivering exceptional quality, service, and value to our customers."

### Employee Education and Training

"Grooming a well-trained workforce focused on customer satisfaction."

### Safe Workplace

"Believing in safety and having a record that shows it."

### Key Performance Indicators

"Taking our goals seriously. If we make a promise, we deliver."

### Goal Alignment

"Fostering a culture of teamwork to achieve the strategic goals and objectives of the company. Together we will make a successful future."

### Lean Thinking

"Eliminating waste and creating value."

### Total Productive Maintenance

"Achieving maximum equipment effectiveness through employee involvement."

### Continual Improvement

"Being addicted to the benefits of never ending improvement."

### 6S

"Sustaining a clean, safe, and efficient workplace."

### Employee Involvement

"Knowing that nothing we do is more important than hiring and involving employees. At the end of the day, people are what make the difference."



**Mike Chesley**  
President - Composiflex

Visit [composiflex.com](http://composiflex.com) for more detailed information. Our experienced engineering staff is available for your technical assistance. Please call 800-673-2544 or e-mail us at [info@composiflex.com](mailto:info@composiflex.com).



For more than 40 years, Composiflex has been an innovator in the design and manufacture of advanced high-performance composites. Specializing in custom designs, Composiflex currently serves the medical, military, aerospace, ballistic protection, industrial and recreational markets. Composiflex conducts operations in Erie, PA, USA.

**Nadcap Accredited Composites**  
**ISO 9001 Certified**  
**AS9100 Certified**