

**ADVANCED AMERICAN
TECHNOLOGIES**



ONE RESIN REVOLUTIONIZING COUNTLESS INDUSTRIES.

AT²LAS® from Advanced American Technologies is a proprietary composite resin, uniquely engineered to outperform such materials as steel, lead, aluminum, concrete and plastic across a variety of sensitive applications and critical industries. From radioactive shielding and transport to ballistics protection, electronics coatings and beyond, AT²LAS® has you covered.

78%

LIGHTER THAN
STEEL

35%

LIGHTER THAN
ALUMINUM



A DISRUPTIVE TECHNOLOGY: AT²LAS® FEATURES



LIMITLESS APPLICATIONS

- Customizable
- Durable
- Flexible
- Pumpable
- Castable



FORMULATED TO LAST

- Fire resistant
- Vibration resistant
- Fracture resistant
- Thermal protector



EASILY IMPLEMENTED

- Manufactured quickly
- Produced on- or off-site
- Environmentally safe



SAFE & SECURE

- Impermeable
- Non-corrosive
- Non-porous
- Non-conductive

ABOUT US

Advanced American Technologies (AAT) is a full-spectrum composite research, development and manufacturing company with facilities in Oak Ridge, Tennessee and Huntsville, Alabama.

A Service-Disabled Veteran Owned Small Business (SDVOSB), AAT was established by retired US Army Colonel Rob Grigsby.



AT²LAS[®] APPLICATIONS

The uses for our unique composite resin are infinite. AT²LAS[®] addresses the common vulnerabilities of other materials, such as resisting corrosion, fracturing and high temperatures, all while being easily and quickly deployable. AT²LAS[®] has also undergone third party testing for the nuclear, ballistics, piping, mechanical and thermal markets.



NUCLEAR RADIATION SHIELDING & CONTAINMENT

Ideal for core encapsulation and nuclear waste storage, AT²LAS[®] can be poured on-site and is structural in nature, adapting to the specifications needed. It has also been independently verified to shield against Cobalt-60 transmission similarly to steel.



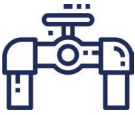
BALLISTIC PROTECTION

AT²LAS[®] delivers a lightweight, customizable and configurable ballistic solution that can be deployed easily and affordably. That means that ballistic applications from anti-intrusion doors to modular ballistic walls to ambidextrous protective backpacks are more accessible.



ELECTRONIC COATINGS

Cutting-edge IP deserves equally cutting-edge protection. AT²LAS[®] can secure electronic circuit cards, providing sensitive engineering with anti-tamper, conformal coating while decreasing operating temperatures.



PIPELINE REINFORCEMENT

Traditional materials in pipes have their weaknesses: corrosion in steel, fragility in plastic and PVC. Manufacturing with AT²LAS[®] allows pipes to be lighter and more resistant to vibration and degradation—and can repair or strengthen existing pipes.



AEROSPACE COMPONENTS

Being 40% lighter than aluminum, castable, non-corroding, and having the ability to absorb significant vibrations, AT²LAS[®] is ideal for certain aerospace components. Recently passing the rigorous Federal Aviation Administration's challenging DO-160 test for shock, vibe, acceleration and flammable environments, AT²LAS[®] was selected to replace traditional machined aluminum components for said project.



TOOLING SOLUTIONS

For new automotive parts or processes, AT²LAS[®] can eliminate costly missteps by validating tool designs prior to production and implementation. It can be used to cast products and can also reduce vehicle weight, resulting in increased efficiency.

ENVIRONMENTAL CONSIDERATION

Our resin can have a positive environmental impact, both in application as a protective barrier and in the ability to return unused resin to AAT for recycling. For example, use of our composite in pipes can prevent the leaching of harmful products into waterways and unused resin can be reintegrated and reintroduced in future applications.

TESTED & APPROVED

Aluminum Variant Unless Specified

Weight

109.2 lb/cu ft
22% weight of INVAR,
65% weight of Aluminum

Density

1.75 grams/cu cm

Dynamic Compressive Yield

26,106 psi

Tensile Strength

8,412 psi

Flexural Modulus (at 72°F)

1.305 x 10⁶ psi

Flexural Strength (at 72°F)

12,700 psi (Updated Test Results Pending)

Tensile Elongation (at break)

2.2%

Coefficient of Thermal Exp.

24.1 x 10⁻⁵ in/in °F

Hardness, Shore "D" (at 72°F)

90

Electrical Conductivity

None (23 MegOhms)

Thermal Conductivity

Ceramic: 0.40 (W/m-K)
Aluminum: 1.275 (W/m-K)

Heat Distortion/Max. Temp.

482° F / 3,100° F

Corrosion

None – Hypochlorous Acid @ 2000 ppm

Fire Resistant

Yes

Machinability

+/- 0.005 Tolerance

CONTACT US

Want to see how Advanced American Technologies and AT²LAS[®] can impact your industry? Please visit atlasaat.com or call 1(888) 988-8802.

