

The Doorway

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BOEING AFTERMARKET



ANTIMICROBIAL TREATED

A LONG-STANDING STRATEGIC PARTNER

COMPREHENSIVE COMPOSITE SOLUTIONS

The Gill Corporation (TGC) has supplied high-performance composite materials to The Boeing Company (Boeing) and its global supply chain for over 60 years. The first TGC aerospace solution was a specialty laminate material that lined the cargo bay of aircraft to prevent fires and smoke from expanding into the passenger compartment.

TGC continues to innovate lightweight, high-performance materials and has become the world's largest supplier of cargo liner solutions for every Boeing aircraft in production. It also offers the widest selection of customized solutions for in-service Boeing aircraft tailoring performance to meet the unique requirements of operators, Maintenance and Repair Organizations (MRO) and Passenger-to-Freighter (P2F) conversions.

TGC's research and development in Fiber-Reinforced Plastic (FRP) combined with their cargo compartment expertise was applied to produce resin impregnated reinforced fibers (prepreg) bonded to honeycomb core. The resultant sandwich panel construction became a highly durable cargo compartment floor panel. TGC continued to expand its panel solutions to the passenger compartment, bulkheads, interior walls and other applications. Today, TGC supplies all floor panels for Boeing aircraft in production and offers the most expansive off-the-shelf and customized panel solutions for all Boeing Aftermarket customers.

To further support these innovations, TGC responded quickly to Boeing's urgent need in the 1980s to develop and qualify an alternate aramid honeycomb core supplier. TGC later acquired its supplier of aluminum honeycomb, enabling TGC to be a vertically integrated manufacturer of advanced honeycomb sandwich panels.

This vertical integration paved the way for larger contracts. Boeing awarded TGC a contract in the early 2010s to supply fully fabricated floor panel kits for the 787 aircraft. This partnership has continued and expanded to include the Tier One supply of fabricated floor panel kits for the 777-Classic and 777-8/-9 aircraft. TGC utilizes its portfolio of Boeing OEM qualified materials with fabrication capabilities to supply finished aftermarket cargo liners and floor panels to the Boeing fleet worldwide.



CARGO LINER DEVELOPMENT

TGC has refined its cargo liner technology over decades, establishing itself as the leader in high-strength fiber-reinforced plastics (FRP) for Boeing aircraft. Products are engineered for superior durability, edge-bearing strength, impact resistance, and abrasion resistance.

FEATURE	Gillliner® 1366D	Gillfab® 1368G
PRIMARY AIRCRAFT	B737 (Lower Sidewalls)	B777 and B787 (Cargo Liners)
DEVELOPMENT	Introduced in 2016 in response to airline needs; developed using a proprietary, rigorous abrasion test	Focuses on maximizing strength-to-weight ratio
QUALIFICATION	Higher-strength alternative to BMS 8-2 Class 3	BMS 8-223, Class 5, Grade B
CORE MATERIALS	Woven E- and S-glass reinforcement, resin-rich surfaces, nylon scrim	Woven S-glass reinforcement with a phenolic resin matrix
KEY PERFORMANCE	Nearly 2X impact resistance required by Class 3, and over 40% higher edge-bearing strength	Ultra-lightweight and high-impact resistance. Superior strength allows for reduced weight/thickness
FLAMMABILITY	Meets standard requirements (implied)	Meets stringent Low Fire, Smoke, and Toxicity (FST) requirements and 14 CFR Part 25 Appendix F (burn through)
AESTHETICS/ FINISH	Nylon surface scrim	Features a white PVF overlay for reflectivity



EVOLUTION OF ADVANCED FLOOR PANELS

TGC has driven advancements in floor panel technology, evolving from traditional materials to high-performance composites. TGC's vertical integration enables it to deliver lightweight, high-strength solutions tailored to meet customers' specific application requirements.

1960s (BMS 4-10): Features an end-grain balsa wood core with aluminum or fiberglass facings. It provides good stiffness but is relatively heavy compared to modern standards.

1970s (BMS 4-17 / Gillfloor® 4417/4417A): Utilizes a meta-aramid (Gillcore® HD) honeycomb core with unidirectional fiberglass/epoxy facings. Known for high shear strength and fatigue resistance in highly loaded areas.

1980s (BMS 4-23 / Gillfloor® 5424): Consists of an aluminum honeycomb core with FRP facings. Developed as a lower-cost alternative to BMS 4-17 with similar strength and weight for B737 applications.

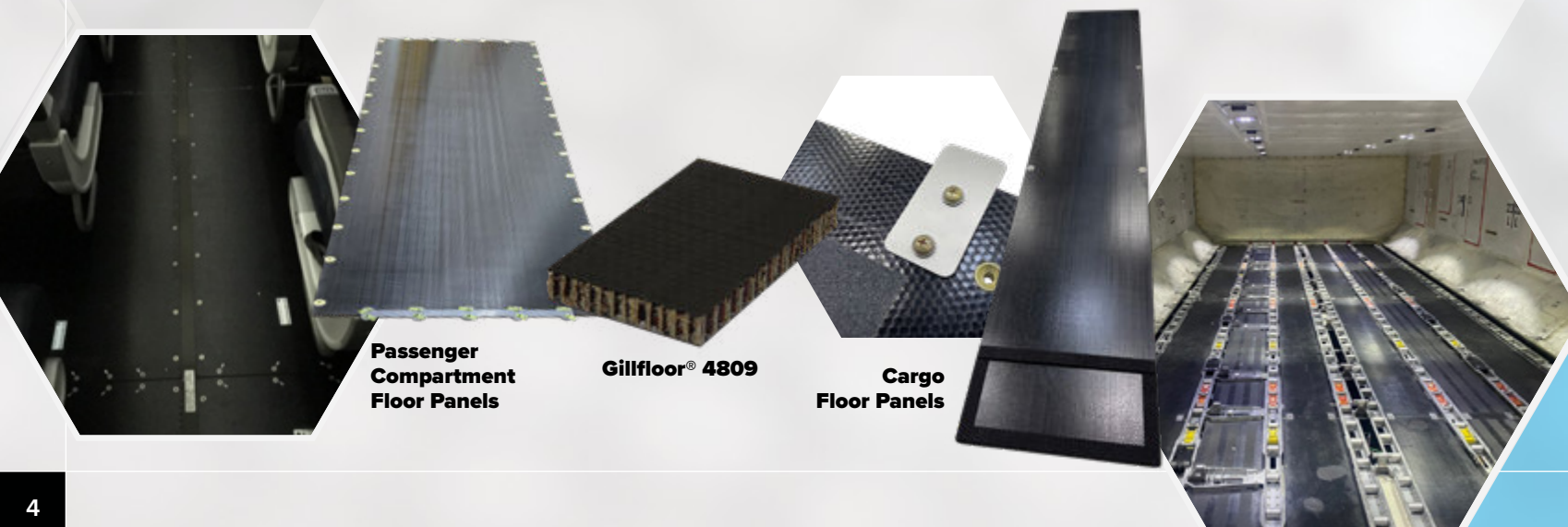
2000s (BMS 4-20 / Gillfloor® 4709/4809): Employs meta-aramid (Gillcore® HD) or para-aramid (Gillcore® HK) honeycomb cores with unidirectional carbon/epoxy facings. This is an ultra-lightweight, high-strength solution; the para-aramid core offers significant weight reduction.

ADVANCED PANEL SOLUTIONS

TGC's state-of-the-art floor panels utilize carbon or fiberglass facings and next-generation cores (includes proprietary Gillcore® HD meta-aramid honeycomb or Gillcore® HK para-aramid honeycomb) for significant weight savings and enhanced performance.

Panel Product	Primary Aircraft / Location	Core Material	Key Feature / Standard	Benefits
GILLFLOOR® 4709	B777 (Passenger Areas)	Gillcore® HD Meta-aramid honeycomb	BMS 4-20 (Types II, III, V)	Lightweight; provides 10–12% weight savings over glass-faced panels
GILLFLOOR® 4809	B777X, B787 (Aisles, Galleys)	Gillcore® HK Para-aramid honeycomb	BMS 4-20 (Types VI–IX)	Ultra-lightweight; provides 13–21% weight reduction over 4709; types tailored for specific load areas
GILLFLOOR® 4809G (GILLVANA®)	Flooring and Sidewalls	Gillcore® HK Para-aramid honeycomb	Integrates GILLVANA® acoustic damping coating	Provides structural strength with added acoustic benefits
GILLFAB® 4518	B777F (Bulk Cargo Floor)	Gillcore® HK Para-aramid honeycomb	High-abuse floor areas	Lightweight bulk cargo floor panel

Gillfloor® 4709 and 4809 incorporate a glass isolation layer within their carbon facings to prevent galvanic corrosion.



Passenger
Compartment
Floor Panels

Gillfloor® 4809

Cargo
Floor Panels

FABRICATION AND KITTING CAPABILITIES

TGC offers comprehensive in-house fabrication and kitting services, delivering fully assembled, inspected, “ready-to-install” floor panel shipsets directly to Boeing, other Tier 1 suppliers and aftermarket customers around the world.

Quality and Logistics

Every assembly undergoes Coordinate Measuring Machine (CMM) inspection to validate precision requirements. Panels are protected, labeled, kitted, and packaged for direct shipment. TGC supports major programs, including fabrication for the B787, B777, B777 Freighter, B777-8 and B777-9.

PASSENGER-TO-FREIGHTER (P2F) CONVERSIONS

TGC is a leading supplier for the global P2F conversion market. The company provides floor panels, cargo liners, interior panels, honeycomb cores, and fully fabricated assemblies in “ready-to-install” shipset kits.

TGC's OEM partnership with Boeing positions it uniquely to support third-party Supplemental Type Certificate (STC) holders. The company has supported B737 P2F conversions (both Classic and NG models) for over 20 years across multiple programs. Complex fabrication includes CNC cutting, robotic insert installation, edge filling, bonding, and stiffener attachment.



MRO, LOGISTICS SUPPORT, AND REGULATORY APPROVALS

TGC's aftermarket products help airlines and MROs reduce costs without compromising safety or performance. Offerings include lower acquisition costs, rapid logistics (including AOG service), and certified alternatives.

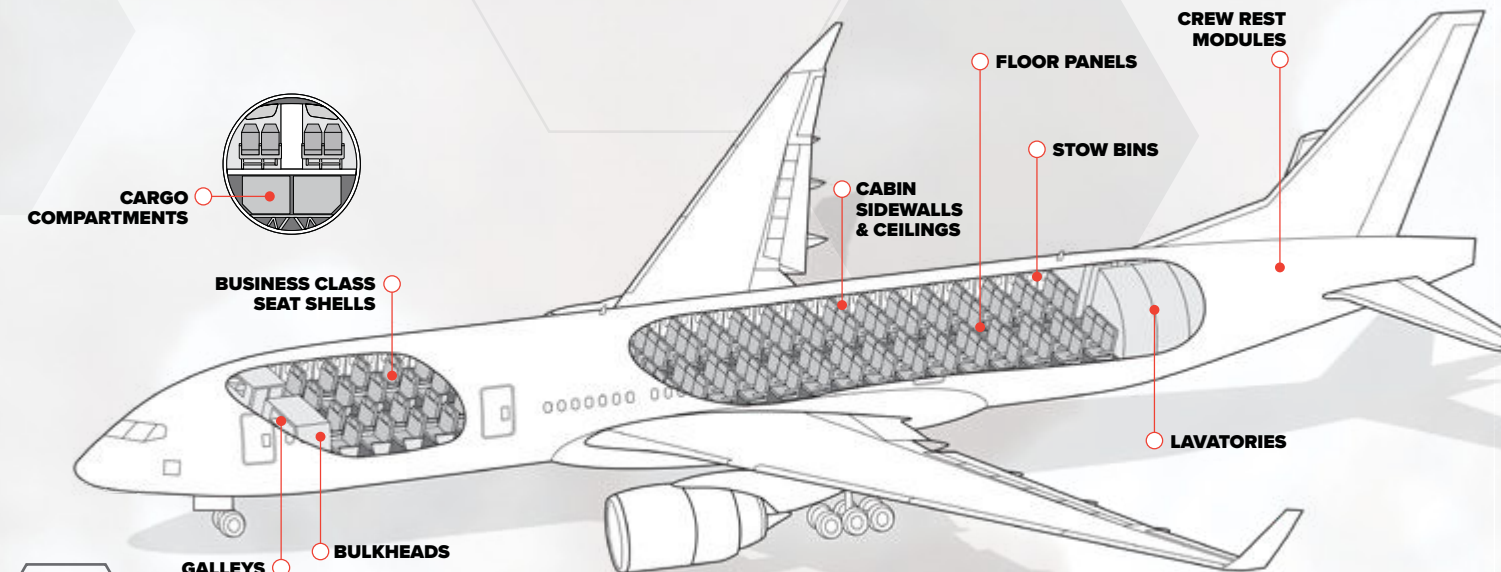
- **PMA/EPA:** Parts Manufacturer Approval and European Parts Approval for replacement parts such as floor panels and cargo liners that meet or exceed OEM specifications (e.g., BMS 4-17, BMS 4-23).
- **STC:** Products integrated into Supplemental Type Certificate programs for major modifications.
- **OOPP:** Support for Owner/Operator Produced Parts through precision-cut kits that streamline installation and reduce labor and waste.

TGC leverages decades of experience, proprietary technologies (such as Gillcore® honeycomb), and full vertical integration to deliver ultra-lightweight, high-durability composite solutions for Boeing aircraft. From advanced cargo liners and floor panels to complete kitted assemblies, TGC provides practical, cost-effective support throughout the aircraft lifecycle. By focusing on innovation, quality, and customer responsiveness, TGC helps keep Boeing fleets operational and efficient for years to come.



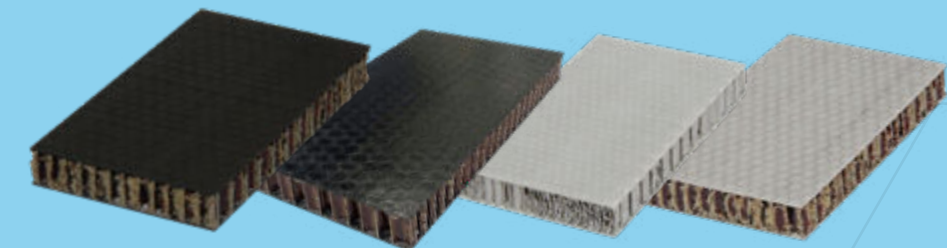
LAMINATES

Product	Material	Resin	Strength	Application	Specification
GILLINER® 1076C/1566C/1567A	Woven E-glass cloth	Polyester	General purpose grade	Sidewalls, ceilings, partition walls and bulkhead facings of the lower cargo hold and main deck (freighters)	BMS 8-2 Class 1, Grade A
GILLINER® 1366/1569A	Woven E- and S-glass cloth	Polyester	High impact grade. Offers higher strength-to-weight ratio compared to all E-glass constructions	Sidewalls, ceilings, partition walls and bulkhead facings of the lower cargo hold and main deck (freighters)	BMS 8-2 Class 2, Grade A
GILLINER® 1366T/1570A	Same as Gilliner® 1366 but with a white Tedlar® overlay on the face side	Vinyl Ester	High impact grade	Sidewalls, ceilings, partition walls and bulkhead facings of the lower cargo hold and main deck (freighters)	BMS 8-2 Class 2, Grade B
GILLINER® 1076D/1568A	Woven E-glass cloth	Polyester	High wear resistant grade	Sidewalls, ceilings, partition walls and bulkhead facings of the lower cargo hold and main deck (freighters)	BMS 8-2 Class 3, Grade A
GILLFAB® 1367/1367A/1368/1368A	Woven E- and/or S-glass. Tedlar® on the face side	Phenolic	Very high impact resistance; low smoke and toxicity	Cargo compartment liners, bulkhead facings, and blowout panels; backing material for non-textile floor mats in wet areas (without PVF film)	BMS 8-223 Class 2, Grade B
GILLINER® 1366D	Woven E- and S-glass cloth with nylon surface scrim	Polyester	High impact, edge bearing and abrasion resistance	B737 lower sidewalls	FAR Part 25 App F Parts I and III (burn through)
GILLFAB® 1367B/1368B	Woven S-glass with white Tedlar® overlay on the face side	Phenolic	Lightweight, high impact resistance; low smoke and toxicity grade	Sidewalls, ceilings, partition walls and bulkhead facings of the lower cargo hold and main deck (freighter)	BMS 8-223 Class 4, Grade B
GILLFAB® 1367G/1368G	Woven S-glass with white Tedlar® overlay on the face side	Phenolic	Ultra lightweight, high impact resistance; low smoke and toxicity grade	Sidewalls, ceilings, partition walls and bulkhead facings of the lower cargo hold	BMS 8-223 Class 5, Grade B



PANELS

Product	Facing	Resin	Core	Strength	Application	Specification
GILLFLOOR® 4709	Unidirectional carbon fiber with lightweight woven fiberglass scrim	Epoxy	Meta-aramid honeycomb	Lightweight, high strength	Under seat, aisle	BMS 4-20 Types II, III and V
GILLFLOOR® 4417	Unidirectional fiberglass	Epoxy	Meta-aramid honeycomb	High strength	Wet and/or highly loaded areas	BMS 4-17 Types II and V
GILLFLOOR® 4417A	Unidirectional fiberglass	Epoxy	Meta-aramid honeycomb	High strength	Wet and/or highly loaded areas	BMS 4-17 Type VI
GILLFLOOR® 4518	Unidirectional and woven fiberglass	Epoxy	Para-aramid honeycomb	Lightweight, high strength	Under seat, aisle, cargo compartment, and main deck (freighter)	BMS 4-17 Types X and XI
GILLFLOOR® 4809	Unidirectional carbon fiber with lightweight woven fiberglass scrim	Epoxy	Para-aramid honeycomb	Lightweight, high strength	Under seat, aisle	BMS 4-20 Types VI, VII, VIII and IX
GILLVANA® 4809G	Unidirectional carbon fiber with lightweight woven fiberglass scrim	Epoxy	Para-aramid honeycomb coated with proprietary visco elastic coating	High strength, vibration and acoustic damping	Aisle, entry, utility, and galley areas	BMS 4-20 Types X and XI
GILLFLOOR® 5424	Unidirectional fiberglass	Epoxy	Aluminum honeycomb	High strength	Under seat, aisle, and main deck (freighter)	BMS 4-23 Types I, II and III



Fun Facts

The tallest mountain in our solar system, Olympus Mons, is 3 times taller than Mount Everest.

Batman and Predator exist in the same fictional universe. Since 1991, they have been featured together in three comic books.

A study from Harvard University finds that having no friends can be just as deadly as smoking. Both affect levels of a blood-clotting protein.

In South Dakota, you can get a driver's permit at age 14 with parental consent. Once you turn 16, you can get your license.

The Backpack Kid's real name is Russell Horning.

In 2017, Adidas sold over 1 million pairs of shoes made from recycled ocean plastic, each pair taking 11 plastic bottles to make.

The British Pound is the world's oldest currency still in use at 1,200 years old. The pound has been an identity as a symbol of British sovereignty.

The world's smallest mammal, a Bumblebee Bat, weighs about the same as a U.S. dime. Native to Myanmar and Thailand, these bats are endangered.

Qantas Airways once powered an interstate flight on cooking oil. This marked Australia's first commercial flight using sustainably derived biofuel.

As of December 2018, The Itchy & Scratchy Show that takes place within The Simpsons has 107 episodes.

Will Smith owed \$2.8 Million to the IRS and almost went bankrupt just before he signed the contract for The Fresh Prince Of Bel-Air.

Berries are simple fruits stemming from one flower. This means that pineapples, bananas, watermelons, pumpkins, and avocados are berries.

The Great Pyramid of Giza actually has eight sides rather than four. All of the other pyramids have just four sides.

English is not native to the British Isles. It was brought to Britain in the mid-5th to 7th Centuries by German, Danish, and Dutch settlers.

When we're born, the only innate fears we have are the fear of falling and the fear of loud sounds. All other fears are learned.

In Korea, there is a breed of dog called a Sapsali, which was originally thought to banish ghosts and evil spirits.

One horse can have approximately 15 horsepower. Horsepower is about 746 watts. The term was coined in the late 18th Century.

The Leaning Tower of Piza is tilted because of the soft soil that it's built on – which has also protected it from at least 4 powerful earthquakes.



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