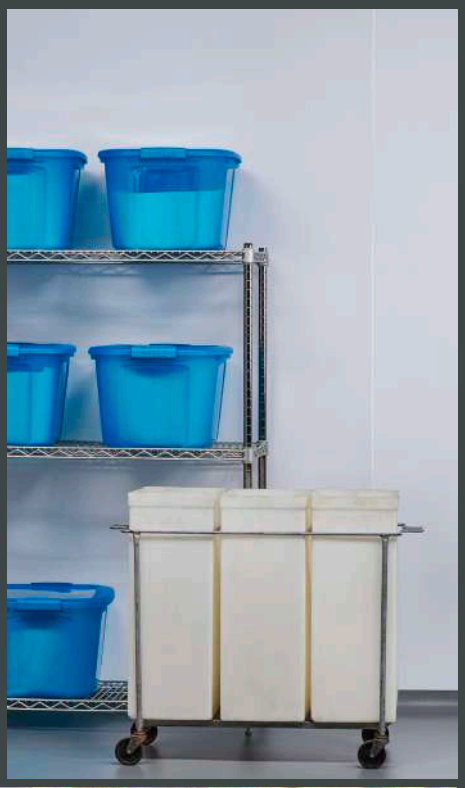
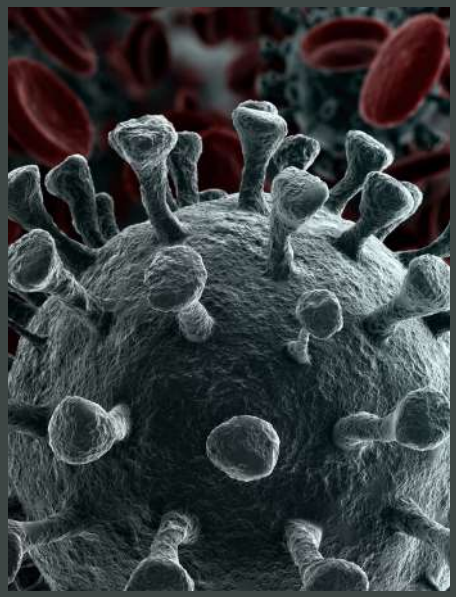
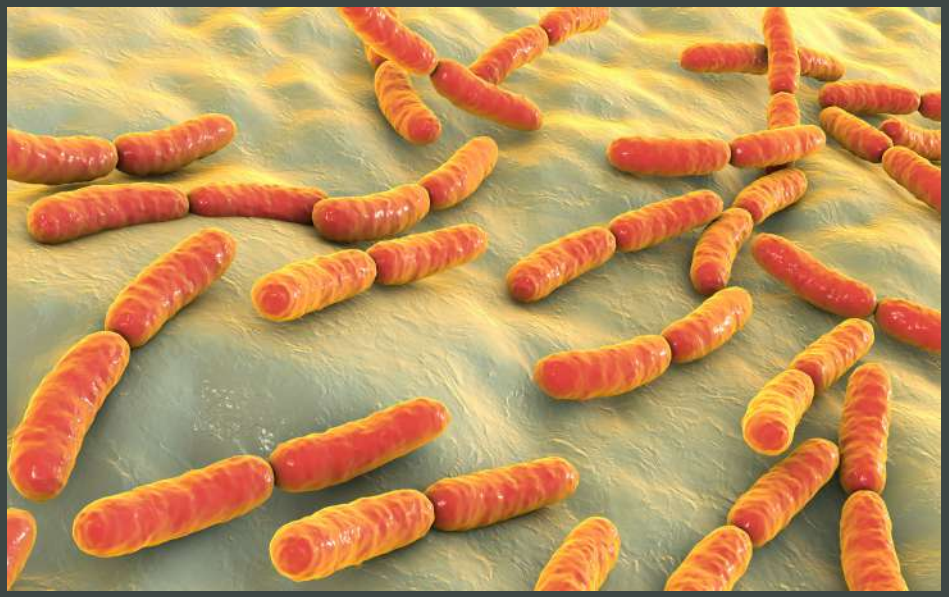
CRANE®
Composites

discover the difference

The Right Choice FOR ALL THE RIGHT PLACES







Antimicrobial Technical Bulletin

frp Fiberglass Reinforced Panels

making the right choice **for** sanitary applications

company statement

Stance against antimicrobial agents

our products

Glasbord® with Surfaseal® defines hygienic and sanitary standards

the big debate

Are antimicrobial surface additives worth the risk + cost? Here are the facts!

timeline

Breaking down the 30 years since antimicrobials entered the market

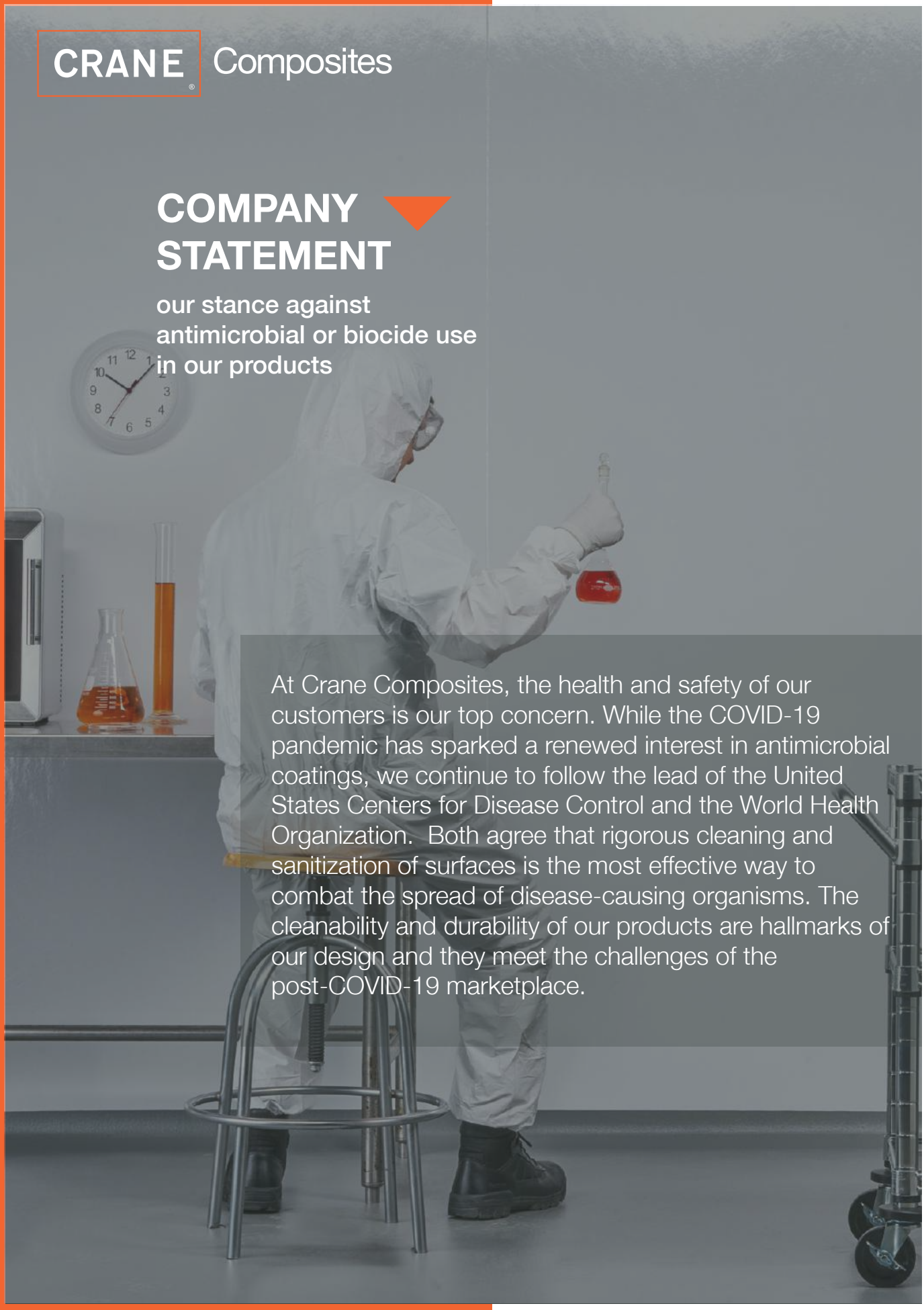
crane's position

Why Glasbord is the right product for hygienic applications

CRANE Composites

COMPANY STATEMENT

our stance against antimicrobial or biocide use in our products



At Crane Composites, the health and safety of our customers is our top concern. While the COVID-19 pandemic has sparked a renewed interest in antimicrobial coatings, we continue to follow the lead of the United States Centers for Disease Control and the World Health Organization. Both agree that rigorous cleaning and sanitization of surfaces is the most effective way to combat the spread of disease-causing organisms. The cleanability and durability of our products are hallmarks of our design and they meet the challenges of the post-COVID-19 marketplace.

OUR PRODUCTS

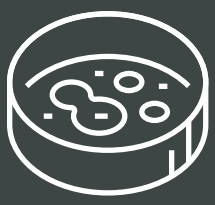
Crane Composites Glasbord® with Surfaseal® has a long history of standing up to the challenges faced in tough environments. Our wall and ceiling panels have been the choice in thousands of installations where cleanability, durability, and low maintenance is required.

HYGIENIC

Glasbord has a completely non-porous, robust, and scratch resistant surface.

Our wall panels will not collect dirt, bacteria, or other dangerous organisms that can contaminate work areas or clean environments.

NO PLACE FOR BACTERIA



Glasbord resists the growth of bacteria and mold.

In 2020, our tests again confirmed that our products do not support or promote the growth of bacteria. Coupled with regular cleaning, where our FRP excels, bacteria does not stand a chance.

3rd PARTY CERTIFIED

Hazard Analysis Critical Control Point (HAACP) certified

Glasbord with Surfaseal is HACCP certified for food safety.

CLEANABLE

A key strength of Glasbord is its durability against the strongest cleaning agents.

Bleach, detergents, sanitizing wipes and sprays will not stain or change the color of our panels and will have no effect on the long term performance of our products.

SURFASEAL® FILM

An integral film, found only on Glasbord, that provides a barrier

This film is NOT an additive, it is a key structural component integrated at the time of manufacturing to create a pore-free surface.

THE BIG DEBATE

An old idea that is new again is the concept of embedding antimicrobial agents in surfaces to create resistance to germs, mold, and other organisms. Additives commonly used include silver or copper nanoparticles, bacteriocides, or new materials such as graphene.

Are antimicrobial surface additives worth the risk + cost?

Key players involved in this debate

Additives manufacturers

Antimicrobial products are being marketed as a failsafe means to perpetually fight bacteria and micro-organisms.

Governing agencies

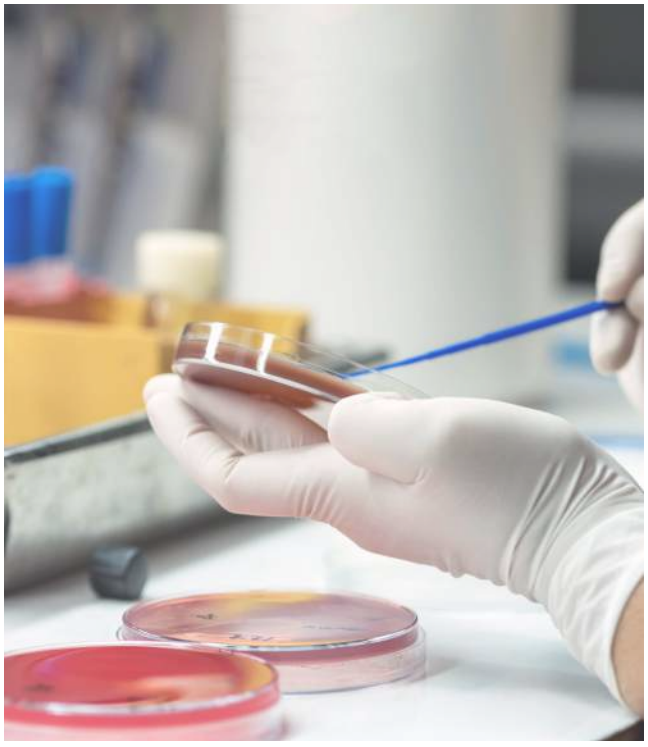
The CDC, WHO, and other leaders in the health industries are cautious about the claims and benefits of antimicrobial surface treatments.

Myths about adding antimicrobial agents into products

With antimicrobial agents, the problem is solved.
Fact: without regular cleaning and sanitization, antimicrobial surface treatments offer limited resistance. They can also create a false sense of security where cleaning is minimized which can lead to the development of resistant organisms, sometimes referred to as Super Bugs.

Viruses are vulnerable to antimicrobial agents.
Fact: No antimicrobial surface agent has been shown to be effective to viruses

Antimicrobials are effective against any bacteria.
Fact: Common antimicrobials are effective against many bacteria but there are known resistant strains and the bacteria are evolving to become more resistant to antimicrobials.



Building Material suppliers

Manufacturers are working to introduce these agents to numerous products such as wall coverings and inaccurate claims are made that these additives protect against viruses such as COVID-19.

Architects & End-Users

Uncertainty about the effectiveness of antimicrobials leads to confusion about the choice of the right product for the right application.

Facts & Figures

TOP 10
global public health threats facing humanity is Antimicrobial Resistance

2.9B
tonne-kilometer food miles by road

2400 km
estimated travel distance of meals from farm to plate

48M
people in the U.S. get sick each year from foodborne illness, 1 in 6!

TIMELINE

For over 30 years, antimicrobial surface treatments have been the subject of debate. Crane Composites has followed the debate closely and made decisions based on leading research and studies.

1984 — Antimicrobials enter the marketplace

Products launch terminology catching on

Microban® is introduced as an additive for plastics, coatings, fabrics and surfaces.

1990's — Antimicrobial market growth

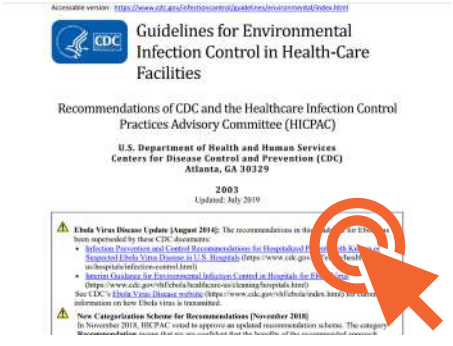
Popularity rises antimicrobial gains traction

Antimicrobial products grow in popularity from toys to tools to soaps and cleaners.

2003 — Centers for Disease Control (CDC) issues statement on antimicrobials

CDC involvement studies conducted seeking evidence

The US CDC completed a study in 2003 that found there was no evidence that antimicrobial coatings offer any enhanced protection from the spread of bacteria and germs. According to the CDC, the most effective way to prevent the spread of infectious disease is to implement a stringent hygiene and cleaning regimen. This includes regularly disinfecting surfaces, using social distancing, and wearing a mask.



2011 — FDA Food Safety Modernization Act (FSMA) launched

FDA takes control preventing illness becomes goal

Millions of people in the USA get sick from foodborne illness in a year. The FDA decided to make the prevention of illness the forefront rather than responding to it. In 2011, Congress launched the FSMA which outlines specific rules, at each point in the supply chain, that must be taken to prevent contamination.

In recent years, there is a growing concern about the overuse of anti-microbial agents that could lead to more dangerous organisms that threaten global health. Leading government agencies are taking this matter seriously and are have issued strong positions against the use of antimicrobials, which is Crane chooses against their use in our manufacturing process.

Kaiser-Permanente Position Statement

Emergence of COVID-19 and a resurgent interest in antimicrobial surface treatments

World Antimicrobial Awareness Week initiated by WHO and renewed strategies for long-term public health

2016 → 2019 → 2020

Healthcare involvement stances against agents/additives

In 2016, after completing an investigation into the chemicals used as antimicrobials, Kaiser-Permanente, the world's largest healthcare provider, banned paint and other interior building products treated with "germ fighting" antimicrobial agents from use in their hospitals, physician offices, and administration buildings.

COVID-19 pandemic reignites interest in antimicrobials

In late 2019, COVID-19 emerges and cleaning, hygiene & sanitization are key defenses that halt its spread

WHO seeks to educate public health strategies gear up

World Health Organization launches World Antimicrobial Awareness Week with slogan "Antimicrobials: Handle with Care". The development of antimicrobial resistant organisms is a serious concern of the WHO, that declared them to be a top ten global public health threat facing humanity.

CRANE'S POSITION

Following the lead of the World Health Organization and the United States Centers for Disease Control, we have chosen to not pursue antimicrobial coatings for our products. We believe the risk and cost of antimicrobial surface treatments outweigh their value.

Why

choose Glasbord hygienic wall panels

Our Glasbord is designed for durable cleanability. It withstands the strongest cleaners and it retains its appearance and performance year after year.

Why not

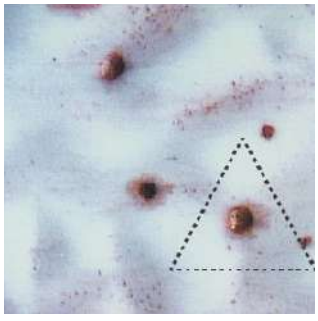
choose anti-microbial solutions

The long-term performance of antimicrobial surface treatment is still not known and rigorous cleaning is still essential, otherwise bacteria and germs will still flourish.

Why Glasbord® with Surfaseal® wins

Mold Resistant
Our FRP panels resist moisture & humidity and are certified to be mold & mildew free.

Easy to Clean
Our FRP panels wipe clean with soap and water, but also stand up to any harsh chemicals + detergents & withstand repetitive cleaning cycles.



Pore Free Surface
Our FRP panels are robust with a resin rich, dense surface, free from voids or pores that can trap dirt and moisture.

Durable
Our wall panels are engineered to last for the life cycle of the building, while maintaining the same hygienic performance.

Glasbord® will stand up to the toughest conditions - we have the proof!

PROPERTIES

- unique Surfaseal finish making it stain resistant & easier to clean
- lowest overall total cost of ownership due to ROI over time
- chemical resistant and resistant to repetitive cleaning
- moisture & humidity resistant, mold & mildew free
- vapor barrier protection preventing transfer of spores
- robust panel with resistance to impact and scratches
- pore free surface, will not trap soil or bacteria
- easy and quick to install with no mechanical fixation
- fire rated: Class C, Class A (UL) and FM Global
- UL Greenguard Gold product certified for low chemical emissions, decreasing indoor pollution levels
- HACCP certified
- Standards met for:
  - particle emission, ISO 14644-1
  - biological resistance, ISO 846
  - chemical cleanability, ISO 2812-1
  - volatile organic compounds, ISO 16000-9
  - mold & mildew free, ASTM D3273 & ASTM D3274

APPLICATIONS

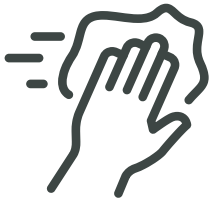
Our products have been used for over 65 years and are used today in every step of food's journey from food processing to table. We offer a wall covering system you can trust to protect your clean environments.

Restaurants:
- Kitchens
- Dining Rooms
- Bar Areas
- Store Rooms

Food Processing Plants:
- Cold Storage
- Slaughterhouse
- Bakery & Pasta
- Distribution Centers
- Water Bottling
- Warehouses

Healthcare:
- Patient Rooms
- Operating/ICU Rooms
- Corridors
- Waiting Areas
- Housekeeping Rooms

Cleanroom:
- Biopharma
- Labs
- Life Science Facility
- Pharmaceutical Plants



CLEANING

Our robust panels hold up under frequent maintenance cycles, even with caustic cleaning chemicals. Our panels will not stain or change color and they are designed to maintain their strength and integrity against even the most aggressive cleaners. The following have been tested and proven to be suitable for use in most exposure conditions:

- Spor-Klenz
- Process Vesphene
- Bleach fogged hydrogen peroxide (vaporized hydrogen peroxide aka VHP)
- Lysol

Will alternative products stand up to your conditions like our Glasbord will?

We have the proof, do you?

who we are

Crane Composites Inc., a subsidiary of Crane Co. (NYSE:CR), is the world's leading provider of fiber-reinforced composite materials.

The superior option

Since 1954, we have continued to pioneer numerous patented technologies for industrial and commercial product applications. Crane Composites fiber-reinforced panels (FRP) can be found in virtually every type of vertical market, from highly industrialized environments to stylish retail and hospitality settings.

No matter what the application, our products and team reflect our mission statement: we are a performance driven organization committed to global leadership and products of high-quality composite materials.

Customers benefit not only from the outstanding performance characteristics of our products, but also from our extensive support programs. Our expert product teams are focused on the needs of customers to provide unparalleled service and expertise.

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MADE IN THE USA