



## American Composites Manufacturers Association – Fire Committee

### Case History: Architectural Applications Involving Fire Performance

By filling in the following details about the application of your products and/or services, you will help the Fire Committee define viable market areas and give ACMA’s public relations firm the facts that could lead to a case history article in a trade magazine.

Please return this form to: Nicholas A Dembsey, Fire Committee Chair, [ndembsey@wpi.edu](mailto:ndembsey@wpi.edu); John Busel, Director Composites Growth Initiative, [jbusel@acmanet.org](mailto:jbusel@acmanet.org); and Doug Barno, [dsbgroup@alltel.net](mailto:dsbgroup@alltel.net).

*Your name:	Ghislain Beauregard	*Title:	President
*Company:	Arcoplast, Inc.	*Phone:	636-978-7781
*Address:	1873 Williamstown Drive	*Fax:	636-978-7782
*City:	St. Peters	*State:MO	*Zip: 63376
*Email:	ghislain@arcoplast.com		
	* must be completed		

Name of product involved: Arcoplast wall & ceiling systems  
(Attach available brochures, fact sheets, and other information.)

#### Customer/End User Info

*Contact person:	Dr. Clifford R. Roberts, D.V.M.	Title:	Director
Company:	University of California, San Francisco	*Phone:	415-476-1571
Address:	Medical Research Building II	Fax:	415-502-8252
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\*Describe customer’s business (including principle products manufactured at this location, unusual equipment designs or operating conditions, etc.)

Leading biomedical research and health science

\*Describe customer challenge

(problem needing correction, solutions tried before, materials used, area of operations, applications affected, etc.)

To create a state-of-the-art high-rise vivarium facility that would house a variety of small and large animals for the support of programs including cancer research, immunology, infectious disease, diabetes and hormone research. The facility had to include barrier and containment areas including quarantine. This facility posed unique challenges in the fact that it is fully intergrated with an existing medical research as well as hospital infrastructures. One of the primary concerns was to provide permanent wall and ceiling finishes that could resist daily sanitation regimen whilst maintaining its permanent finish and chemical resistance for long term performance and of equal concern, specifying a building product that would address safety and health considerations as well as addressing local and state building codes.

Arcoplast developed a composite wall and ceiling liner panel consisting of a non-combustible cement core with a fire rated resin and antimicrobial gel coat surface. The panels were manufactured in large flat molds and cut to a modular dimension for easy handling. A kerfed edge with a spline systems was designed to eliminate exposed fasteners and for easy installation. Aliphatic urethane jointing systems was also developed for a monolithic joint and radius edge finish. The high gloss antimicrobial gel coat provided a permanent cost efficient surface finish resistant to animal occupancies whilst providing state of the art clean rooms with optimal performance in contamination controlled environmnts. The fire rated resin and non-combustible cement core addressed the local and state building

codes. The Arcoplast composite panels had to meet the ASTM E 84 flame spread and smoke development requirements. The Arcoplast wall and ceiling composite panels further increased the authorities level of security by providing the toxicity test developed at the University of Pittsburg. The Arcoplast cement core sandwich panel meets the requirements for interior finish materials as defined by Title27, Chapter 1, Subchapter 5, Arcticle 5, of the Building Code of the City of New York.

\*Describe your solution (*product features & benefits; when put into service; approvals required*)

\*Describe results to demonstrate that composites “win” versus alternative materials  
(advantages gained, such as reduced maintenance, increased production or quality, cost savings, improved safety and/or environmental — see examples below)

- A. Improved safety with Arcoplast composite panel construction with a non-combustible cement core
- B. Reduced environmental risk by improved and permanent surface finish for contamination controlled environments
- C. Arcoplast wall and ceiling system that can resist to high pressure washdowns for sanitation
- D. Reduced maintenance cost through elimination of downtime and shutdowns created by frequent painting due to harsh elements
- E. High corrosion resistance required by daily sanitation regimen
- F. Composite wall and ceiling panels that do not support growth of mold, mildew and microbes
- F. High impact resistance crucial in animal holding areas and facilities
- G. Long term durability resulting in lower life cycle cost
- H. Exceptional design flexibility for clean room construction
- I. User friendly, product that could be installed by local tradesmen
- J. Modular components made easy for shipping, handling, storing and access to high rise construction
- K. Arcoplast composite modular panel systems installed at any time of construction phase

\*Are there any photographs, charts, or graphs available for use in the story?

Yes       No      (“X” fills; spacebar clears)

\*Has customer given permission to use their name in story?

Yes       No      (“X” fills; spacebar clears)

\*Will customer allow us to quote a management representative in the story?

Yes       No      (“X” fills; spacebar clears)

#### GENERAL BENEFITS EXAMPLES

- Fire Performance
- Light weight – reduced weight
- High strength
- Corrosion resistance
- Weather resistance
- High impact strength
- Radar transparency
- Non-magnetic
- Non-conductive
- High strength-to-weight ratio
- Design flexibility
- Energy efficient
- High dielectric strength (insulator)
- Dimensional stability
- Small to large part geometry
- Customized surface finish
- Environmentally sound or safe
- Others

#### RESULTS MESSAGE EXAMPLES

- Rapid installation – modular components, easier handling because it is lightweight
- Reduced or Low maintenance – no painting because color is molded in
- Reduced inspection – easier to inspect
- Parts consolidation – faster assembly and reduced installation time
- Lower operator fatigue
- Affordable
- Cost savings / cost effective– lower installed or life-cycle costs
- Reduced personal safety – less on the job injuries

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- Long term durability – extended service life
- Influenced styling/design – sculptural form providing design versatility
- Increased performance
- More attractive, functional, durable
- Reduced environmental risk - leading to reduced disposal issues
- Others