

arcoplast GFRP, ACRYLOYL PANELS

UNLIMITED DESIGNER SOLUTIONS FOR CRITICAL ENVIRONMENTS



Laboratory : GFRP Seamless Primary Barrier



Biosafety/ Biosecurity : BSL-3 A BSL-3 BSL-3Ag BSL-4

Food & Beverage

Healthcare

Nutraceuticals

Pharmaceuticals

Research Labs

Vivariums Animal Care

Acryloyl : Seamless primary barriers

Acryloyl Engineered Polymer Panels are designed for critical environments and high containment facilities, while providing a substantial savings over fiberglass composite panels.

Acryloyl EP architectural interior panel is based on advanced engineered polymers M⁴ creating the next generation interiors in laboratory designs. The incorporation of Engineered Polymers combined with the Arcoplast[®] "patent pending" joint system, sealing technology and craftsmanship will deliver the highest level of primary and secondary barrier construction for all environments where contamination control is critical.



Arcoplast[®] Engineered Polymer Systems added benefits and options

- Robust, maintenance-free, repairable in-place
- Thermo-formable for curved and custom applications
- Impact, corrosion and chemical resistant
- Made to withstand vigorous decontamination procedures
- Engineered Polymers Panel will not decay, dent or fade
- Impermeable throughout with unequalled aesthetics



**Designer
Labs Now
Available!**

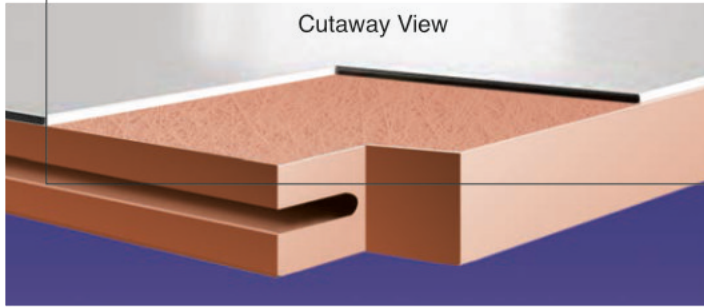
Panels meet and exceed high standards



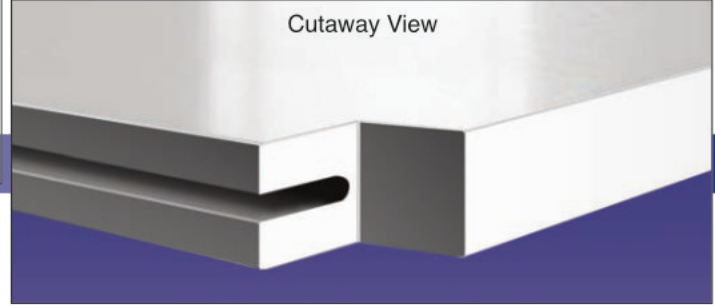
	Fiberglass Composite			Acryloyl Engineered Polymers			
Panel Surface							
Panel Surface	Gel Coat Side Only			Acrylic Finish on Face & Back Side			
Surface Finish	High Gloss			Dull, Satin & High Gloss			
Surface Profile	Smooth Surface			Sanded or Polished Surface			
Panel Dimension							
Thickness	6mm, 9.5mm, 12.5mm			6mm, 9.5mm, 12.5mm, 19mm			
Width	4'-0" (1.212m)			4'-0" (1.212m) up to 9'-0" (2.744m)			
Length	up to 30'-0" (9.15m)			up to 20'-0" (6m)			
Dimensional Tolerance	+/- 1/8" on length			non transformed '+/- 1/4" width +/- 1/2" length			
Panel Thickness	5mm	9.5mm	12.5mm	6mm	9.5mm	12.5mm	19mm
Lbs./Sq. Ft.	2	3.5	4.7	2	3.1	4	6.3
Kg/M²	9.7	17.6	22.9	9.7	15.1	19.5	30.2
Side Edge Profile							
Square Cut				✓	✓	✓	✓
Eased Side Edge	✓	✓	✓		✓	✓	✓
Grooved		✓	✓		✓	✓	✓
End Cut Profile							
Square Cut	✓	✓	✓	✓	✓	✓	✓
Eased Side Edge							
Grooved		✓	✓	✓	✓	✓	✓
Joint System							
Mechanical Spline		✓	✓		✓	✓	✓
Flush Seam	✓	✓	✓	✓	✓	✓	✓
Welded Seam					✓	✓	✓
Batten Cover	✓			✓	✓	✓	✓
Cam Lock							✓

Arcoplast Fiberglass Composite Panel - Arcoplast Acryloyl EP Panel Properties

Arcoplast® GFRP 9.5 mm Panel



Arcoplast® Acryloyl 12.5mm



Mechanical Properties	Joint Peel Strength Test - Interior Corner Assembly	55 lbf	92.78 lbf
	Seismic Shear Strength Test Panel - Spline Joint Assembly	396 lbf	380 lbf
	Seismic Shear Strength Test Lateral Movement - Corner Section Assembly	330 lbf	791 lbf
	Seismic Shear Strength Load Test (Peak Load) Solid Panel	556 lbf	629 lbf
	Pull-out Strength Of Variable Fasteners - Ex. #6 x 25 mm Pan Phillips SDS	573 lbs	733 lbs
	Partition Load Bearing Test	✓	✓
	Walk-On Ceiling System Load Test	✓	✓
	Arcoplast FEA Report on Structural Analysis - Seismic Loading Compliance	Pass	Pass
Physical Properties	Sound Absorption Test ASTM C 423-09a / E 795-05	0.05	0.05
	Sound Transmission Loss Test ASTM E 90-09 / E 413-10	57	59
	Specular Gloss Test ASTM D 523	99.7	97.8
	Impact Resistance Test - Mil 1073.2	18' x 2 lbs	11' x 2 lbs
	Barcol Test Indentation Hardness Test ASTM D 2583	56.8	63
	Flexural Properties For Reinforced Plastics Test ASTM D 790-03	10318 psi	8070 psi
	Compressive Strength Properties Test ASTM D 695-02a	15920 psi	12502 psi
	Tensile Properties Test ASTM D 638-03	10141 psi	3740 psi
	DTUL - Deflection Temperature Under Load ASTM D 648	185°F	200°F
	Coefficient of Linear Thermal Expansion ASTM D 696-03	27.5 x 10 ⁻⁶ in/in°F	22.43 x 10 ⁻⁶ in/in°F
	R-Value ASTM D177 Thermal Conductivity	0.1	0.8
	Water Vapor Transmission Test ASTM E 96-05	0.01	0.04
	Water Absorption ASTM D 570 (24 hrs)	0.01	0.04
	Surface Profile & Surface Finish Analysis ISO 10012-1	Pc750	Pc750
	Resistance to Mold on the Surface Test ASTM D3273	Pass	Pass
Fire and Smoke Development	Degree of Surface Disfigurement by Fungal/Algal Growth ASTM D3274	Pass	Pass
	Resistance to Bacteria ISO 846A-B-C	Pass	Pass
	ISO 9705 Annex B Full Scale Room Fire Test	Pass	Pass
	Classification of Reaction to Fire Performance in accordance with EN 13501-1 - Europe, Asia	B-s1-d0	B-s1-d0
	UL S-102 Test On Surface Burning Characteristics (Must be on full composite construction - Canada)	18,9 FS- 63, 4SD	10.8FS - 6.1SD
	UL 94 - 5VA - 500W Vertical Burning Test	Pass	Pass
	ASTM E-84 Test On Surface Burning Characteristics (Must be on full composite construction - USA)	20FS - 145SD	10FS - 0SD
	Toxicity Test - Measurement Of Acute Lethality Decomposition Products - UPIIT Protocol	MEA 414-04-M	MEA 64-96-M (Solid Colors)
Barrier Performance	Air Pressure Decay Test ASME N510 Nuclear Air Treatment Systems	Pass	Pass
	Air Pressure Decay Test Small Chamber BSL-3, BSL-4	Pass	Pass
	Air Pressure Decay Test On Accessories Relating to MEP	Pass	Pass
	Air Pressure Decay Test On Screw Penetrations	Pass	Pass
	Air Pressure Decay Test On Expansion Joint & Electrical Face Plates	Pass	Pass
	Supplemental Helium Leak Testing	Pass	Pass
	Window Panel Pressure Decay Test Report	Pass	Pass
Coloration Fastness	Coloration Test on Formaldehyde Gas Decontamination Procedure	Pass	Pass
	Coloration Test on Hydrogen Peroxide Vapor Decontamination Procedure	Pass	Pass
	Coloration Test on Chlorine Dioxide Decontamination Procedure	Pass	Pass
	UV Exposure Cycles Test	Pass	Pass
	Arcoplast surface and sealant chemical compatibility tests ISO 2812-4	Pass	Pass
	Arcoplast surface and sealant chemical compatibility tests ASTM D 1308-02	Pass	Pass
Compliance	Arcoplast cleanliness & stain resistance ISFA 2-01	Pass	Pass
	USDA, FDA, NIH, CDC, NIAID, CANADA AGRICULTURE Compliant	✓	✓
	Product Guide Specification Written According To (CSI) 3-Part Format	✓	✓
	City of New York Department of Buildings MEA 414-04-M	✓	✓
	Determination of Extractives Residue according to US FDA 21 CFR 177.2600	✓	✓
	Living Building Challenge 3.0 Red List		✓

THE HIGHEST LEVEL
OF INTERIOR BARRIER
CONSTRUCTION FOR
HIGH CONTAINMENT
AND CONTAMINATION
CONTROL.



Creating the next generation
of sealed interiors for critical
environments

Arcoplast has been pioneering the use of high tech interior surfaces for the architectural and design community for over 30 years. Since the beginning, we have stayed true to our mission to research, design and incorporate the best interior finishes that would become the industry solution for high containment and critical environments.

The addition of Acryloyl Engineered Polymers combined with the Arcoplast® "patent pending" joint system, sealing technology and craftsmanship facilitates the creation of next generation interiors in laboratory design.


arcoplast®
Interior Systems for Critical Environments
arcoplast.com

Advantages of the Arcoplast Systems

- Providing a permanent protective seal
- Rodent, vermin and fungi resistant
- Moisture and corrosion resistant
- Chemical resistant
- Fire-retardant resin
- Molded high density fiber glass core
- Extends life expectancy of structures
- Integrates with structural elevations
- Many surface colors, designs and finishes to choose from
- Thermoformable for curved and custom applications

1873 Williamstown Drive
St. Peters, Missouri 63376
Phone 636-978-7781
Fax 636-978-7782

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