arcoplast
BSL-3 and BSL-4

High Containment Facilities

High containment facilities constructed with Arcoplast wall and ceiling systems for sterile environments meet exacting regulatory requirements for commissioning, validation and qualification, up to and including BSL-4. Arcoplast wall and ceiling systems are designed for clinical, diagnostic, research and production facilities in new or existing buildings.

arcoplast®
WALL AND CEILING SYSTEMS

Composite Surfaces for Sterile Environments

www.arcoplast.com

Solid Glass and Resin Matrix Composite Sealed Systems

Product Information

Versatility for BSL-3 and BSL-4 Environments

When constructed with Arcoplast solid glass and resin matrix composite panels and components, a containment shell does not require costly concrete and steel liners. This reduces construction time and costs without compromising quality, security and environmental integrity. Containment facilities constructed with Arcoplast components form a sealed inner shell, meet air pressure decay standards, and comply with decontamination procedure requirements.

Containment facilities using Arcoplast wall and ceiling systems erected with conventional steel stud techniques are lightweight and meet BSL-3 and BSL-4 requirements, including USDA, FDA, NIH, CDC and NIAID construction, design and surface finish requirements for good manufacturing practices. They can provide the primary barrier for USDA ARS 242.1 BSL-3Ag applications.

Arcoplast contamination controlled environments are designed for high containment applications such as infectious disease research, aerobiology, biosecurity, animal testing and cleanrooms. Because they are leak-tight and easily cleaned, Arcoplast systems help protect both people and the environment when biosafety is vital.

Benefits

Sealed internal shells constructed with Arcoplast components:

- Offer maximum containment. Arcoplast components support monolithic designs through a seamless finish that ensures containment integrity.
- Provide hermetically sealed barriers. Arcoplast systems are dimensionally stable under extreme positive and negative pressures, very resistant to impacts and chemical resistant.
- Are super-hygienic. The Arcoplast surface for sterile environments is a permanent, extremely smooth, high-gloss, non-porous and impervious finish designed to withstand rigorous decontamination procedures.
- Meet specific facility requirements. Arcoplast fiber reinforced panel composite systems fulfill a wide range of construction needs, including wall liner panels, free standing partitions, wall resurfacings, walk-on ceilings and accessible ceiling panels.

Qualifications

Surface Burning Characteristics	ASTM E 84	Flame Spread - 22.5 Smoke Development - 39.9
Toxicity	New York City Approval # MEA 414-04-M	When Testing in Accordance with the Combustion Toxicity Protocol Developed at the University of Pittsburgh, the Arcoplast Cement Core Sandwich Panel Meets the Requirement for Interior Finish Material as Defined by Title 27, Chapter 1, Subchapter 5, Article 5, or the Building Code of the City of New York.
Water Vapor Transmission	ASTM E 96	Less Than 0.01 Perms
Light Reflectance/Gloss Property	ASTM D 523	99.7 from Light Source at 85 Degrees
Air Pressure Decay Test	ASTM E 2178	Pass - 4 In. W.C. (Negative/Positive)
Testing of Nuclear Ait Treatment Systems	ASME N510	Pass - 1000 Pa
Air Pressure Decay Test on Arcoplast face plate for Electrical Box Mounted on Arcoplast Surfaces	ASME N510	Pass - 1000 Pa
Air Pressure Decay Test on Penetrations 12” Stainless Steel Duct Mounted and Sealed with Arcoplast Finishing Compound	ASME N510	Pass - 1000 Pa
Decontamination Test Procedure on:	Paraformaldehyde Gas Decontamination Vapor-Phase Hydrogen Peroxyde Chlorine Dioxide	Arcoplast Panels Not Effected by Procedures

Applications

- BSL-3 and BSL-4 Laboratories
- BSL-3 Ag
- ABSL-3 and ABSL-4 Laboratories
- Biocontainment
- Nanotechnology Laboratories
- Vivarium/Vivaria
- Necropsy
- Surgery Suite
- Small and Large Animal Holding Rooms
- Cleanrooms

Installations

Arcoplast systems are in use at major research, clinical and production facilities, including:

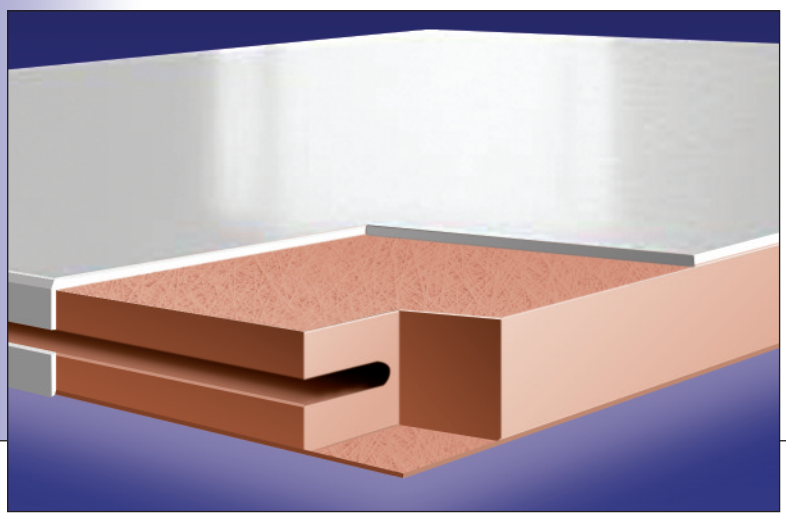
- Johns Hopkins Applied Physics Laboratory
- Perrigo Company
- Pfizer Inc.
- University of Alberta
- University of California, Berkely
- University of California, Irvine
- University of California, San Francisco
- University of Pittsburgh
- Utah State University
- Warnex Inc.

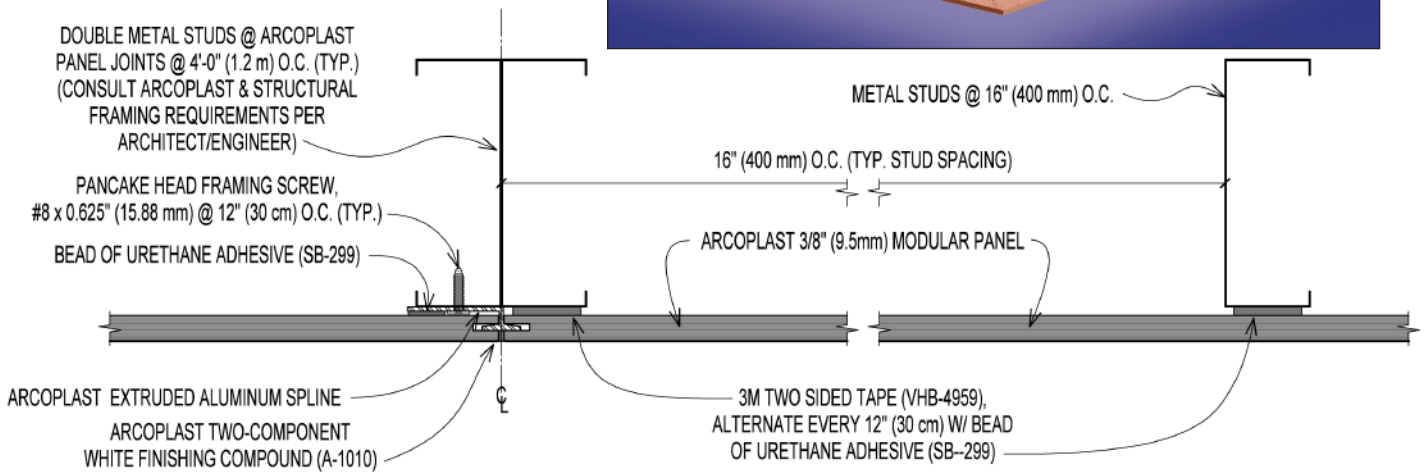
BSL-3 and BSL-4

Solid Glass and Resin Matrix Composite Sealed System

High Containment Facilities

BSL-3 and BSL-4 containment shells constructed with Arcoplast wall and ceiling systems and Arcoplast components use conventional steel stud construction. Arcoplast systems are easily integrated with windows, doors and mechanical penetrations to form a sealed inner shell.





CEILING AND WALL LINER FLUSH JOINT, SPLINE ATTACHMENT ASSEMBLY

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WALL AND CEILING SYSTEMS

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