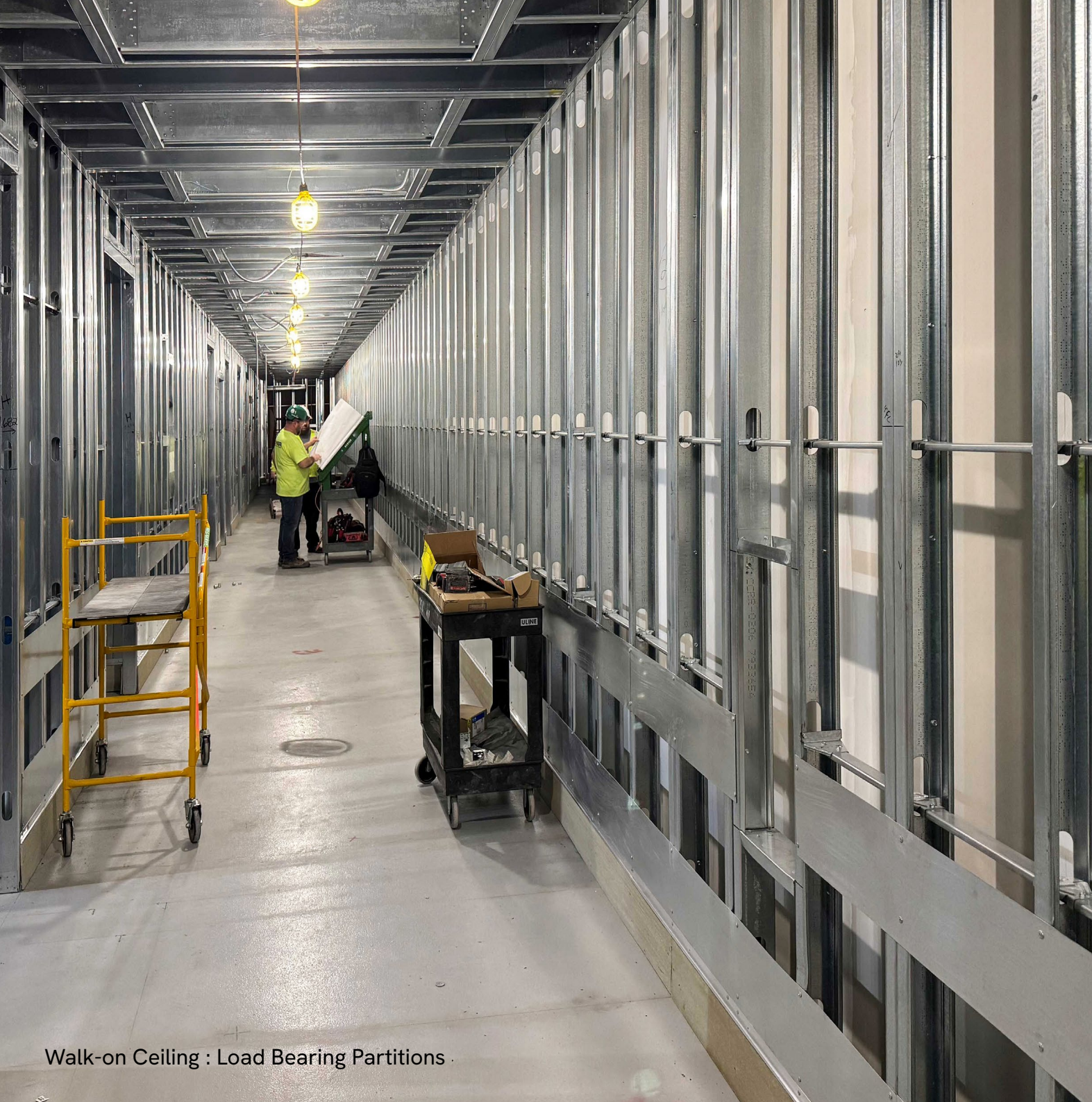




Arcoplast Dry Build

Primary Barriers Overview



Precision Engineering

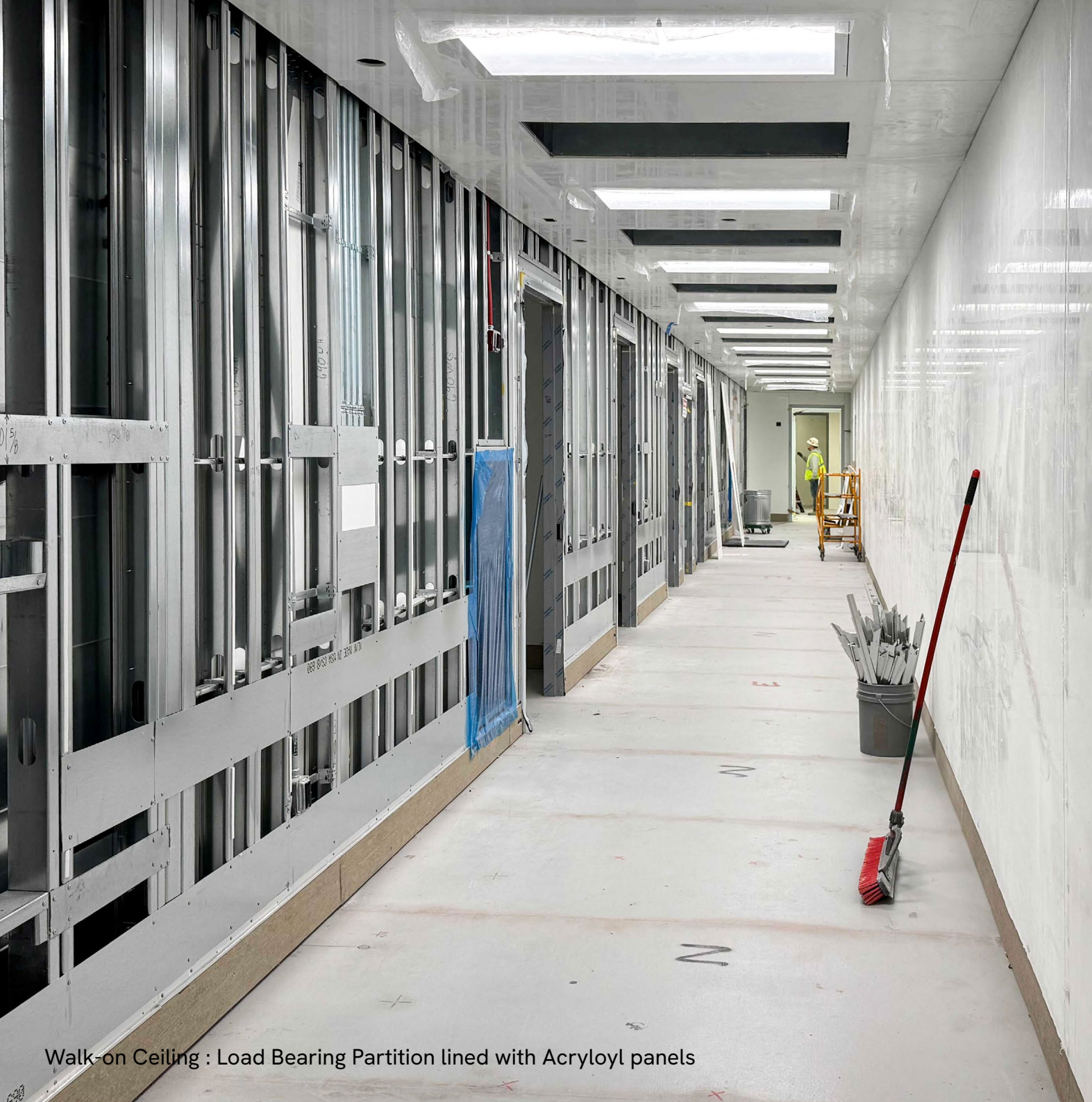
Arcoplast panels are manufactured in a controlled environment to specification, using only virgin materials to ensure all mechanical and physical properties render a consistent surface topography, chemical stability, durability and uniformed strength.

On-site flexibility saves time and waste

The Arcoplast Dry Build system involves no pre-engineering.

On the job Arcoplast primary barrier panels are able to be precisely and efficiently cut and tailored to specification. Penetrations for MEPs and direct attachment of fixtures are seamlessly sealed and finished.

The Arcoplast Dry Build system supports circular economy practices by employing systematic construction processes, leading to reduced labour and material costs.



Risk Management

The Arcoplast Dry Build installation system is engineered to comply with the following high containment standards : CL-3, CL-4, PC3, PC4, ABSL-3, BSL-3Ag, BSL-3, and BSL-4.

Prefabricated components and methods of standardized installation processes reduce on-site variables. There are no wet trades and this factor alone mitigates the risk of surface contamination.

Years of experience forged Arcoplasts Dry Build installation system as a methodical process of steps and sign-off procedures developed to ensure compliant, documented quality control. This is done through coordinated sequencing of panel fixing, adhesive curing, joint sealing and finishing, these critical steps ensure the integrity of the primary barrier.

The Arcoplast Dry Build system ensures installation consistency that aligns with cleanroom commissioning and performance qualification processes.

Walk-on Ceiling : Load Bearing Partition lined with Acryloyl panels



Walk on Ceiling

Architects & Engineers often ask the question :
Can Arcoplast BSL-3 & BSL-4 primary barriers
be designed with a walk on ceilings?

The answer is : **YES**

These two images depict a facility constructed
with a load-bearing support structure, designed
to accommodate an Arcoplast walk-on ceiling.

- ✓ Structural Steel Joists
- ✓ Load bearing partitions
- ✓ Metal Floor Decking
- ✓ Arcoplast Ceiling Liner





Acryloyl PC3 Lab : Acryloyl panels being installed

Installation

A well-trained crew can install an Arcoplast Primary Barrier quickly and efficiently using the Arcoplast methodical, step-by-step Dry Build System.

To save double handling and reduce material waste, Arcoplast panels are delivered to site, pre cut ready to install or can be supplied in designated lengths.

To cut and shape panels on-site, regular power tools and hand tools are used.

Fasteners are used in the installation process but never penetrate the primary barrier.

Brief description

A-2020 structural adhesive is used to adhere panels to framing and to bind panels together using the Arcoplast spline system. While A-2020 cures, panels are held in position with VHB tape. Full curing time is 4 hours.

A-1010 Bio-Seal is used to seamlessly seal and finish panel joints, MEP penetrations and surface mounted direct attachment of fixtures.



lighting housing

surface mount chase

electrical

Why Mockup?

Aspects of functional design

lab cabinets

HEPA filter

stainless steel corner guard

panel installation trial

Client comment regarding the mockup room :

" This was the best investment, money well spent. Throughout the job based on the different outcomes in the mockup-room, we were able to make informed decisions prior to the build, saving significant costs in time and materials ... "

direct attachment

CGMP compliant window

air pressure testing

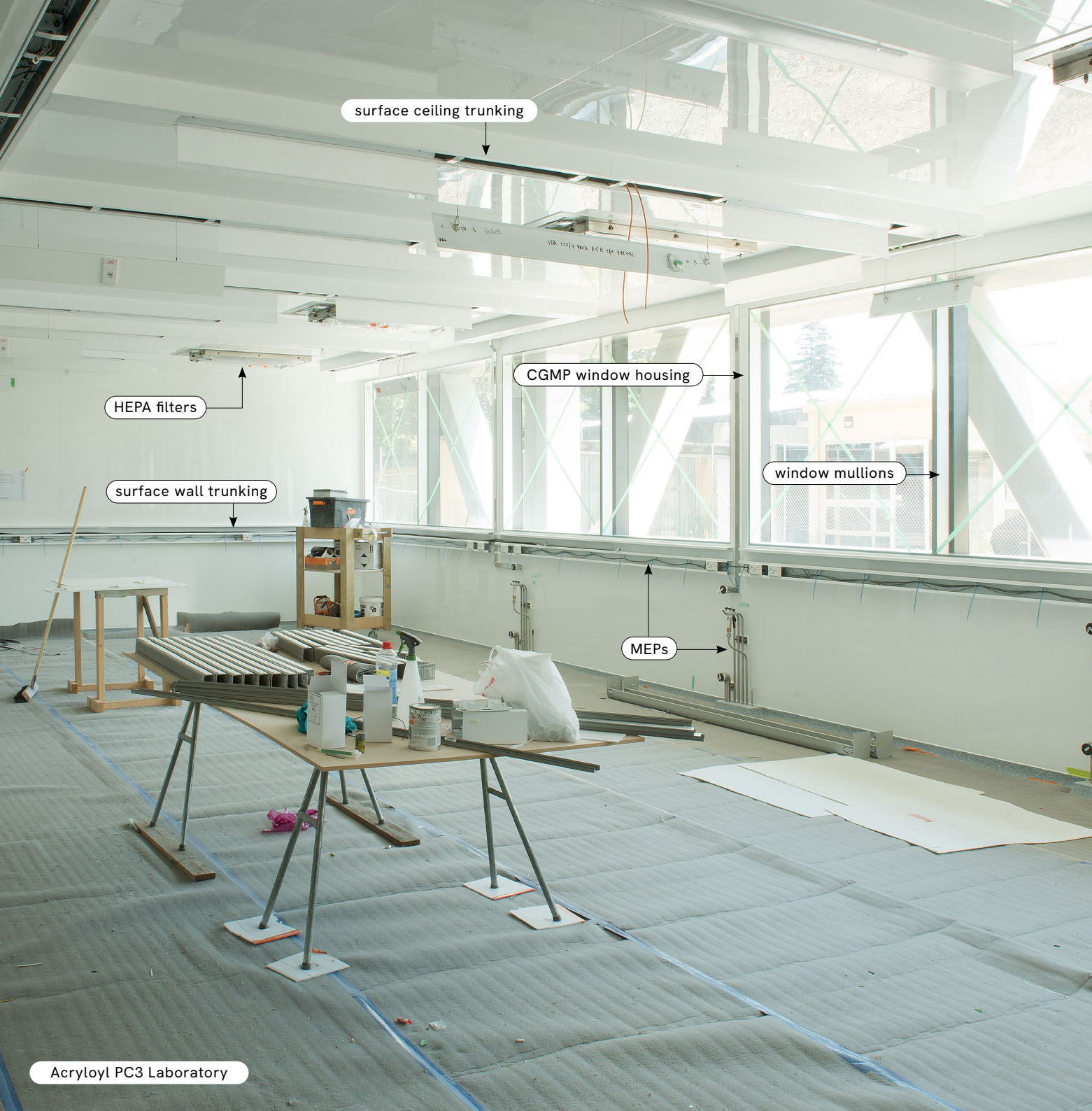
MEPs

MEPs

lab furniture

cleaning decon trial

floor base integration



Integration

Complex systems of pneumatic doors, HEPA filters, surface-mounted trunking, CGMP window housings and complex MEP services, present challenges across multiple levels.

Integration is not just inserting equipment into a space, everything must function on many levels : Pneumatically, the room must function as designed; physically and mechanically the Primary Barrier must maintain its integrity; and Biologically the barrier must function at a microscopic level to maintain containment integrity.

Not every project requires a mock-up room, but when used, it enables detailed interface checks, definition of tolerances, the coordinated refinement of installation methods and the development of team workflows. In tightly coordinated builds such as BSL-3 and BSL-4 laboratories, construction methodology is a critical factor.

The project end goal : Ensure the highest standards of cleanroom compliance and operational standards.



TR35 pultruded ceiling grid, fitted with iPanel insulated lay-in ceiling panels

Crew

We know, for many of the crew this will be their first experience building an Arcoplast high containment primary barrier laboratory.

Documentation

Arcoplast products are supported by training manuals and technical documents.

Training Courses

Arcoplast offer step-by-step training courses tailored to each aspect of the Dry Build Systems for : CL-3, CL-4, PC3, PC4, ABSL-3, BSL-3Ag, BSL-3, BSL-4 Primary Barriers. Also there are training courses for the Arcoplast TR35 FRP lay-in ceiling panel grid system.

On-Site Supervisors

Arcoplast On-site supervisors are trained and experienced tradespeople who work alongside contractors to ensure guaranteed outcomes.

Skilled Labour Database

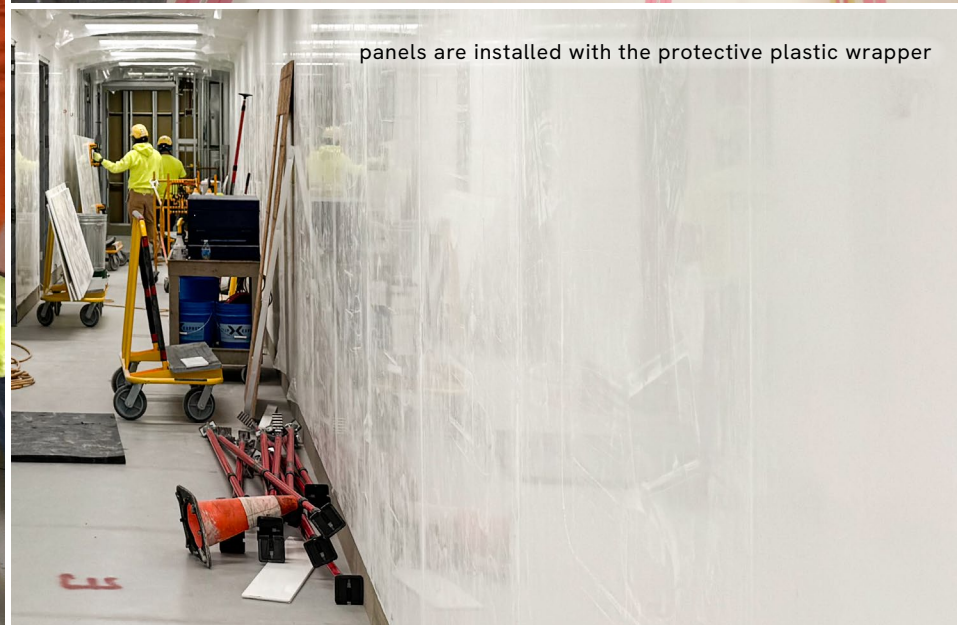
If you need experienced crew, Arcoplast maintains a database of skilled tradespeople in the USA and around the world.

Quality Control

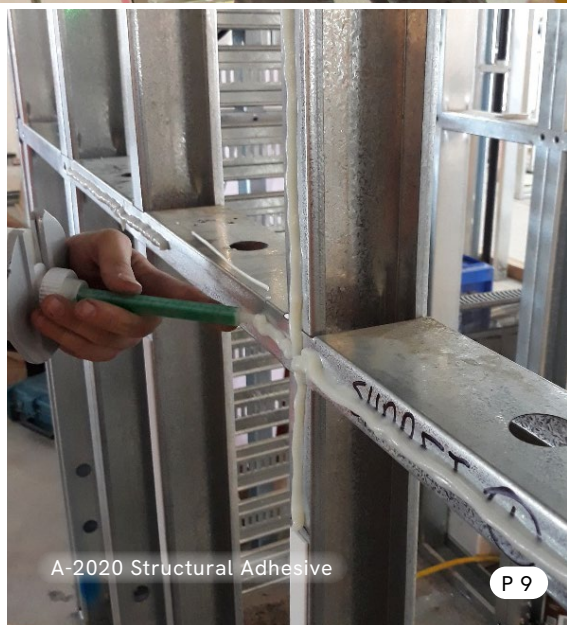
Arcoplast primary barrier installations must be carried out by skilled experienced trades people.



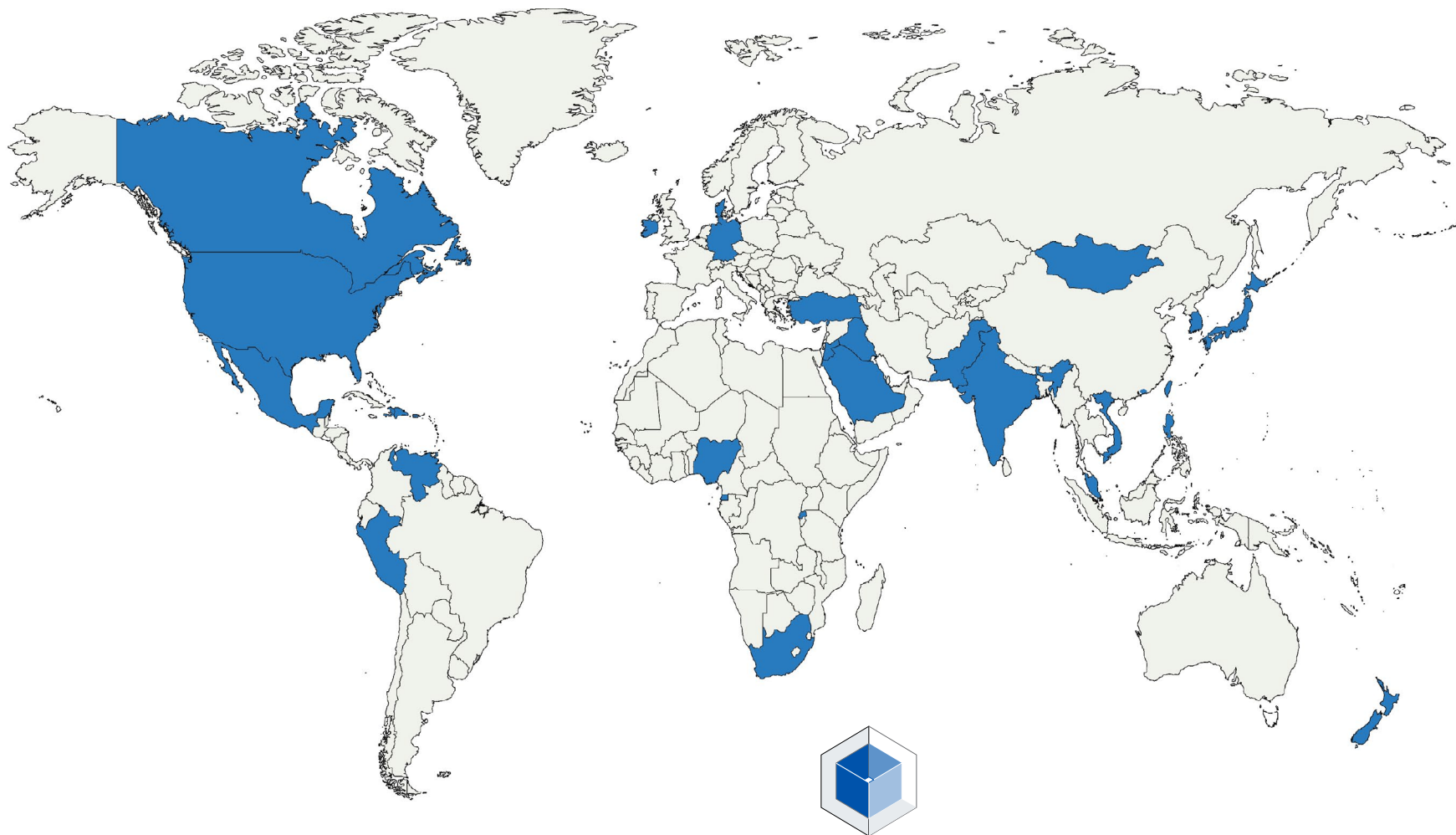
onsite application : A-1010 Bio-Seal three in one - Adhesive Sealant Finishing compound



panels are installed with the protective plastic wrapper



A-2020 Structural Adhesive



phone : 1 888 736 2726

fax : 636 978 7782

web : www.arcoplast.com

email : info@arcoplast.com

land address : 106 Crafton Drive, O'Fallon, Missouri 63366 USA

Disclaimer : All information is presented with the best of intentions. New data may arise or standards change, please be aware we can only offer what we know at the time. The information we offer is based on the testing and data we have conducted and collected to date. All images and information in this document is subject to Copyright©Arcoplast 2025