

### Bio/CR-1 GridLock® Panel (walls and ceilings)

#### General Description:

Bio/CR-1 system is part of the GridLock Biocontainment /Clean Room product line. The panels used in this system are 12 mm thick (.477") and are made of polymer, metal and fiberglass composite that form a durable composite panel for use in walls and hard lid ceilings. The exposed face is composed of a 090 polymer matrix reinforced with fibers with a consistent smooth face (no fiberglass print through). The polymer matrix/fibers surface finish is glossy and ASTM E 84 Class A for smoke and flame spread.

For a seamless installation the vertical edge is routed to form a modified recessed ship lap design that allows for direct fastening to the wall studs in the overlap. The final outer recess is then filled with a 100% solids LEED compliant urethane adhesive which also provides a sealed gloss finish. The surface finish of the system is dense, stain resistant, chemical resistant and impervious to water. It is non-generating for particulate matter and as such is ideal for use in BSL-3 and 4 facilities, standard animal holding, research laboratories and pharmaceutical production walls and ceilings.

The Bio/CR-1 "system" is designed specifically as a sealed seamless biocontainment and clean room application that is applicable to several industries. The system is considered "seamless" and there are no joint battens. Further the ability to mount these panels directly on studs reduces construction time and eliminates painting or repainting.

The same mounting system used to install the panels for walls is also used for ceilings as "hard lid" systems that are seamless and batten free.

**Cleaning:** GridLock Panels can withstand daily surface washing, wet wiping, dusting and vacuuming. They can withstand routine high-pressure washing and chemical disinfection and fumigation. The resinous finish will not support the growth of bacteria or mold. Ask your LSP Representative for more detailed maintenance instructions.

The panels have the following properties:

**Recycle Content:** Minimum 50%

**Fire Rating:** Class 1 ASTM E 84 for flame spread of 25 or less

**Light Reflectance @ 85:** 94.3

**Minimum Weight:** 3.1 lbs. per square foot

**Finish:** Polyester gel coat smooth

**Standard Sizes:** 47" x 10'

**Panel thickness:** 12 mm

**Color:** White

**Finish:** Gloss

**Hardness: ASTM D-785 46**

Barcol

**Flexural Mod ASTM D-790-07 :** 657,693

**Flexural Strength-ASTM D 790-07:** 6751 psi

**Water Vapor Transmission**

**ASTM E-96:** < 0.0001 perms

**Air Permeance ASTM E-2178 (L/s/m<sup>2</sup>):** 0.00001 @ 300 pa

**STC Rating ASTM E-90:** 32  
**Tensile Strength: ASTM D-638:** 3672 psi  
**Tensile Mod ASTM D-638:** 581,000  
**Coefficient of Linear Thermal Expansion CLTE (mm mm C) ASTM D-696:** 4.30 E -05  
**Compressive Strength ASTM D-695:** 5364 psi  
**Modulus: ASTM D695:** 49,873 psi

<b>Chemical Resistance</b>	20% Acetic Acid	Occasional Spill
	50% Citric Acid	Good
	20% Nitric Acid	Occasional Spill
	30% Hydrochloric Acid	Occasional Spill
	10% Hydrofluoric Acid	Occasional Spill
	Hydrogen Peroxide	Good
	40% Potassium Hydroxide	Good
	40% Sodium Hydroxide	Good
	50% Sulfuric Acid	Good
	Urea	Good

The joint adhesive/sealant has the following properties:

<b>Hardness Shore D</b>	<b>ASTM D-1706</b>	<b>70 - 80</b>
<b>Tensile Strength</b>	<b>ASTM D-638</b>	<b>3,000 psi min.</b>
<b>Flexural Strength</b>	<b>ASTM D-790</b>	<b>4,000 psi min.</b>
<b>Thermal Shock</b>	<b>Mil F-52505</b>	<b>No cracking or loss of adhesion</b>
<b>Abrasion Resistance (Taber Abrader, CS-17 Wheels, 1000 gm. load, 1000 cycles)</b>	<b>ASTM D-4060</b>	<b>.035 gm loss</b>
<b>Ultimate Elongation</b>	<b>ASTM D-638</b>	<b>20% min.</b>