

DIVISION _____

Specification Section # _____

GRIDLOCK BIO/CR-4B CEILING SYSTEM**PART 1 GENERAL**

Furnish and install the GridLock Bio/CR-4B Ceiling System designed for biocontainment and clean room applications as described in this Section. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specifications apply to work in this section.

1.1 RELATED WORK: (NOTE TO SPECIFIER: Include appropriate detail drawings and information pertinent to the specific project.)

1.2 SUBMITTALS

1.2.1 Submit # _____ samples of the materials to be used to show joining details as well as final panel finish.

1.2.2 All parties wishing to have materials considered as equals for this project must submit such materials for evaluation to the design professional at least 10 (ten) days prior to bid date. Bidders not complying with this requirement will be considered non-responsive.

1.3 QUALITY ASSURANCE

1.3.1 Provide Single Source responsibility for the supply of all finish materials used in the installation.

1.3.2 A Contractor approved by Manufacturer must perform installation.

1.4 DELIVERY, HANDLING AND STORAGE

1.4.1 Deliver materials packaged so that materials are clearly marked and identifiable showing the following:

- A) Product Name
- B) Manufacturer's Name
- C) Component Designation

1.4.2 Handle Materials by methods to prevent damage

1.4.3 Inspect direct job-site deliveries to assure that quantities are correct and that materials comply with specifications and are not damaged.

1.4.4 Replace, at no cost to owners, materials that are found defective either in manufacture, handling or storage.

1.4.5 Store materials on site at the final installation temperature for at least 24 hours prior to, during, and after installation.

1.5 WARRANTY

1.5.1 Provide a limited 10 year warranty for materials and installation against any defects in manufacturing and workmanship.

Life Science Products, Inc. Technical Specification
Gridlock BioCR-4B Ceiling Specification

1.6 JOB CONDITIONS

- 1.6.1 A Representative of the Manufacturer shall visit the job-site with the Contractor prior to installation to insure that field conditions are acceptable for installation.
- 1.6.2 For 24 hours before, during the installation, and for 72 hours after the installation, maintain temperature and relative humidity at in-service conditions.

PART 2 PRODUCTS

For the purposes of this specification, GridLock Bio/CR-4 B Ceiling System by Life Science Products, Inc. (800-638-9874) is used as the standard.

2.1 MATERIALS

- 2.1.1 System Overview: The system as specified shall consist of composite panels manufactured from materials having physical properties as specified in Section 2.1.3 below. Panels shall have a consistent smooth high gloss finish.
- 2.1.2 Panels: The panels used in this system shall be GridLock Bio/CR-4 composite panel series. The panels shall be 6 mm thick and shall be of an aggregate of components made of polymer, metal and polymer saturated fiber that form a durable composite Ceiling panel. The exposed face is composed of a polymer saturated fiber with a consistent smooth face. The composite surface finish is a semi-gloss and the panel assembly is ASTM E 84 Class A for smoke and flame spread. The panel will be supplied in standard 48" x 10' size. The vertical edge shall be square edge design. The vertical edges of the panel shall be directly fastened to the substrate using countersunk mounting screws so that the face of the screw is secured below the panel face elevation. The panel seam shall be covered with a fiberglass composite batten to match the surface texture of the panel. Inside corners shall be of a plastic composite with a 3 inch radius. Outside corner moldings shall be 16 gauge, 304 stainless steel corner guards with 1/8" radius and 3" wings. Stainless corner moldings shall be adhesive mounted
- 2.1.3 The panels shall have the following properties:

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

Light Reflectance @ 85: **94.3**

Minimum Weight: **1.7 lbs. per square foot**

Finish: **Polyester gel coat smooth**

Panel thickness: **6 mm**

Color: **White**

Finish: **Semi-Gloss**

Hardness: ASTM D-785 **46 Barcol**

Flexural Mod ASTM D-790-07: **557,693**

Flexural Strength-ASTM D 790-07: **5325 psi**

Water Vapor Transmission ASTM E-96: **< 0.0001 perms**

Air Permeance ASTM E-2178 (L/s/m²): **0.00001 @ 300 pa**

Tensile Strength: ASTM D-638: **3272 psi**

Tensile Mod ASTM D-638: **511,000**

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**

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PART 3 EXECUTION

- 3.0.1 Check with the panel manufacturer before installing the metal studs to determine the exact stud spacing. Install metal Ceiling studs in accordance with local applicable zoning and building codes but also to match the sizing for the panels.
- 3.0.2 Apply adhesive of type recommended by Manufacturer to the entire back side of the panel, all the way to the edge, prior to applying the panel. Follow Manufacturers recommendations for application and "open times" of the adhesive.
- 3.0.3 Panels are designed to be mounted directly to a series of acceptable substrates. Put the panels in place against the studs. Place fastening screws into the substrate at all sides of the panel to secure the edges of the panels first. Secondly, attach the panels to the substrate by inserting mounting screws in the joining joint between the panels so as not to assure that the screw head remains below the face of the panel.
- 3.0.4 Apply pressure to the center of the panel using protective prop poles until adhesive cures.
- 3.0.5 Fill the exposed seam with sealant and strike flush.
- 3.0.6 Apply adhesive sealant to both sides of the seam and apply the batten.
- 3.0.7 Allow the adhesive to set and apply a final smoothed bead of sealant along the vertical edges of the batten.
- 3.0.8 Inside corners shall be of a plastic composite with a 3 inch radius. Outside corner moldings shall be 16 gauge, 304 stainless steel corner guards with 1/8" radius and 3" wings. Stainless corner moldings shall be adhesive mounted.