



DIVISION \_\_\_\_\_

Specification Section # \_\_\_\_\_

**GRID-LOCK CEILING SYSTEM "DI" SPECIFICATION  
(Gloss Finish Panels)**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

1.1.1 Drawings and related general provisions of contract, including general and supplementary conditions and other related Division I specification sections apply to this section.

1.1.2 Refer to Division \_\_\_\_\_ (HVAC) and Division \_\_\_\_\_ (Lighting) for requirements for coordination drawings. (Note to specifier: In order to ensure sealed panels, no equipment intended to be suspended from ceiling and no permanent through ceiling mechanical work can be completed prior to ceiling installation. Further, it is important that lighting direction and placement be indicated on the reflective ceiling plans. Also indicate type of lighting and mounting required. Subsequent changes that occur during construction must be related to ceiling manufacturer or contractor as they occur.)

**1.2 SUBMITTALS**

1.2.1 Submit \_\_\_ set(s) of Manufacturer's data for  
A) Ceiling Units  
B) Suspension System  
C) Ceiling Locking Mechanisms

1.2.2 Submit \_\_\_ set(s) of drawings showing the placement of ceiling components in conjunction with the reflective ceiling plan.

**1.3 QUALITY ASSURANCE**

1.3.1 Provide all materials (panels, accessories, etc.) from a single supply source.

**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.

**Life Science Products, Inc. Technical Specification**  
Gridlock Ceiling System "DI" (Gloss Finish Panels)

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 two year material warranty against defects in manufacturing and a two year warranty against defects in installations.

**1.6 JOB CONDITIONS**

1.6.1 For 24 hours before installation, during the installation, and for 24 hours after installation of the ceiling, maintain temperature and relative humidity at in-service conditions.

1.6.2 Interior finish wet work such as plastering, concrete, and resinous wall coatings shall be completed and dry prior to installation of ceiling components.

1.6.3 Mechanical, electrical, HVAC and other work above the ceiling line which result in through-ceiling penetrations shall be completed, stubbed and approved prior to the start of the ceiling installation.

1.6.4 Mechanical installations below the ceiling line such as space heaters, piping and other work shall not be completed until the ceiling installation is completed.

**PART 2 - PRODUCTS**

2.1.1 Manufacturer of the ceiling system shall supply and warrant all components of the system with the exception of wire hangers. For the purposes of this specification, GRID-LOCK Ceiling System "DI" as manufactured by Life Science Products is used as the standard.

2.1.2 All suspension grid components shall be of pultruded PVC fiberglass construction with UL # 723 Flame Spread Rate of less than 7, Smoke development of 65, USDA and Agriculture Canada accepted.

2.1.3 The grid deflection shall not exceed 1/360 with a 6 pound per foot loading in a 4 foot span.

2.1.4 Assembly clips shall be manufactured from Grade 1, Type 2 virgin PVC, must comply with UL 94 V-0 and be USDA accepted.

**Life Science Products, Inc. Technical Specification**  
Gridlock Ceiling System "DI" (Gloss Finish Panels)

- 2.1.5 Ceiling Panels shall be constructed of closed cell foam core, and shall be 5/8" overall thickness with fiberglass reinforcement on both the top and bottom sides. Finish shall be Class 1 Fire Rated halogenated polyester resin and gel coat. The panels shall have the following properties:
- A) Fire rating Class 1 ASTM E84
  - B) Flame spread of 25 or less
  - C) Square edge detail
  - D) Minimum weight of 1.5 lb. per square foot
  - E) Gloss finish
- 2.1.6 The panel finish face shall possess the following characteristics:
- Impact Resistance (kj/m<sup>2</sup>): 64
  - Thickness of face glass: 1.8 mm
  - Reinforcement (gm/m sq.): 500 W.R. + 450 + 30 tissue
  - Total Weight (kg/m sq.): 2.9
  - Proportion of reinforcement (% by weight): 34
  - Tensile Strength (MPa): 120
  - Compressive Strength (MPa): 220
  - Flexural Strength (MPa): 170
  - Interlaminar Shear (MPa): 22
  - Youngs Modulus (E GPa): 9.0
  - Thermal Conductivity (W/mK): 0.16 at 20 degrees C.
  - Thermal Transmittance (W/m<sup>2</sup>K): 5.7 at 20 degrees C.
  - Coefficient of linear expansion: 22-40 x 10<sup>-6</sup>/K at 20 degrees C.
  - Operating Temperature: - 40 C. to + 50 C.
- 2.1.7 Ceiling panels are to be suspended in the grid matrix void of any hold down or locking clips. All panels will therefore be free access with the exception of those with through ceiling penetrations.

**PART 3 - EXECUTION**

- 3.1.1 Space hangers as required to accommodate specified ceiling panel dimensions. Lay hangers out for each room or space. Install additional hangers as required to support framing at columns, ducts and other through ceiling penetrations.
- 3.1.2 Keep main runners and carriers clear of abutting walls.
- 3.1.3 Install wall angle components by fastening them to the wall at a minimal 16" spacing and not more than 3" from the ends.
- 3.1.4 Caulk at all intersections of the wall angle and vertical surfaces and at all through ceiling penetrations.