



**SECTION 08 80 00**

**COMMERCIAL GLASS BLOCK WINDOWS / PANELS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Engineered Glass Block System

**1.2 RELATED SECTIONS**

- A. Section 05 50 00 – Metal Fabrications: Steel channels, sills, lintels and jambs.
- B. Section 07 90 00 – Joint Sealers.
- C. Section 09 90 00 – Paints and Coatings

**1.3 REFERENCES**

- A. ASTM E283 –04 Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure and Temperature Differences Across the Specimen.
- B. ASTM E330 –02 Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- C. ASTM E547 – 00 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference.
- D. ASTM C920 –08 Standard Specification for Elastomeric Joint Sealants.
- E. Tested in accordance with AAMA/WDMA/CSA 101/1.S.2/A440-05

**1.4 QUALITY ASSURANCE**

- A. Manufacturer
  - 1. Minimum of 10 years specialized experience in the manufacture of windows.
- B. Direct Representation
  - 1. The manufacturer shall have available a direct representative with full knowledge and experience of the product and systems for technical assistance.

## 1.5 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Product Data: Manufacturer's literature on each product to be used, including:

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Written installation instructions.

C. Verification Samples:

1. Two glass block units of each type specified, showing size, design, and pattern of faces as required for project.
2. Representative samples of assembly as required for project.

D. Test Reports

1. Submittal of test reports from independent laboratories indicating conformance to regulatory requirements shall be made available if required by architect.

## 1.6 DELIVERY, STORAGE AND HANDLING

A. Handle panels in a manner which will prevent undue stress on component parts, sealants and structural members. Do not rack or torque, or cause load forces in an inappropriate manner.

## 1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

## 1.8 WARRANTY

A. Provide manufacturers limited 10-year warranty.

## **PART 2 PRODUCTS**

### 2.1 SYSTEM DESCRIPTION

A. Design Requirements

1. Engineered system shall conform to the requirements specified for the particular items and shall be complete assemblies by a single manufacturer.

B. Performance Requirements

1. The system shall meet the design loads for the location of the installation as specified by the project engineer.

C. Basis for Design

1. The design for this window system is based on Pittsburgh Corning's LightWise Architectural Systems "Commercial Window."

2.2 MANUFACTURERS

A. Acceptable Manufacturer: Pittsburgh Corning Corporation, which is located at: 800 Presque Isle Drive, Pittsburgh, PA 15239-2799; Toll Free Tel: 800-545-5001; Tel: 724-327-6100; Fax: 724-387-3806; Email: [request info](mailto:requestinfo); Web: [www.pittsburghcorning.com](http://www.pittsburghcorning.com).

2.3 GLASS BLOCK PREFABRICATED SYSTEM

A. Glass Block: General.

1. Edge Coating: Polyvinyl Butyral (PVB)
2. Framing: 2-piece thermally-broken aluminum frame system

B. Glass Block: PC hollow glass block

1. Pattern: all available patterns
2. Nominal Size; all available sizes

C. Basis for Design

1. Pittsburgh Corning's LightWise Architectural Commercial Glass Block Windows

D. Physical Properties:

1. Weight Installed 12 to 14 lbs/sq. ft.
2. Thermal Conductance (U Value): 0.45 Btu/hr sq. ft. deg F
3. Thermal Resistance (R Value): 2.24 deg F hr sq. ft/Btu
4. Visible Light Transmission: 55% to 90% depending on pattern
5. Sound Transmission: STC 35 to 40

2.4 ACCESSORIES

A. Sealant (caulk): Non-staining; waterproof mastic; silicone type meeting the requirements of ASTM C920

B. Aluminum 2-piece Channel System: anodized or powder coated as required.

C. Anchorage: Self-tapping screws and masonry anchors per substrate

D. Shims: Plastic type shims as required

### **PART 3 EXECUTION**

#### **3.1 EXAMINATION**

A. Do not begin installation until substrates have been properly prepared.

B. Notify architect of unsatisfactory preparation before proceeding.

C. Verify that channels for support at head, jambs and sills are properly installed.

#### **3.2 PREPARATION**

A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

#### **3.3 INSTALLATION**

A. Install Glass Block System in strict compliance with the manufacturers' specifications, sizing, anchorage charts and installation instructions including all materials, accessories, workmanship and cleaning.

#### **3.4 CLEANING**

A. Remove excess sealant from glass surfaces immediately following application.

#### **3.5 PROTECTION**

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION