

**SECTION 08 80 00  
GLAZING**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies glass, related glazing materials and accessories. Glazing products specified apply to factory or field glazed items.

**1.2 RELATED WORK**

- A. Factory glazed by manufacturer in following units:
  - 1. Section 08 51 13, ALUMINUM WINDOWS.

**1.3 LABELS**

- A. Temporary labels:
  - 1. Provide temporary label on each light of glass identifying manufacturer or brand and glass type, quality and nominal thickness.
  - 2. Label in accordance with NFRC (National Fenestration Rating Council) label requirements.
  - 3. Temporary labels shall remain intact until glass is approved by Project Engineer.
- B. Permanent labels:
  - 1. Locate in corner for each pane.
  - 2. Label in accordance with ANSI Z97.1 and SGCC (Safety Glass Certification Council) label requirements.
    - a. Tempered glass.
    - b. Laminated glass or have certificate for panes without permanent label.
    - c. Organic coated glass.

**1.4 SUBMITTALS**

- A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Certificates:
  - 1. Certificates stating that wire glass, meets requirements for safety glazing material as specified in ANSI Z97.1.
  - 2. Certificate on shading coefficient.
  - 3. Certificate on "R" value when value is specified.
- C. Warranty: Submit written guaranty, conforming to General Condition requirements, and to "Warranty of Construction" Article in this Section.
- D. Manufacturer's Literature and Data:
  - 1. Glass, each kind required.
  - 2. Glazing cushion.
  - 3. Sealing compound.

### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Schedule delivery to coincide with glazing schedules so minimum handling of crates is required. Do not open crates except as required for inspection for shipping damage.
- B. Storage: Store cases according to printed instructions on case, in areas least subject to traffic or falling objects. Keep storage area clean and dry.
- C. Handling: Unpack cases following printed instructions on case. Stack individual windows on edge leaned slightly against upright supports with separators between each.

### 1.6 PROJECT CONDITIONS

- A. Field Measurements: Field measure openings before ordering tempered glass products. Be responsible for proper fit of field measured products.

### 1.7 WARRANTY

- A. Warranty: Conform to terms of "Warranty of Construction", FAR clause 52.246-21.

### 1.8 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.
- B. American National Standards Institute (ANSI):
  - Z97.1-04 ..... Safety Glazing Material Used in Building - Safety Performance Specifications and Methods of Test.
- C. American Society for Testing and Materials (ASTM):
  - C1363-05 ..... Thermal Performance of Building Assemblies, by Means of A Hot Box Apparatus
  - C542-05 ..... Lock-Strip Gaskets.
  - C716-06 ..... Installing Lock-Strip Gaskets and Infill Glazing Materials.
  - C864-05 ..... Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
  - C920-05 ..... Elastomeric Joint Sealants.
  - C1036-06 ..... Flat Glass.
  - C1048-04 ..... Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.
  - C1172-03 ..... Laminated Architectural Flat Glass.
  - C1349-04 ..... Architectural Flat Glass Clad Polycarbonate.
  - C1376-03 ..... Pyrolytic and Vacuum Deposition Coatings on Flat Glass.
  - D635-06 ..... Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastic in a Horizontal Position.
  - D4802-07 ..... Poly (Methyl Methacrylate) Acrylic Plastic Sheet.
  - E84-08..... Surface Burning Characteristics of Building Materials.

E330-02.....Structural Performance of Exterior Windows, Curtain Walls, and  
Doors by Uniform Static Air Pressure Difference.

E2190-08.....Insulating Glass Unit

D. Commercial Item Description (CID):

A-A-59502 .....Plastic Sheet, Polycarbonate

E. Code of Federal Regulations (CFR):

16 CFR 1201 - Safety Standard for Architectural Glazing Materials; 1977, with 1984 Revision.

F. National Fire Protection Association (NFPA):

80-08 .....Fire Doors and Windows.

G. National Fenestration Rating Council (NFRC):

Certified Products Directory (Latest Edition).

H. Safety Glazing Certification Council (SGCC):

Certified Products Directory (Issued Semi-Annually).

I. Underwriters Laboratories, Inc. (UL):

752-06 .....Bullet-Resisting Equipment.

J. Unified Facilities Criteria (UFC):

4-010-01-2007.....DOD Minimum Antiterrorism Standards for Buildings

## **PART 2 - PRODUCT**

### **2.1 GLASS**

A. Use thickness stated, unless specified otherwise in assemblies.

B. Low-E Tempered Glass (Typical 4-Track Double Hung Interior Sash):

1. ASTM C1048, Kind FT, Condition C, Type I, Class 1, Quality q3 with low emissivity pyrolytic coating having an E of 0.15.

2. Thickness, 4.8 mm (3/16 inch).

C. SEU Clear Tempered Glass (Typical 4-Track Double Hung Exterior Sash):

1. Exterior Pane, ASTM C1048, Kind FT, Condition A, Type I, Class 1, Quality q3, 3/16 inch thick.

2. Interior Pane, ASTM C1048, Kind FT, Condition A, Type I, Class 1, Quality q3, 3/16 inch thick.

3. Total Thickness, 5/8 inch.

### **2.2 GLAZING ACCESSORIES**

A. As required to supplement the accessories provided with the items to be glazed and to provide a complete installation. Ferrous metal accessories exposed in the finished work shall have a finish that will not corrode or stain while in service.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

A. Verification of Conditions:

1. Examine openings for glass and glazing units; determine they are proper size; plumb; square; and level before installation is started.
  2. Verify that glazing openings conform with details, dimensions and tolerances indicated on manufacturer's approved shop drawings.
- B. Advise Contractor of conditions which may adversely affect glass and glazing unit installation, prior to commencement of installation: Do not proceed with installation until unsatisfactory conditions have been corrected.
- C. Verify that wash down of adjacent masonry is completed prior to erection of glass and glazing units to prevent damage to glass and glazing units by cleaning materials.

### **3.2 PREPARATION**

- A. For sealant glazing, prepare glazing surfaces in accordance with GANA-02 Sealant Manual.
- B. Determine glazing unit size and edge clearances by measuring the actual unit to receive the glazing.
- C. Shop fabricate and cut glass with smooth, straight edges of full size required by openings to provide GANA recommended edge clearances.
- D. Verify that components used are compatible.
- E. Clean and dry glazing surfaces.
- F. Prime surfaces scheduled to receive sealants, as determined by preconstruction sealant-substrate testing.

### **3.3 INSTALLATION - GENERAL**

- A. Install in accordance with GANA-01 Glazing Manual and GANA-02 Sealant Manual unless specified otherwise.
- B. Glaze in accordance with recommendations of glazing and framing manufacturers, and as required to meet the Performance Test Requirements specified in other applicable sections of specifications.
- C. Set glazing without bending, twisting, or forcing of units.
- D. Do not allow glass to rest on or contact any framing member.
- E. Glaze doors and operable sash, in a securely fixed or closed and locked position, until sealant, glazing compound, or putty has thoroughly set.
- F. Patterned Glass:
  1. Install units with one patterned surface with smooth surface on the weather side.
  2. Install units in interior partitions with pattern in same direction in all openings.
- G. Tempered Glass: Install with roller distortions in horizontal position unless otherwise directed.

### **3.4 REPLACEMENT AND CLEANING**

- A. Clean new glass surfaces removing temporary labels, paint spots, and defacement after approval by Project Engineer.
- B. Replace cracked, broken, and imperfect glass, or glass which has been installed improperly.

- C. Leave glass, putty, and other setting material in clean, whole, and acceptable condition.

### **3.5 PROTECTION**

- A. Protect finished surfaces from damage during erection, and after completion of work. Strippable plastic coatings on colored anodized finish are not acceptable.

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