

SECTION 088000 GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A Glass for Doors and windows.
- B Glazing units.
- C Glazing compounds.

1.02 RELATED REQUIREMENTS

- A Section 081113 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.

1.03 REFERENCE STANDARDS

- A 16 CFR 1201 - Safety Standard for Architectural Glazing Materials Current Edition.
- B ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test 2015 (Reaffirmed 2020).
- C ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers 2005 (Reapproved 2019).
- D ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.
- E ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass 2018.
- F ASTM C1193 - Standard Guide for Use of Joint Sealants 2016.
- G GANA (GM) - GANA Glazing Manual 2022.
- H GANA (SM) - GANA Sealant Manual 2008.
- I GANA (LGRM) - Laminated Glazing Reference Manual 2019.
- J IGMA TM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use 1990 (2016).

1.04 SUBMITTALS

- A Product Data on Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- B Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.
- C Certificate: Certify that products of this section meet or exceed specified requirements.
- D Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A Perform Work in accordance with GANA (GM), GANA (SM), GANA (LGRM), and IGMA TM-3000 for glazing installation methods.
- B Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.06 FIELD CONDITIONS

- A Do not install glazing when ambient temperature is less than 40 degrees F.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A Float Glass Manufacturers:

1. Guardian Glass, LLC: www.guardianglass.com/#sle.
2. Pilkington North America Inc: www.pilkington.com/na/#sle.
3. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com/#sle.

2.02 GLASS MATERIALS

- A Float Glass: Provide float glass based glazing unless otherwise indicated.

1. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
2. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.

2.03 GLAZING UNITS

- A Monolithic Safety Glazing: Non-fire-rated.

1. Applications:
 - a. Glazed lites in doors, except fire doors.
 - b. Other locations required by applicable federal, state, and local codes and regulations.
 - c. Other locations indicated on drawings.
2. Glass Type: Fully tempered safety glass as specified.
3. Tint: Clear.
4. Thickness: 1/4 inch, nominal.

2.04 GLAZING COMPOUNDS

- A Butyl Sealant: Single component; ASTM C920 Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.

- B Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; nonbleeding, nonstaining; ASTM C920 Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25; color as selected.

- C Manufacturers:

1. Dow Corning Corporation: www.dowcorning.com/construction/#sle. Dow Corning Corporation: www.dowcorning.com/construction/#sle.
2. Pecora Corporation: www.pecora.com/#sle.
3. Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com/#sle.

2.05 ACCESSORIES

- A Setting Blocks: Neoprene, with 80 to 90 Shore A durometer hardness; ASTM C864 Option I. Length of 0.1 inch for each square foot of glazing or minimum 4 inch by width of glazing rabbet space minus 1/16 inch by height to suit glazing method and pane weight and area.

- B Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option I. Minimum 3 inch long by one half the height of the glazing stop by thickness to suit

application, self adhesive on one face.

- C Glazing Tape, Back Bedding Mastic Type: Preformed, butyl-based, 100 percent solids compound with integral resilient spacer rod applicable to application indicated; 5 to 30 cured Shore A durometer hardness; coiled on release paper; black color.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

- A Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B Verify that the minimum required face and edge clearances are being provided.
- C Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.
- D Verify that sealing between joints of glass framing members has been completed effectively.
- E Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.
- B Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION, GENERAL

- A Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.
- B Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.
- C Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.
- D Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.
- E Set glass lites in proper orientation so that coatings face exterior or interior as indicated.
- F Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, etc.

3.04 CLEANING

- A Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- B Remove nonpermanent labels immediately after glazing installation is complete.
- C Clean glass and adjacent surfaces after sealants are fully cured.
- D Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.05 PROTECTION

- A After installation, mark pane with an 'X' by using removable plastic tape or paste.
- B Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION