Welcome to the SAFTI*FIRST*™ Guide Specification System prepared as an aid to specifiers in preparing written construction documents. For specification assistance with specific product applications, please contact SAFTI*FIRST*™. To download an electronic copy, please visit www.safti.com.

SPECIFICATION
SECTION 08 8810: FIRE RATED GLASS & FRAMING
SuperLite™ II-XL 45 minute and
SuperLite™ II-XL 45 minute with Starphire® Ultra-Clear Glass by PPG

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Fire rated glazing
   1. SuperLite™ II-XL 45 safety rated, fire protective glazing with fire resistive qualities for interior and exterior applications.
   2. Applications of fire rated glazing includes:
      a. Fire rated glazing as vision lites in door assemblies.
      b. Fire rated glazing as sidelites, windows, transoms in fire rated frames.

B. Related sections:
   1. Section 01 3323: Shop Drawings, Product Data and Samples.
   2. Section 08 8000: Glazing.
   3. Section 08 5130: Steel Window.
   4. Section 08 1110: Steel Doors and Frames.
   5. Section 08 1400: Wood Doors and Frames.
   6. Section 08 1120: Aluminum Doors and Frames.
   7. Section 08 5110: Aluminum Windows.
   8. Section 08 1113: Hollow Metal Doors and Frames.
   9. Section 08 7000: Finish Hardware.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. ASTM E119: Methods for Fire Tests of Building Construction and Materials.
   2. ASTM E152: Methods for Fire Tests of Door Assemblies.
   3. ASTM E163: Methods for Fire Tests of Window Assemblies.
   4. ASTM E2074: Standard Test Method for Fire Tests of Door Assemblies, including Positive Pressure Testing of Side-hinged and Pivoted Swinging Door Assemblies.
   5. ASTM E2010-1: Standard Test for Positive Pressure of Fire Tests of Window Assemblies.

B. National fire Protection Association (NFPA):
   1. NFPA 80: Fire Doors and Windows.
   2. NFPA 251: Fire Tests of Building Construction and Materials.
   3. NFPA 252: Fire Tests of Door Assemblies.
   4. NFPA 257: Fire Tests of Window Assemblies.

C. Underwriters Laboratories, Inc. (UL):

1. UL 9: Standard for Safety of Fire Tests of Window Assemblies.
2. UL 10 B: Standard for Safety of Fire Tests of Door Assemblies.
3. UL 10 C: Standard for Safety of Positive Pressure Tests of Door Assemblies.
4. UL 263: Fire Tests of Building Construction and Materials.

D. Standard Council of Canada:
   1. ULC Standard CAN4-S101: Fire Tests of Building Construction and Materials.
   2. ULC Standard CAN4-S104: Fire Tests of Door Assemblies.
   3. ULC Standard CAN4-S106: Fire Tests of Window Assemblies.

E. Consumer Product Safety Commission (CPSC):
   1. CPSC 16 CFR 1201: Safety Standard for Architectural Glazing Materials.

F. Glass Association of North America (GANA)
   1. GANA – Glazing Manual.
   2. FGMA – Sealant Manual.

G. National Fenestration Rating Council (NFRC)
   1. NFRC 100: Procedure for Determining Fenestration Product U-Factors.
   2. NFRC 200: Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.

H. [American Recovery and Reinvestment Act
   1. Section 1605, Title XVI Buy American Provision]

I. [Insert building code used by Authority Having Jurisdiction]

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide a fire rated glazing manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage, or failure.
   1. Fire Rating: 45 minutes with hose stream.
   2. Safety rated, fire protective glazing with fire resistive qualities tested in accordance with ASTM E119, NFPA 80, NFPA 251, NFPA 252, NFPA 257, UL 9, UL 10B, UL 10C and UL 263.
   3. Testing Laboratory: Fire test shall be conducted by a nationally recognized independent testing laboratory.

B. Listings and Labels:
   1. Fire rated glazing shall be under current follow-up services by nationally recognized independent testing laboratory approved by OSHA and maintain a current listing or certification. Assemblies shall be labeled in accordance with limits of listings.

1.04 SUBMITTALS

A. Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedure Section.

1. Shop Drawings: Submit shop drawings showing layouts, profiles and product components.
2. Samples: Submit 12x12 glass samples.
3. Technical Information: Submit latest edition of manufacturer's product data.

1.05 DELIVERY, STORAGE AND HANDLING

A. General: Comply with Division 1 Product Requirements Sections.

B. Ordering: Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.

C. Delivery: Deliver materials to specified destinations in manufacturer or distributor's packaging.

D. Storage and Protection: Store off ground, under cover, protected from weather and construction activities and at temperature conditions recommended by manufacturer.

1.06 PROJECT CONDITIONS

A. Field Measurements: Verify actual measurements for openings by field measurements before fabrication. Show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.07 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document. Manufacturer's warranty is not intended to limit other rights that the Owner may have under the Contract Documents.
   1. Warranty Period: 5 years from date of shipping.

PART 2 PRODUCTS

2.01 FIRE RATED GLAZING

A. Material: SuperLite™ II-XL 45 minute fire protective glazing with fire resistive qualities.

B. Manufacturer: SuperLite™ II-XL as manufactured and distributed by SAFTI *FIRST*.
   1. Contact: 100 N Hill Drive, Suite 12, Brisbane, CA 94005; Telephone 888.653.3333; Fax 888.653.4444; email info@safti.com; Web site www.safti.com.
   2. Fire rated glass and framing must be provided by a single-source, US manufacturer. Distributors of fire rated glass and framing are not to be considered as manufacturers.

C. Design Requirements:

1. Make-up: Must be comprised of an inboard and outboard lite of [clear tempered] [Starphire® Ultra-Clear Low-Iron Tempered Glass by PPG] protecting a clear, fire resistive, intumescent interlayer.
2. Thickness: 3/4" (19 mm) standard to 1/2" (13 mm) thin profile.
3. Weight: 8-lbs/sq. for standard 3/4" (19 mm) standard profile.
4. Dimensions: Must meet max. clear view area of 4,952 sq. in., measuring at least 124 in. on the long side.
5. Visible Light Transmission: Must meet [0.851 with clear tempered] [0.905 with Starphire]
6. U-Factor: Must meet 0.99 with standard clear tempered make-up.
7. NFRC 100 & 200: must provide a finite element computer thermal modeling and calculations through NFRC CMAST.
8. NFRC Certifications in conjunction with GPX or CW Framing by SAFTI *FIRST*. Must be used as an assembly.
   4.1. Must meet NFRC 100 rated U-Factor of 0.40 when insulated with Versalux Blue or Solarban 60.
   4.2. Must meet NFRC 200 rated SHGC of 0.34 when insulated with Versalux Blue or Solarban 60.
   4.3. Must meet NFRC 500 rated Condensation Resistance of 56 when insulated with Versalux Blue or Solarban 60.
9. Sound Transmission Class: Must provide a minimum of STC 40 rating in 3/4" (19 mm) standard profile.
10. Outdoor/Indoor Transmission Class: Must provide minimum OITC 37 rating in 3/4" (19 mm) standard profile.
11. Appearance: Must be tint-free, optically clear fire resistive glazing.
12. Fire Rating: Must be fire rated to 45 minutes with hose stream and meet ASTM E-119.
13. Impact Safety Resistance: CPSC 16 CFR 1201 Cat. I & II.
14. Hard Body Impact Classification: Must meet ASTM C1629/C1629M Level 3.
15. Soft Body Impact Classification: Must meet ASTM E695 Level 3.
16. Surface Abrasion Resistance: Must meet ASTM D4977 Level 3.
17. Customization: Available in insulated, energy performance, bullet-resistant, blast-resistant, hurricane-resistant, laminated, tinted, patterned, frosted, mirrored, reflective, segmented, decorative and more.

D. Manufacturer's Fire Rated Glazing Material:
   1. Each piece of fire-rated glazing material shall be labeled with a permanent logo including name of product, manufacturer, testing laboratory, fire rating period and safety glazing standards.
   2. Glazing materials installed in Hazardous Locations, subject to human impact, shall be certified and permanently labeled as meeting applicable requirements reference in NFPA 80:
      a. CPSC 16 CFR 1201 Cat. I & II

E. Substitutions: No substitutions allowed.

2.02 MATERIALS

A. Glazing Accessories: Manufacturer recommended fire rated glazing accessory as follows:

1. Glazing with EPDM tape or other listed flame resistant gasket material and calcium silicate setting blocks.

2.03 RELATED PRODUCTS

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Note: Basis of design for fire rated framing system is GPX™ Framing as manufactured by SAFTI *FIRST*™.

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A. Glazing shall be installed in an equally rated framing system.

B. Pressure glazing is allowed.

2.04 SOURCE QUALITY

A. Obtain fire rated glazing products from a single manufacturer.

B. Fabrication Dimensions: Fabricate to approved dimensions. The general contractor shall guarantee dimensions where practicable within required tolerances.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data including product technical bulletins and installation instructions.

3.02 EXAMINATION

A. Site Verification of Conditions: Verify substrate conditions, have been previously installed under other sections, and are acceptable for product installation in accordance with manufacturer's instructions.

3.03 INSTALLATION

A. Installation shall be in strict accordance with the fire glazing material manufacturer's specifications. Field cutting or tampering is strictly prohibited.

3.04 CLEANING AND PROTECTION

A. Protect glass from contact with contaminating substances resulting from construction operations. Remove such substances by method approved by manufacturer.

B. Wash glass on both faces not more than four days prior to date schedule for inspections intended to establish date of Substantial Completion. Wash glass by method recommended by glass manufacturer.

C. Remove temporary coverings and protection of adjacent work areas.

D. Remove construction debris from project site and legally dispose of debris.

END OF SECTION

In the interest of continuous improvement of its product line, SAFTI*FIRST*™ reserves the right to modify its products' composition, colors, textures, sizes, and other physical and performance attributes and these guide specifications at any time. SAFTI*FIRST*™ makes no expressed or implied warranties regarding content, errors, or omissions in the information presented. Specifications modified or rewritten not in conformance with manufacturer's standard processes, products, and procedures may void warranties and related remedies.