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 88 13: FIRE-RATED GLAZING
SuperLite® II-XLM 60 minute

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Fire rated glazing
   1. SuperLite® II-XLM 60 fire resistive, safety rated glazing material for interior and exterior applications.
   2. Applications of fire rated glazing includes:
      a. Fire rated glazing as door vision lites, sidelites, borrowed lites, windows, transoms and transparent wall applications in fire rated frames.

B. Related sections:
   1. Section 01 33 23: Shop Drawings, Product Data and Samples.
   2. Section 08 80 00: Glazing.
   3. Section 08 88 00: Special Function Glazing
   4. Section 08 12 13: Hollow Metal Frames
   5. Section 08 12 16: Aluminum Frames
   6. Section 08 12 16.13: Fire-Rated Aluminum Frames
   7. Section 08 14 33: Stile and Rail Wood Doors
   8. Section 08 41 13.13: Fire-Rated Aluminum Framed Entrances and Storefronts
   9. Section 08 43 13.13: Fire-Rated Aluminum Storefronts
   10. Section 08 44 13: Glazed Aluminum Curtain Walls
   11. Section 08 44 18: Glazed Steel Curtain Walls

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 Window 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. American National Standards Institute (ANSI):
1. ANSI Z97.1: Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.

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

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: 60 minutes with hose stream.

2. Fire resistive, safety rated glazing 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 a 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 8x8 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. Do not expose to temperatures greater than 120 degrees F or less than the minimum -20 degrees F during storage and transportation. Do not expose non-PVB side of glass to UV light. Store sheets vertically. Do not lean.

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-XLM 60 minute fire resistive with hose stream.

B. Manufacturer: SuperLite® II-XLM as fabricated and distributed by SAFTI *FIRST*®.
   1. Contact: 100 N Hill Drive, Suite 12, Brisbane, CA 94005; Telephone 888.653.3333; 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: Comprised of multiple sheets of glass laminated with a clear fire resistive intumescent interlayer.
   2. Thickness: 1" (25 mm) standard.
   3. Weight: 12.3 lbs./sq. ft. in " (25 mm) standard profile.
   4. Clear View Dimensions: Maximum 3,855 sq. in. (87-5/8" x 87-5/8") for walls and 3,855 sq. in. (87-5/8" x 87-5/8") in doors.
   5. 5. Visible Light Transmission: 81% for 1" (25 mm) standard.
   6. U-Value: 0.881 for 1" (25 mm) standard.
   7. R-Value: 1.14 for 1" (25 mm) standard.
   8. Sound Reduction: Rw=42 dB for 1" (25 mm) standard.
   9. Appearance: Must be tint-free, optically clear fire rated glazing.
   10. Fire Rating: Must be fire rated to 60 minutes with hose stream and meet ASTM E-119.
   11. Impact Safety Resistance: CPSC 16 CFR 1201 Cat. I & II and ANSI Z97.1.
   12. Customization: Available in energy-saving insulated units, decorative, security 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 Tape: Closed cell foam, coiled on release paper over adhesive on one side, maximum water absorption volume of 2%, designed for compression of 24% to effect an air and vapor seal.
   2. Silicone Sealant: One-part neutral curing silicone, medium modulus sealant, Type S; Grade NS; Class 25 with additional movement capability of 50 percent in both extension and compression (total 100 percent); Use (Exposure) NT; Uses (Substrates) G, A, and O as applicable. Available Products:
      a. Dow Corning 795 – Dow Corning Corp.
      b. Siliglaze-II 2800 – General Electric Co.
      c. Spectrem 2 – Tremco Inc.
   3. Setting Blocks: Calcium silicate; glass width by 3” x 1/4” thick.
   4. Cleaners, Primers and Sealers: Type recommended by manufacturer of glass and gaskets.

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 GPX Architectural Series Framing, SAFTI *FIRST*® EZ Frame System or an equally rated framing system.

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. Comply with referenced GANA standards and instructions of manufacturers of glass, glazing sealants, and glazing compounds.

B. Protect glass from edge damage during handling and installation. Inspect glass during installation and discard pieces with edge damage that could affect glass performance.

C. Cut glazing tape to length and set against permanent stops, flush with sight lines to fit openings exactly, with stretch allowance during installation.

D. Place setting blocks located at quarter points of glass with edge block no more than 6- inches from corners.

E. Glaze vertically into labeled fire-rated metal frames or partition walls with same fire rating as glass and push against tape for full contact at perimeter of pane or unit.

F. Place glazing tape on free perimeter of glazing in same manner described above.

G. Do not remove protective edge tape.

H. Install removable stop and secure without displacement of tape.

I. Do not pressure glaze.

J. Glaze exterior openings with PVB layer toward the exterior of the building.

K. Knife trim protruding tape.

L. Apply cap bead of silicone sealant along void between the stop and the glazing, to uniform line, with bevel to form watershed away from glass. Tool or wipe sealant surface smooth.

M. Provide minimum 1/4 inch edge clearance.

N. Install in vision panels in fire-rated doors to requirements of NFPA 80.

O. Install so that appropriate permanent lab markings remain permanently visible.

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

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