

This GGI Specification was prepared as an aid to specifiers preparing written construction documents. For specification assistance with specific product applications, please contact GGI. To download an electronic copy, please visit www.generalglass.com.

SPECIFICATION
SECTION 08 8810 - FIRE-RATED GLASS
PYROGUARD by GGI

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fire-rated glazing materials, tested without hose stream, installed as vision lites in fire-rated doors.

B. Related Sections include the following:

1. Section 06 40 00 "Architectural Woodwork" for wood frames for transoms, borrowed lights.
2. Section 08 11 00 "Metal Doors and Frames" for vision panels in interior or exterior doors.
3. Section 08 14 16 "Flush Wood Doors" for vision panels in interior or exterior doors.
4. Section 08 14 33 "Stile and Rail Wood Doors" for vision panels in interior or exterior doors.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM E2010-01: Standard Test Method for Positive Pressure Fire Tests of Window Assemblies.

B. American National Standards Institute (ANSI):

1. ANSI Z97.1: Standard for Safety Glazing Materials Used in Buildings

C. Glass Association of North America (GANA):

1. GANA – Glazing Manual.
2. FGMA – Sealant Manual.

D. National Fire Protection Association (NFPA):

1. NFPA 80: Fire Doors and Windows.
2. NFPA 252 – Fire Tests of Door Assemblies.

E. Underwriters Laboratories, Inc. (UL):

1. UL 10B – Fire Tests of Door Assemblies.
2. UL 10C – Positive Pressure Fire Tests of Door Assemblies.

F. Standard Council of Canada:

1. ULC Standard CAN4-S104: Fire Tests of Door Assemblies.
2. CAN/ULC-S101M: Standard Methods of Fire Endurance Tests.

G. <Insert building code name used by authority having jurisdiction>.

1.3 DEFINITIONS

- A. Manufacturer: A firm that produces primary glass, fabricated glass or framing as defined in referenced glazing publications.

1.4 SUBMITTALS

- A. Comply with requirements of Section 01 33 00<Insert Section #>.
- B. Product data: Submit manufacturer's technical data for each glazing material required, including installation and maintenance instructions.
- C. Certificates of compliance from glass and glazing materials manufacturers attesting that glass and glazing materials furnished for project comply with requirements. Separate certification will not be required for glazing materials bearing manufacturer's permanent label designating type and thickness of glass, provided labels represent a quality control program involving a recognized certification agency or independent testing laboratory acceptable to authority having jurisdiction.
- D. Product Test Listings: From UL indicating fire-rated glass complies with requirements, based on comprehensive testing of current product.
- E. Samples (optional). For following products:
 - 1. Glass sample-as provided by manufacturer

1.5 QUALITY ASSURANCE

- A. Glazing Standards: FGMA Glazing Manual and Sealant Manual.
- B. Fire Protective Rated Glass: Each lite shall bear permanent, non-removable label of UL certifying it for use in tested and rated fire protective assemblies.
- C. Fire Protective Glazing Products for Door Assemblies: Products identical to those tested per ASTM E 152, classified and labeled by UL or other certification agency acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle materials under provisions of Section 01 60 00<Insert Section #>.
- B. Deliver materials to specified destination in manufacturer's or distributor's packaging, undamaged, complete with installation instructions.
- C. Store off ground, under cover, protected from weather and construction activities.

1.7 WARRANTY

- A. Provide the PYROGUARD standard manufacturer's warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURER / SUPPLIER

- A. PYROGUARD distributed by GGI. Contact: 101 Venture Way, Secaucus, NJ 07094-1808; Telephone 800.431.2042; Fax 201.553.1851; email info@generalglass.com; Web site www.generalglass.com.

2.2 PERFORMANCE REQUIREMENTS

- A. Fire-rated 3-PLY laminated glazing material listed for use in impact safety-rated locations such as doors.

2.3 MATERIALS-GLASS

- A. Fire Rated Glazing: Composed of wired glass with a surface-applied fire-rated film.
- B. Properties:
 - 1. Thickness: 5/16" (7.2 mm)
 - 2. Weight: 2.4 lbs./sq. ft.
 - 3. Fire-rating: 20 minutes without hose stream for doors.
 - 4. Impact Safety Resistance: ANSI Z97.1 Class U/B and/or CPSC 16CFR1201 Cat. I. Positive Pressure Test: UL 10C; passes.
- C. Listings and Labels: Permanently label each piece of PYROBEL with the PYROBEL logo, UL logo and fire rating, and the appropriate marks as approved by the local authority having jurisdiction.
- D. Fire Rating: Fire rating classified and labeled by UL for fire rating scheduled at opening locations on drawings, when tested in accordance with [ASTM E2010-01] [ULC Standards CAN4 S-104 and CAN4 S-106] [NFPA 257] [UL 9 and UL 10C].
- E. Substitutions: No substitutions allowed.

2.4 GLAZING COMPOUND FOR FIRE-RATED GLAZING MATERIALS

- A. Glazing Tape: Closed cell polyvinyl chloride (PVC) foam, coiled on release paper over adhesive on two sides, maximum water absorption by volume of 2 percent.
- B. [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:
 - 1. Dow Corning 795 - Dow Corning Corp.
 - 2. Silglaze-II 2800 - General Electric Co.
 - 3. Spectrem 2 - Tremco Inc.]
- C. Setting Blocks: Neoprene, EPDM, or silicone; tested for compatibility with glazing compound; of 70 to 90 Shore A hardness.
- D. Cleaners, Primers, and Sealers: Type recommended by manufacturer of glass and gaskets.

2.5 FABRICATION

- A. Fabricate glass and other glazing products in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with recommendations of product manufacturer and referenced glazing standard as required to comply with system performance requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine glass framing, with glazier present, for compliance with the following:
 - 1. Manufacturing and installation tolerances, including those for size, squareness, offsets at corners.
 - 2. Minimum required face or edge clearances.
 - 3. Observable edge damage or face imperfections.
- B. Do not proceed with glazing until unsatisfactory conditions have been corrected.
- C. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings that are not firmly bonded to substrates.

3.2 INSTALLATION (GLAZING)

- A. Comply with referenced FGMA 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. Set units of glass in each series with uniformity of pattern, draw, bow, and similar characteristics.
- D. Cut glazing tape to length and set against permanent stops, flush with sight lines to fit openings exactly, with stretch allowance during installation.
- E. Place setting blocks located at quarter points of glass with edge block no more than 6 inches from corners.
- F. Glaze vertically into labeled fire-rated metal frames with same fire rating as glass and push against tape for full contact at perimeter of pane or unit.
- G. Place glazing tape on free perimeter of glazing in same manner described above.
- H. Install removable stop and secure without displacement of tape.
- I. [Use specified glazing compound, without adulteration; bed glazing material in glazing compound; entirely fill all recess and spaces. Provide visible glazing compound with smooth and straight edges.]
- J. Install in vision panels in fire-rated doors to requirements of NFPA 80.
- K. Install so that appropriate [UL] [PYROGUARD] markings remain permanently visible.

3.3 PROTECTION AND CLEANING

- A. Protect glass from contact with contaminating substances resulting from construction operations. Remove any such substances by method approved by glass manufacturer.
- B. Wash glass on both faces not more than four days prior to date scheduled for inspections intended to establish date of substantial completion. Wash glass by method recommended by glass manufacturer.

3.4 GLAZING SCHEDULE

Rating	Assembly	Max. Exposed Area (Sq. In.)	Max. Width Of Exposed Glazing (In.)	OR	Max. Height Of Exposed Glazing (In.)	Stop Height
20 min.	Doors	1,404	28		62	5/8"

END OF SECTION