

SECTION 088100—GLASS—PYRAN® PLATINUM-F GLASS CERAMIC

PART 1 -GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fire-rated glazing materials intended for use in [doorlights] [transoms] [sidelights] [windows] in fire-rated frames.

B. Related Sections include the following:

1. Section 081100 – “Metal Doors and Frames”.
2. Section 081200 – “Metal Frames”.
3. Section 081300 – “Metal Doors”.
4. Section 081400 – “Wood Doors”.
5. Section 085100 – “Metal Windows”.
6. Section 085200 – “Wood Windows”.

1.2 REFERENCES

- A. UL 9 – Fire Tests of Window Assemblies.
- B. UL 10B – Fire Tests of Door Assemblies.
- C. UL 10C – Positive Pressure Fire Tests of Door Assemblies.
- D. UBC 7-2 (1997) – Positive Pressure Standard.
- E. UBC 7-4 (1997) – Fire Test of Window Assemblies.
- F. NFPA-80 – Fire Doors and Windows.
- G. NFPA-252 – Fire Tests of Door Assemblies.
- H. NFPA-257 – Fire Tests of Window Assemblies.
- I. ASTM E2010-01 – Standard Test Method for Positive Pressure Fire Tests of Window Assemblies.
- J. ASTM E2074-00 – Standard Test Method for Positive Pressure Fire Tests of Door Assemblies.
- K. ULC CAN4-S104 – Fire Tests of Door Assemblies.
- L. ULC CAN4-S106 – Fire Tests of Window Assemblies.

1.3 PERFORMANCE REQUIREMENTS

- A. Fire-rated glass-ceramic, transparent and wireless, with a surface-applied film, for use in door lights, transoms or sidelights and windows with fire rating requirements from 20 minutes to 90 minutes with hose stream test in impact safety-rated locations.
- B. Conforms to positive pressure test standards.

1.4 SUBMITTALS

- A. Comply with requirements of Section 013000.
- 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 material fabricators 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 of glass, fire rating and mark of recognized testing laboratory Provided labels represent a quality testing laboratory acceptable to authority having jurisdiction.

- D. Product testing listing: From testing agency indicating fire-rated glass complies with requirements, based on comprehensive testing of current product.
- E. Samples: Submit, for verification purposes, a sample for each type of glass indicated.

#### 1.5 QUALITY ASSURANCE

- A. Glazing Standards: GANA Glazing Sealant Manual.
- B. Fire-Rated Glass: Each lite shall bear permanent, nonremovable label from the testing agency certifying it for use in tested and rated fire protective assemblies.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle materials under provision of Section 016000.
- 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 manufacturer's limited warranty under provision of Section 017000.

### PART 2 -MATERIALS

#### 2.1 MANUFACTURERS

- A. Manufacturer: PYRAN Platinum-F fire- and safety-rated glass-ceramic as manufactured by SCHOTT Technical Glass Solutions GmbH, Jena/Germany and supplied by InterEdge Technologies/AGC Flat Glass North America, Sausalito, CA, Telephone (877) 376-3343, Fax (415) 289-0326, website: [www.firesafe-glass.com](http://www.firesafe-glass.com).
- B. Properties:
  - 1. Thickness: 3/16 inch (5mm).
  - 2. Film: 3M Scotchshield Ultra Film.
  - 3. Weight: 2.5 lbs./sq. ft.
  - 4. True color rendition.
  - 5. Approximate Visible Transmission: approximately 80%
  - 6. Fire-rating: Up to 90 minutes with hose stream test (up to 180 minutes in doors).
  - 7. Impact safety rating: ANSI Z97.1 and CPSC 16CFR1201 (Cat. I and II).
  - 8. Surface finish: Mirror-like.
  - 9. Manufactured by a special float process.
  - 10. Environmentally-friendly glass-ceramic contains no hazardous heavy metals.
- C. Maximum sheet sizes: approximately 43" x 77".
- D. Labeling: Permanently label each lite of PYRAN Platinum-F fire-rated glass-ceramic with product and manufacturer's name, mark from the authorized testing agency, fire rating, etc., according to code requirements.

- E. Fire Rating: Fire rating tested and listed by UL for fire rating scheduled at opening locations on drawings, when tested in accordance with [UL 9, UL 10B and UL 10C] [UBC 7-2 and UBC 7-4] [NFPA-252 and NFPA-257] [ASTM E2010-01 and ASTM E2074-00] [ULC CAN4-S104 and ULC CAN4-S106].

## 2.2 GLAZING COMPOUND FOR FIRE-RATED GLAZING MATERIALS

- A. Glazing Tape: Closed cell polyvinyl chloroxide (PVC) foam, Pemko Manufacturing Company, Ref. FG3000S90 or Unifrax Corporation Fiberfrax Alumino-Silicate fiber glazing tape.
- B. Setting Blocks: Calcium silicate: Width of glass x 3” x 1/4”
- C. Cleaners, Primers, and Sealers: Type recommended by manufacturer of glass and gaskets.

## 2.3 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 -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 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. 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 or partition walls 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. Provide minimum edge clearance of 1/4 inch (+1/8 inch, -1/16 inch) and a minimum edge cover of 3/8 inch for steel systems or 1/4" for wood beaded systems.
- I. Install removable stop and secure without displacement of tape.
- J. Install so that appropriate 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.)	Max. Height Of Exposed Glazing (In.)	Stop Height
Up to 90 minutes	Doors Non-Temp Rise	2,736	36	76	5/8"
Up to 180 minutes	Doors Temp Rise and Non-Temp Rise	100	12	33	1/2"
Up to 90 minutes	Other than Doors	3,422	76	76	5/8"

END OF SECTION