SCHOTT PYRAN® Platinum
Fire-Rated Glass-Ceramic

Specifications

Section 08 81 00 according to CSI MasterFormat 2004
Fired-Rated Glass: SCHOTT PYRAN® Platinum

Part 1 – General

1.1 Summary
- A. Section Includes:
  1. Fire-rated glazing materials intended for use in transoms, windows and sidelites in fire-rated frames.
- B. Related Sections:
  1. Section 08 11 00 – Metal Doors and Frames
  2. Section 08 12 00 – Metal Frames
  3. Section 08 51 00 – Metal Windows
  4. Section 08 52 00 – Wood Windows

1.2 References
- A. UL 9 - Fire Tests of Window Assemblies
- B. UBC 7-2 - Positive Pressure Standard
- C. UBC 7-4 - Fire Test of Window Assemblies
- D. NFPA 80 - Fire Doors and Windows
- E. NFPA 257 - Fire Tests of Window Assemblies
- F. ULC CAN4-S106 - Fire Tests of Window Assemblies.

1.3 Performance Requirements
- A. Fire-rated glass-ceramic, transparent and wireless, for use in transoms and windows with fire rating requirements from 20 minutes to 90 minutes with hose stream test in non-impact, non-safety-rated locations.
- B. Conforms to positive pressure test standards.
- C. Environmental Certification- Minimum Cradle to Cradle Certified, Silver, by MBDC
  1. Conservation of energy and water in manufacturing process: 20% electricity from renewable sources, gray water replaces 90% of process water, all process water recirculated
  2. Raw material batch includes 40-50% recycled cullet sourced internally and from cut-offs and scrap returned from fabricators
  3. No hazardous heavy metals such as antimony and arsenic included in formulation

1.4 Submittals
- A. Comply with requirements of Section 01 30 00.
- B. Product data: Submit manufacturer's technical data for each glazing material required, including installation and maintenance instructions.
  1. Glazing materials bear manufacturer's permanent label designating type of glass, fire rating and UL mark. Provided labels represent a quality control program involving a recognized certification agency or independent testing laboratory acceptable to authority having jurisdiction.
  2. Product test listings: From UL indicating fire-rated glass complies with requirements, based on comprehensive testing of current product.
- C. Samples: Submit, for verification purposes, a sample for each type of glass indicated.

SCHOTT PYRAN® Platinum
Fire-Rated Glass-Ceramic

Specifications

1.5 Quality Assurance
- A. Glazing standards: GANA Glazing Manual and GANA Sealant Manual
- B. Fire-rated glass: Each lite shall bear a permanent, non-removable label from Underwriters Laboratories 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 01 60 00.
- 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

Provide manufacturers limited warranty under provision of Section 01 70 00.

Part 2 – Products

2.1 Fire-Rated Glazing Materials
- A. Manufacturer: PYRAN® Platinum fire-rated glass-ceramic manufactured by SCHOTT Technical Glass Solutions GmbH, Jena, Germany and supplied by SCHOTT North America, Inc., Louisville, KY, Telephone 1.502.657.4417, Fax 1.502.966.4976.
- B. Properties:
  1. Thickness: 3/16" (5mm)
  2. Weight: 2.5 lbs/ft²
  3. Clear; No amber tint
  4. Visible light transmission: approximately 80% according to test standard DIN EN 410
  5. Fire-rating: Up to 90 minutes with hose stream test
  6. Impact safety rating: None
  7. Manufactured by a special float process resulting in surface finish with nearly invisible micro-structure
  8. Environmentally friendly glass-ceramic contains no hazardous heavy metals such as Antimony or Arsenic.
- C. Maximum sheet sizes: Approximately 43" x 77"
  1. Labelling: Permanently label each lite of PYRAN® Platinum fire-rated glass-ceramic with product and manufacturers name, mark from the authorized testing agency, fire rating, etc., according to code requirements.
  2. Optional: Glazing may be lightly sandblasted or may be decorated with surface-applied opacity film. After the surface treatment, a Clearshield coating may be applied.
  3. The glazing units may be directly screen-printed upon.
- D. 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, UBC 7-2, UBC 7-4, NFPA 80, NFPA 257, ULC CAN4-S106.

2.2 Glazing Compound
- A. Glazing tape: Closed cell polyvinyl chloride (PVC) foam, Pemko Manufacturing Company, Ref. FG3000S90 or Unifrax Corporation Fiberfrax Alumino-Silicate fiber glazing tape.
- B. Setting blocks: Calcium silicate
- C. Cleaners, primers and sealers: Type recommended by manufacturer of glass and gaskets.

Specifications

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 – Execution

3.1 Examination

A. Examine glass and framing, with glaziers 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 surface 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 manuals 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 set aside pieces with edge damage that could affect the 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. Arrange two setting blocks located at quarter points of glass with edge block no more than six inches from corners.
F. Glaze vertically into labelled fire-rated metal frames or partition walls with the same fire rating as the 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 displacing the tape.
I. 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 methods approved by the glass manufacturer.
B. Wash glass on both surfaces not more than four days prior to date scheduled for inspections intended to establish date of substantial completion. Wash glass with a soft, clean, non-abrasive cloth and a mild soap, detergent, or non-abrasive window cleaning solution. After cleaning, rinse immediately with clean water and remove any excess water from the panel surface. Do not allow any metal parts of the cleaning equipment to come in contact with the panel surface

3.4 Glazing schedule

Rating	Application	Max. exposed area of glazing (in^2)	Max. width of exposed glazing (in)	Max. height of exposed glazing (in)	Min. depth of groove (in)	Groove Width	Building Code Marking
Up to 90 min	Transom lites, sidelites, windows	3,422 (23.7 ft^2)	76	76	5/8	7/16, 3/8	OH-90