



Design No. U553
BXUV.U553
Fire-resistance Ratings - ANSI/UL 263

[Page Bottom](#)

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

[See General Information for Fire-resistance Ratings - ANSI/UL 263](#)

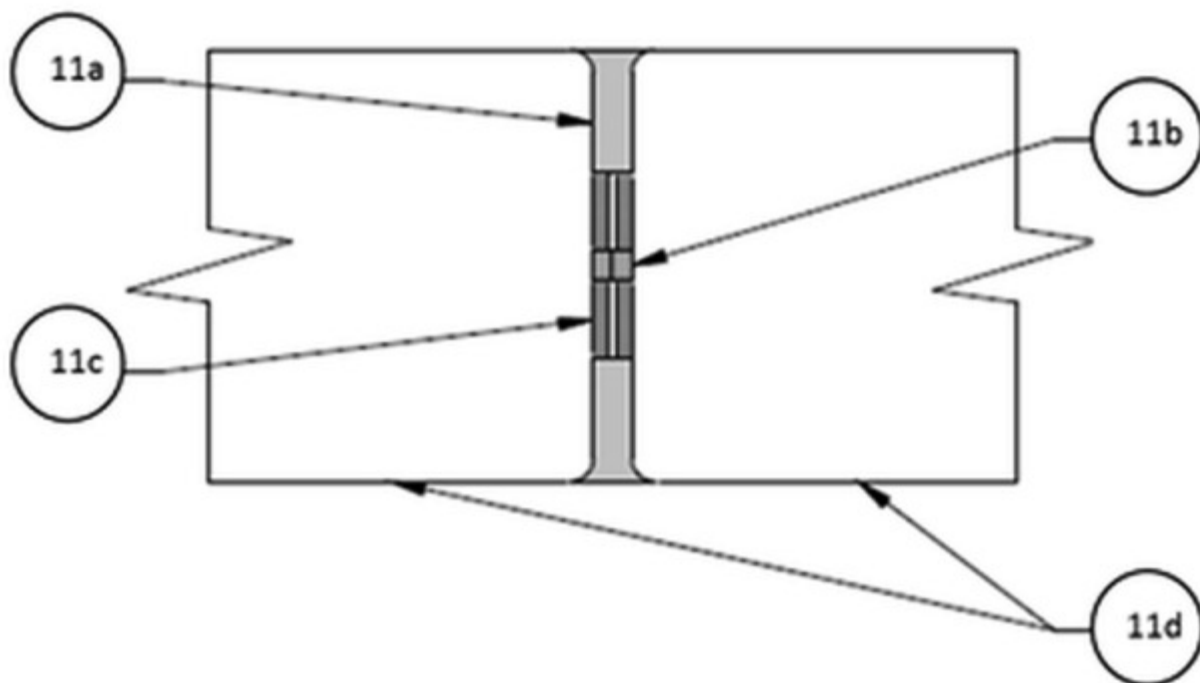
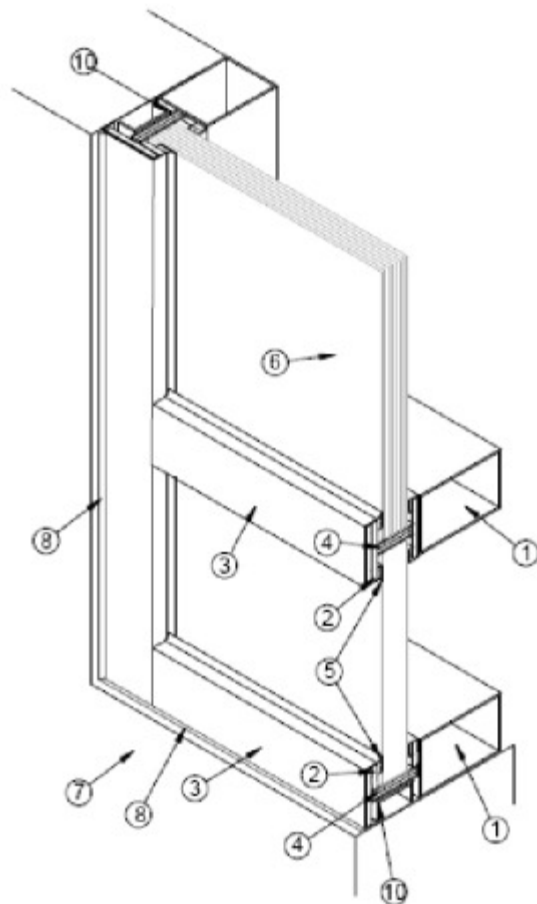
[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada](#)

Design No. U553

February 17, 2017

Non-Bearing Wall Rating - 1, 1-1/2 or 2 Hr (See Items 4, 6, 7, and 10)

- * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



1. **Steel Framing Members*** — Nom. 2-3/8 in. in width with a nom. depth of 3-1/2 in. with lengths cut according to glazing opening size. Secured to wall with 1/4 in. diameter by 3 in. long hex head screw fastened 6 in. from the end and then every 17 in. OC through pre-drilled holes in the framing members. Framing members can incorporate vertical or horizontal mullions into the systems.

STILES CUSTOM METAL INC — Stile-Lite 300

2. **Steel Pressure Caps** — Supplied with the steel framing members. Nom. 2-3/8 in. wide with a nom. depth of 0.611 in. with lengths cut according to glazing size. Cap retainer is inserted into the steel pressure cap prior to fastening to the framing members. The pressure cap and cap retainer assembly is then secured to the framing members with a minimum 1/4 in. by 3-1/2 in. cap head screws and neoprene washers located every 12-1/16 in. OC. Screws to be sized to match the glazing used.

3. **Facing Profiles** — Supplied with the steel framing members. Nom 2-3/8 in. wide with a nom minimum depth of 0.611 in. with lengths cut according to glazing size. Facing profiles snap over the pressure caps with no mechanical fasteners.

4. **Pressure Plate Screws** — Supplied with the steel framing members. Screw sizes vary with thickness of Fire Resistant Glazing Material. Studs to be located 100 mm from each end of the steel framing member and then every 300 mm OC.

5. **Gaskets** — Supplied with the steel framing members. Nom. 2-5/16 in. wide by nom. 1/4 in. thick neoprene strip applied to the steel framing members and the pressure caps to cushion and seal the glazing material when installed.

6. **Fire Resistant Glazing Material*** — For 1 hr. assemblies - Nom. 1 in. (26 mm) minimum thickness laminated glass supplied in various sizes. For 1-1/2 hr. and 2 hr. assemblies, Nom. 2-1/8 in. (53 mm) minimum thickness laminated glass panels supplied in various sizes. Maximum exposed size of glazing for 1 hr. rated assemblies not to exceed 26.7 ft² with a maximum horizontal or vertical dimension of 87-5/8 in. Maximum size of glazing for 1-1/2 and 2 hr. rated assemblies not to exceed 29.3 ft² with a maximum exposed horizontal or vertical dimension of 100-7/8 in.

AGC GLASS EUROPE SA - SENEFFE — Pyrobel 60, Pyrobel 60 EG, Pyrobel 60 IGU, Pyrobel 120, Pyrobel 120 EG, Pyrobel 120 IGU

TRULITE GLASS & ALUMINUM SOLUTIONS L L C — Pyrobel 60, Pyrobel 60 EG, Pyrobel 60 IGU, Pyrobel 120, Pyrobel 120 EG, Pyrobel 120 IGU

SAFTIFIRST — Superlite II XLM 60, Superlite II XLM 60 EG, Superlite II XLM 120, and Superlite II XLM 120 EG

GENERAL GLASS INTERNATIONAL — Pyrobel 60, Pyrobel 60 EG, Pyrobel 120 and Pyrobel 120 EG

7. **Wall Assembly** — The 1, 1-1/2 or 2 hr fire rated wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400, V400, or U900-Series Wall or Partition Designs in the UL Fire Resistance Directory. The wall opening shall be lined with one layer of gypsum board for one hour assemblies and two layers of gypsum board for two hour assemblies when installed into a U300, U400 or V400-Series Wall or Partition Design. When a U400 or V400-Series Design is specified, 20 Ga. steel studs must be used to frame the opening.

8. **Fill, Void or Cavity Materials*** — Any UL Classified Fill, Void or Cavity Material caulking applied with caulking gun. Caulking to be applied over tightly packed insulation filling the voids between the framing and the finished opening of the wall.

9. **Intumescent Tape** — (Not Shown) Intumescent tape supplied with the steel framing members shall be applied to all edges of the fire resistant glazing materials (Item 6) as well as to the web of the channels used as spacer (Item 10) with the framing. Intumescent tape to be trimmed to match the thickness of the glazing material.

10. **Spacers** — Supplied with the framing members. C shaped steel channels to be installed opposite the glazing pocket. Spacers are to be installed to maintain the clamping force of the pressure plate against the framing members. Spacer is to be a nominal 1 in. deep for 1 hr assemblies and a nominal 2-1/8 in. deep for 1-1/2 or 2 hr rated assemblies.

11. **Butt jointed glazing** — Superlite-II XLM or Pyrobel 120 panes of maximum size 114 in. high by 40 in. wide may be butted together along vertical edges (no framing) using the butt joint system, shown below:

a. Momentive Pensil 300 - A silicone sealant is applied to fill the butt joint gap between the glazing panes and finished flush.

b. Superwool paper X607 - Superwool paper with self-adhesive tape on one face. A strip is adhered along the full height of each glazing pane edge at the butt joints only, set central to the glazing panes thickness. 4mm x 3mm thick (uncompressed).

c. Kerafix FXL 200 - Intumescent with self-adhesive tape of one face. A strip is adhered along the full height of each glazing pane edge at the butt joints only, positioned each side of item 2 (set 15mm from the exposed and unexposed face of the glass). 10mm x 2mm

thick.

d. **Fire Resistant Glazing Material*** - The following types of glazing materials may be used:

AGC GLASS EUROPE SA - SENEFFE — Pyrobel 120

TRULITE GLASS & ALUMINUM SOLUTIONS L L C — Pyrobel 120

SAFTIFIRST — Superlite II XLM 120

GENERAL GLASS INTERNATIONAL — Pyrobel 120

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

[Last Updated](#) on 2017-02-17

[Questions?](#)

[Print this page](#)

[Terms of Use](#)

[Page Top](#)

© 2017 UL LLC

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2017 UL LLC".



Design No. U565
BXUV.U565
Fire-resistance Ratings - ANSI/UL 263

[Page Bottom](#)

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

[See General Information for Fire-resistance Ratings - ANSI/UL 263](#)

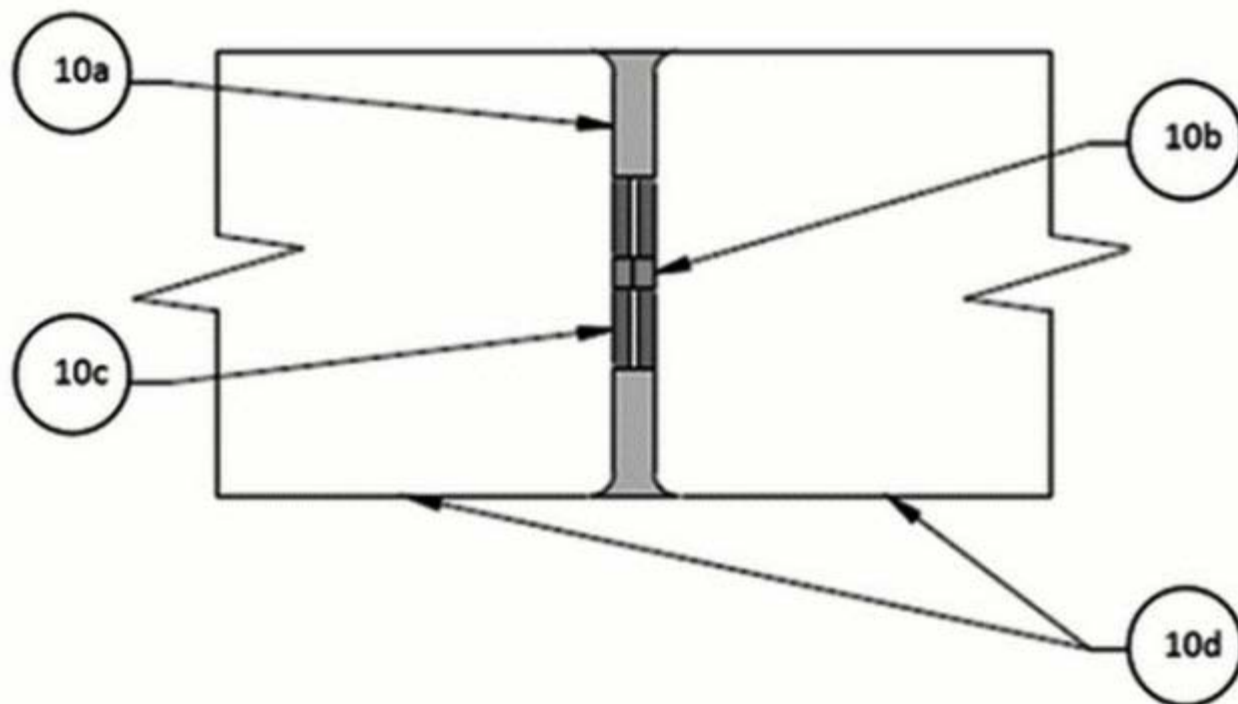
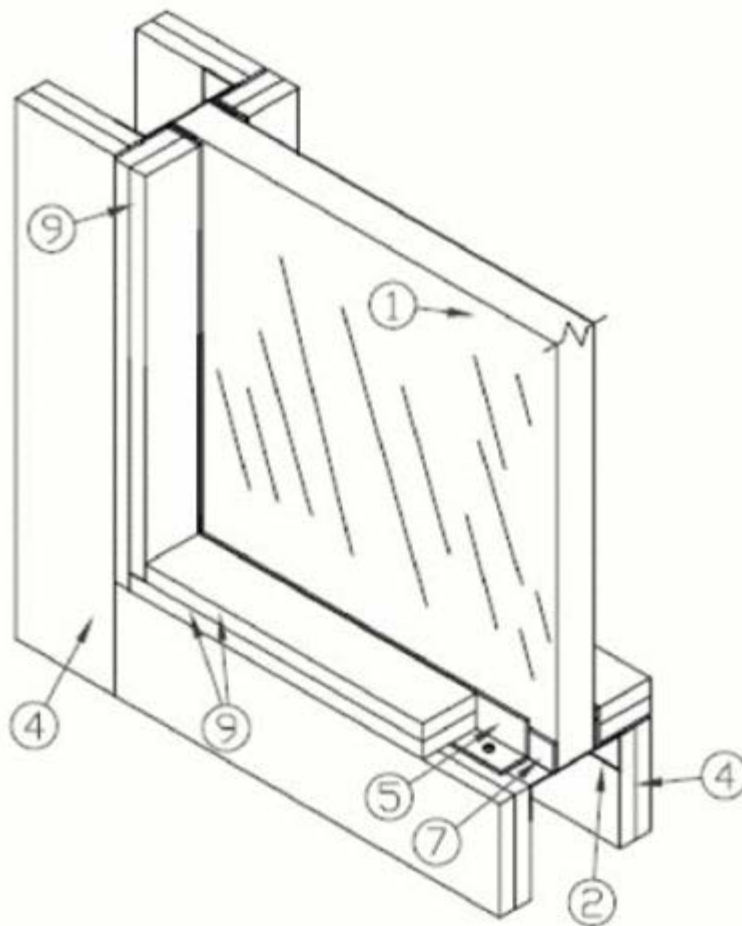
[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada](#)

Design No. U565

March 27, 2017

Nonbearing Wall Rating — 1, 1-1/2 or 2 hr Rating (See Items 1 and 4)

- * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



1. **Fire Resistant Glazing Material*** — For 1 hr. assemblies - Nom. 1 in. (26 mm), Max exposed size not to exceed 26.7 sq ft with max exposed dimension of 87-5/8 in. For 1-1/2 and 2 hr. assemblies - Nominal 2-1/16 in. (53 mm), maximum size of glazing for 1-1/2 and 2 hr. rated assemblies not to exceed 29.3 ft² with a maximum exposed horizontal or vertical dimension of 100-7/8 in.

AGC GLASS EUROPE SA - SENEFFE — Pyrobel 60, Pyrobel 60 EG, Pyrobel 60 IGU, Pyrobel 120, Pyrobel 120 EG and Pyrobel 120 IGU

GENERAL GLASS INTERNATIONAL — Pyrobel 60, Pyrobel 60 EG, Pyrobel 120 and Pyrobel 120 EG

2. **Steel Studs** — 18 gauge heavy duty electrogalvanized studs, 3-1/2 in. wide, 1-1/4 in. legs, and 1/4 in. stiffening flanges. Studs are nested with steel runners, Item 3, and fastened together with 1/2 in. long S12 pan head screws through both legs of the stud and runner every 6 in. OC.

3. **Steel Runners** — 18 gauge electrogalvanized steel runners, 3-5/8 in. wide, 1-1/4 in. legs. Nested with steel studs, Item 2, to form framing members. Horizontal framing members attached to vertical framing members by cutting legs of runners 6 in. from each end and bending runners either up or down and nesting on vertical members and fastening to vertical member with 1/2 in. long S12 pan head screws, 2 through both legs, and 4 through the face of the vertical stud 4 in. OC.

4. **Gypsum Board*** — **Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305.** Nom 5/8 in. thick, 4 ft wide by 10 ft long, cut to size and shaved on edges. Wallboard boxed around stud and runner framing members. Base layer secured to framing members with 1-1/4 in. long S12 bugle head drywall screws (screws not shown). Drywall fastened with 1 screw on each leg and 2 screws on each face, spaced 16 in. OC. Face layer secured to framing members with 1-5/8 in. long S12 bugle head drywall screws same as base layer, spaced 8 in. OC. Wallboard joints covered with paper tape and two coats of joint compound. Screw heads covered with two coats of joint compound. One layer of gypsum board must be installed per side for 1 hr assemblies while two layers of gypsum board must be installed per side for 1-1/2 or 2 hr assemblies. Drywall to be installed per the manner described in the individual U400 or V400-Series Wall or Partition Designs.

ACADIA DRYWALL SUPPLIES LTD ([View Classification](#)) — CKNX.R25370

AMERICAN GYPSUM CO ([View Classification](#)) — CKNX.R14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO ([View Classification](#)) — CKNX.R19374

CERTAINTED GYPSUM INC ([View Classification](#)) — CKNX.R3660

CGC INC ([View Classification](#)) — CKNX.R19751

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C ([View Classification](#)) — CKNX.R18482

GEORGIA-PACIFIC GYPSUM L L C ([View Classification](#)) — CKNX.R2717

LOADMASTER SYSTEMS INC ([View Classification](#)) — CKNX.R11809

NATIONAL GYPSUM CO ([View Classification](#)) — CKNX.R3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM ([View Classification](#)) — CKNX.R7094

PANEL REY S A ([View Classification](#)) — CKNX.R21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD ([View Classification](#)) — CKNX.R19262

THAI GYPSUM PRODUCTS PCL ([View Classification](#)) — CKNX.R27517

UNITED STATES GYPSUM CO ([View Classification](#)) — CKNX.R1319

USG MEXICO S A DE C V ([View Classification](#)) — CKNX.R16089

5. **Glazing Stops** — 1/16 in. thick, 15/16 in. by 1-1/8 in. steel angles, cut to fit tightly along the perimeter of both sides of glazing material, Item 1. The steel angle stops were cut to fit tightly around the perimeter of the opening. The steel angles are to be set in the opening and then screwed to the steel studs through the gypsum wallboard and the steel angles with No. 6 by 1 in. long TEK screws. The angles are to be secured with a screw every 8 in. OC starting 2 in. in from the end. The steel angle stops are to be installed first for both the front and back of the glazing material and the clearance for the glass is then measured. The angles were removed on the front side of the frame so the glazing material could be set in place. The self-adhesive glazing tape (Item 7) is to be applied to the steel angle stops to make a seal for when the glazing material was installed.

6. **Setting Blocks** — (Not Shown) — Hardwood, rubber or calcium silicate setting blocks placed on bottom of window opening between glazing stops, Item 5, to set glazing material, Item 1.

7. **Glazing Tape** — 1/2 in. wide by 1/8 in. thick closed cell glazing tape with self-adhering backing, adhered to glazing stops, Item 4, to seal and cushion legs of glazing stops in contact with glazing material, Item 1.

8. **Silicone Sealant** — (Not Shown) — 100 percent silicone rubber building and glazing sealant. A bead of sealant is applied at the glazing stop, Item 5, and glazing material, Item 1, joint.

9. **Steel Angle Trim** — The steel angles (See Item 5) on both sides of the wall are to be covered with two layers of 5/8 in. thick gypsum board where the first layer is fastened with a No. 6 by 1 in. long TEK Screws through the steel angle and into the stud located every 8 in. OC. The second layer of gypsum board was then installed over the first layer and should be attached to the underlying gypsum board, steel angle and studs with 2-1/2 in. long drywall screws located every 8 in. OC. The screws through the second layer of gypsum board are to be staggered to avoid the screws used in the first layer of gypsum board.

10. **Butt jointed glazing** — Pyrobel 120 or Superlite-II XLM 120 panes of maximum size 114 in. high by 40 in. wide may be butted together along vertical edges (no framing) using the butt joint system, shown below:

a. Momentive Pensil 300 -- A silicone sealant is applied to fill the butt joint gap between the glazing panes and finished flush.

b. Superwool paper X607 - Superwool paper with self-adhesive tape on one face. A strip is adhered along the full height of each glazing pane edge at the butt joints only, set central to the glazing panes thickness. 4mm x 3mm thick (uncompressed).

c. Kerafix FXL 200 - Intumescent with self-adhesive tape of one face. A strip is adhered along the full height of each glazing pane edge at the butt joints only, positioned each side of item 2 (set 15mm from the exposed and unexposed face of the glass). 10mm x 2mm thick.

d. **Fire Resistant Glazing Material*** — Pyrobel 120. The following types of glazing materials may be used:

AGC GLASS EUROPE SA - SENEFFE — Pyrobel 120

GENERAL GLASS INTERNATIONAL — Pyrobel 120

11. **Perimeter Caps** — (Optional, not shown - for use when using General Glass International fire-resistive glazing material - see item 1) Kwickap Aluminun System, 1/16 in. (1.6 mm) thick trim profiles, secured to gypsum board and steel angle to provide decorative cover for perimeter of glazing material.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

[Last Updated](#) on 2017-03-27

[Questions?](#)

[Print this page](#)

[Terms of Use](#)

[Page Top](#)

© 2017 UL LLC

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and

in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2017 UL LLC".



KCMZ.R25120
Fire-protection-rated Glazing Materials

[Page Bottom](#)

Fire-protection-rated Glazing Materials

[See General Information for Fire-protection-rated Glazing Materials](#)**GENERAL GLASS INTERNATIONAL**

R25120

101 VENTURE WAY
SECAUCUS, NJ 07094-1825 USA

Fire-protection-rated glazing material**Product designation:** 1/4 in. thick wired glass.**Thickness:** 1/4 in.**Glazing Compound:** Pemko FG3000S45**Furnace pressure:** Positive

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
20, 30 and 45 min	Doorframe, window, sidelite/transom with or without second piece of 1/4 in. thick tempered glass	1296	54	54	5/8	1/2	D-H-NT-20, OH-20, D-H-NT-30, OH-30, D-H-NT-45, OH-45
20 Min No Hose	Hollow Metal Door	3289	35-3/4	92	3/4	1/2	D-NH-NT-20
45 min	Transom Light	3456	96	36	5/8	1/2	D-H-NT-45
45 min	Sidelight or Window	4608	100	100	5/8	1/2	D-H-NT-45, OH-45
45 min	Hollow Metal Door	2856	34	84	5/8	1/2	D-H-NT-45
90 min	Hollow Metal Door	552	12	46	5/8	1/2	D-H-NT-90
60 min	Wood Door	960	12	80	5/8	1/2	D-H-NT-60

Fire-protection-rated glazing material**Product designation:** NEW-WIRE**Thickness:** 1/4 in.

Glazing Compound: Pemko FG3000S45**Furnace pressure:** Positive

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
20, 30 and 45 min	Doorframe, window, sidelite/transom with or without second piece of 1/4 in. thick tempered glass	1296	54	54	5/8	1/2	D-H-NT-20, OH-20, D-H-NT-30, OH-30, D-H-NT-45, OH-45
20 Min No Hose	Hollow Metal Door	3289	35-3/4	92	3/4	1/2	D-NH-NT-20
45 min	Transom Light	3456	96	36	5/8	1/2	D-H-NT-45
45 min	Sidelight or Window	4608	100	100	5/8	1/2	D-H-NT-45, OH-45
45 min	Hollow Metal Door	2856	34	84	5/8	1/2	D-H-NT-45
90 min	Hollow Metal Door	552	12	46	5/8	1/2	D-H-NT-90
60 min	Wood Door	960	12	80	5/8	1/2	D-H-NT-60

Fire-protection-rated glazing materials**Product designation:** Schott Pyran S ****Thickness:** 5 mm (3/16 in.)**Glazing compound:** Fiberfrax tape, closed cell PVC, Pemko FG3000S45**Furnace pressure:** Positive

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
20 min NH	Doors	3204	36	89	3/4	7/16 / 11/32*	D-NH-NT-20
20 min NH	Sidelights, Transom Lights, Windows	7228	116-3/4	116-3/4	3/4	7/16 / 11/32*	D-NH-NT-20, OH-20

Product designation: Schott Pyran Star, Star F, Crystal, Crystal F ****Thickness:** 5 mm (3/16 in.)**Glazing compound:** Fiberfrax tape, closed cell PVC, Pemko FG3000S90**Furnace pressure:** Positive

--	--	--	--	--	--	--	--

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
60 and 90 min	Doors Temp Rise	100	12	33	5/8	7/16 / 11/32*	D-H-NT-60, D-H-NT-90
60 and 90 min	Door Non-Temp Rise	2736	36	76	5/8	7/16 / 11/32*	D-H-NT-60, D-H-NT-90
60 and 90 min	Sidelights, Transom Lights, Windows	3202	76	76	5/8	7/16 / 11/32*	OH-60, OH-90, D-H-NT-60, D-H-NT-90

Product designation: Schott Pyran Star L, Crystal L **

Thickness: 8.6 mm (5/16 in.)

Glazing compound: Pemko FG3000S90

Furnace pressure: Positive

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
60 and 90 min	Doors Temp Rise	100	12	33	3/4	1/2 *	D-H-NT-60, D-H-NT-90
60 min	Doors Non-Temp Rise	2736	36	76	3/4	1/2 *	D-H-NT-60
90 min	Doors Non-Temp Rise	2376	36	66	3/4	1/2 *	D-H-NT-90
180 min	Doors Temp Rise	100	12	12	1/2	1/2 *	D-H-NT-180,
180 min	Non-Temp Rise	100	12	12	1/2	1/2 *	D-H-NT-180
60 min	Sidelights, Transom Lights, Windows	2786	66	76	3/4	1/2 *	D-H-NT-60, OH-60
90 min	Sidelights, Transom Lights, Windows	2786	66	66	3/4	1/2 *	D-H-NT-90, OH-90
60 and 90 min	Doors Non-Temp Rise	1521	36	42-1/4	5/8	1/2	D-H-NT-60, D-H-NT-90
60 and 90 min	Sidelights, Transom Lights, Windows	3208	75-3/4	42-1/4	5/8	1/2	D-H-NT-60, OH-60, D-H-NT-90, OH-90

Product designation: Schott Pyran Platinum, Platinum F **

Thickness: 5 mm (3/16 in.)

Glazing compound: Fiberfrax tape, closed cell PVC, Pemko FG3000S90

Furnace pressure: Positive

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
180 min	Doors Temp Rise	100	12	33	1/2	7/16 / 3/8*	D-H-NT-180
180 min	Doors Non-Temp Rise	100	12	33	1/2	7/16 / 3/8*	D-H-NT-180

60 and 90 min	Doors Non-Temp Rise	2736	36	76	5/8	7/16 / 3/8*	D-H-NT-60, D-H-NT-90
60 and 90 min	Transom Lights, Sidelights, Windows	3422	76	76	5/8	7/16 / 3/8*	D-H-NT-60, OH-60, D-H-NT-90, OH-90

Product designation: Schott Pyran Platinum L **

Thickness: 9 mm (3/8 in.)

Glazing compound: Fiberfrax tape, closed cell PVC, Pemko FG3000S90

Furnace pressure: Positive

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
180 min	Doors Temp Rise	100	12	33	1/2	5/8 / 1/2*	D-H-NT-180
180 min	Doors Non-Temp Rise	100	12	33	1/2	5/8 / 1/2*	D-H-NT-180
60 and 90 min	Doors Non-Temp Rise	2736	36	75	5/8	5/8	D-H-NT-60, D-H-NT-90
60 and 90 min	Transom Lights, Sidelights, Windows	3143	75	75	5/8	5/8	D-H-NT-60, OH-60, D-H-NT-90, OH-90

* Groove Width for use with Pemko FG3000S90.

** All glazing materials can be used to construct Insulated Glazing Units.

Note: All glazing materials are also Classified in accordance with UL 9, "Positive Pressure Conditions."

Fire-protection-rated glazing materials

Product designation: Pyroguard Clear

Thickness: 5/16 in.

Glazing compound: "K" Tape or FG3000

Furnace pressure: Positive

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
20 min NH	Door Lights	1404	28	62	3/4	9/16	D-NH-NT-20

Fire-protection-rated glazing materials

Product designation: Pyrobel 60, Pyrobel 60 EG

Thickness: Nominal 1 in.

Glazing compound: Self-adhesive Intumescent Tape.

Furnace pressure: Positive

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
--------	-------------	--------------------------------------	------------------------------------	-------------------------------------	---------------------------	--------------------	-----------------------

1 h	Window, Transom, Sidelight	3855	87-5/8	87-5/8	5/8	1-1/4	OH-60
1 h	Door [wood, wood covered composite or steel]	3855	44	87-5/8	5/8	1-1/4	D-H-T-60

Fire-protection-rated glazing materials**Product designation:** Pyrobel 90, Pyrobel 90 EG**Thickness:** Nominal 1-1/4 in.**Glazing compound:** Self-adhesive Intumescent Tape.**Furnace pressure:** Positive

Rating	Application	Max Exposed Area of Glazing (sq in.)	Max Width of Exposed Glazing (in.)	Max Height of Exposed Glazing (in.)	Min Depth of Groove (in.)	Groove Width (in.)	Building Code Marking
1-1/2 h	Window, Transom, Sidelight	3528	84	84	5/8	1-1/2	OH-90
1-1/2 h	Door [wood, wood covered composite or steel]	2916	36	61	5/8	1-1/2	D-H-T-90

[Last Updated](#) on 2017-02-06[Questions?](#)[Print this page](#)[Terms of Use](#)[Page Top](#)

© 2017 UL LLC

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2017 UL LLC".



LISTING INFORMATION OF GGI Glass Distributors "Pyrobel" Fire Rated Glazing

SPEC ID: 39909

GGI Glass Distributors Corp.
101 Venture Way

Secaucus, NJ 07094

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Note: The first number shows the fire-rating, in minutes, and the second number shows glazing thickness in millimeters.

“Pyrobel 45-16” (Door, Transom Light, Sidelight, and Borrowed Light)

Nominal 5/8" (16mm) thick "Pyrobel 45-16"* Glazing Panel for use in wood or steel fire doors in steel frames for sidelights/transom lights/borrowed lights, in up to 45 minute locations.

Limitations: When installed in door vision panels, listed fire rated steel door vision panel frame is required. In addition, 1/4" (6.4mm) high x 5/8" (16mm) wide x 3" (76.2mm) long calcium silicate setting blocks must be used at quarter points under the bottom edge; and 1/8" (3mm) thick x 1/2" (12.7mm) wide, closed cell foam glazing tape is required on all edges (on both faces). Exterior glazing compound of an additional laminated glazing layer with PVB is acceptable, including an additional insulating glazing panel. Complies with ANSI Z97.1 (2009) Class A, Impact test requirements.

	Sidelight, Transom Light, and Borrowed Light	Doors
Maximum Allowable Clear View Area	4608 sq in. (2.97 sq m)	2747 sq in. (1.77 sq m)
Maximum Allowable Clear View Width	96" (244 cm)	58-3/4" (149 cm)
Maximum Allowable Clear View Height	96" (244 cm)	58-3/4" (149 cm)
Minimum Stop Depth	5/8" (15.87 mm)	5/8" (15.87 mm)

“Pyrobel 60-25” (Glazed Wall)

Nominal 1" (25.4mm) thick "Pyrobel 60-25"* Glazing Panel for use as non-load bearing fire rated wall system, in up to 60 minute locations.

Limitations: Exterior glazing wall compound or an additional laminated glazing layer with PVB is acceptable, including insulated glazing panel. Complies with ANSI Z97.1 (2009) Class A, Impact test requirements.

Maximum Allowable Clear View Area	3855 sq in. (2.48 sq m)
Maximum Allowable Clear View Width	87-5/8" (223 cm)
Maximum Allowable Clear View Height	87-5/8" (223 cm)
Minimum Stop Depth	1" (25.4 cm)

“Pyrobel 60-25” (Door, Transom Light, Sidelight, and Glazed Wall)

Nominal 1" (25mm) thick "Pyrobel 60-25"* Glazing Panel for use in composite core wood or steel fire doors in steel frames for sidelights/transom light/borrowed lights, in up to 60 minute locations. This glazing maintains a temperature rise of no more than 250°F (121.11°C) above ambient and is acceptable for fire rated doors with temperature rise rating.

Limitations: In doors, this product must be installed in a listed, fire rated, steel door vision frame, made of cold rolled steel (minimum material thickness = 0.04" (1.01 mm) with through-bolt fasteners at maximum 12" (304.8 mm) o.c. In addition, 1/4" (6.4mm) high x 1" (25.4mm) wide x 3" (76.2mm) long calcium silicate setting blocks

must be used at quarter points under the bottom edge; and 1/8" (3mm) thick x 1/2" (12.7mm) wide, closed cell foam glazing tape is required on all edges (on both faces). Exterior glazing composed of an additional laminate glazing layer with PVB is acceptable, including an additional insulating glazing panel. Use of this glazing in sizes exceeding 100 sq in. (645 sq cm) in 60 minute fire rated doors may require prior approval by the Authority Having Jurisdiction.

Complies with ANSI Z97.1 (2009) Class A, Impact test requirements.

Maximum Allowable Clear View Area	3855 sq in. (2.48 sq m)
Maximum Allowable Clear View Width	87-5/8" (223 cm)
Maximum Allowable Clear View Height	87-5/8" (223 cm)
Minimum Stop Depth	5/8" (15.9 cm)

“Pyrobel 90-35” (Door, Transom Light, Sidelight, and Borrowed Light)

Nominal 1-3/8" (35mm) thick "Pyrobel 90-35"* Glazing Panel for use in composite core wood or steel fire doors, in steel frames for transom lights/sidelights/borrowed lights in up to 90 minute locations. This product maintains a temperature-rise of no more than 250°F (122°C) above ambient and is acceptable for fire-rated doors with temperature-rise ratings.

Limitations: 1) *Denotes manufacturer's designation. 2) When installed in door vision light panels, listed fire rated steel door vision panel frame is required. 3) In addition, 1/4" (6.4mm) high x 1-3/8" (35mm) wide x 3" (76.2mm) long calcium silicate setting blocks must be used at quarter points under bottom edge of glazing; 1/8" (3mm) thick x 1/2" (12.7mm) wide, closed-cell foam glazing tape is required on all edges (on both faces). 4) Exterior glazing composed of an additional laminated glazing layer with PVB is acceptable, including an additional insulating glazing panel. 5) Use of this glazing in sizes exceeding 100 sq in. (645 sq in.) in 90 minute fire-rated doors may require prior approval by the Authority Having Jurisdiction. 6) If width or height dimension for a vision light panel exceeds 35-1/4" to a maximum of 45", then maximum clear view area reduces to 1080 sq in. Complies with ANSI Z97.1 (2009) Class A, Impact test requirements.

Clear View Dimensions	Steel Doors	Wood Doors	Raised Side Lights	Transom Lights	Borrowed Lights/Windows
Maximum Width	36" (914 mm)	36" (914 mm)	84" (2134 mm)	84" (2134 mm)	84" (2134 mm)
Maximum Height	61" (1549 mm)	61" (1549 mm)	84" (2134 mm)	35-1/4" (869 mm)	84" (2134 mm)
Maximum Area	2196 sq in. (1.42 sq m)	2196 sq in. (1.42 sq m)	3528 sq in. (2.28 sq m)	1243 sq in. (0.76 sq m)	3528 sq in. (2.28 sq m)
Minimum Stop Height	5/8" (16mm)	5/8" (16mm)	5/8" (16 mm)	5/8" (16 mm)	5/8" (16 mm)

“Pyrobel 90-35” (Glazed Wall)

Nominal 1-3/8" (35mm) thick "Pyrobel 90-35"* Glazing Panel for use as non-load bearing fire rated wall system, in up to 90 minute locations or proprietary frame systems.

Limitations: Exterior glazing wall compound or an additional laminated glazing layer with PVB is acceptable, including insulated glazing panel.

Complies with ANSI Z97.1 (2009) Class A, Impact test requirements.

Maximum Allowable Clear View Area	3828 sq in.
Maximum Allowable Clear View Width	88"
Maximum Allowable Clear View Height	88"
Minimum Stop Depth	1"

“Pyrobel 120-53” (Glazed Wall)

Nominal 2-1/8" ± 1/8" (53mm ± 3mm) thick "Pyrobel 120-53"* Glazing Panel for use as non-load bearing fire rated wall system, in up to 120 minute locations or proprietary frame systems.

Limitations: Exterior glazing wall compound used for exterior applications is composed of an additional laminated glazing layer with PVB including an additional insulated glazing panel.

Complies with ANSI Z97.1 (2009) Class A, Impact test requirements.

Maximum Allowable Clear View Area	3828 sq in.
Maximum Allowable Clear View Width	88"
Maximum Allowable Clear View Height	88"
Minimum Stop Depth	1"

* Denotes Manufacturer's Designation

<p>Companies that Manufacture or Assembly Glazing/Glass Under Warnock Hersey Label Service Intertedge Technologies 27 Central Avenue Sausalito, CA 94965</p>

Evaluated to the following...

Unless otherwise noted, the glazing in this section have been evaluated for conformance to the following standards listed below:

When listed for use in a Door Vision Panel, Transom or Side Light:

- ASTM-E152, Methods of Fire Tests of Door Assemblies
- CAN/ULC-S104, Standard Method for Fire Tests of Door Assemblies
- CSFM-43.7, Standard Methods of Fire Tests of Door Assemblies
- NFPA-252, Standard Methods of Fire Tests of Door Assemblies
- UBC-7-2-94, Uniform Building Code Standard
- UL-10(b), Fire Tests of Door Assemblies

When listed for use in a Fire Window Assembly:

- ASTM-E163, Methods of Fire Tests of Fire Window Assemblies
- CAN/ULC-S106, Standard Method for Fire Tests of Window & Glass Block Assemblies
- NFPA-257, Standard Method for Fire Tests of Fire Window Assemblies
- UBC-7-4-94, Uniform Building Code Standard
- UL-9, Fire Tests of Fire Window Assemblies

When listed for use as wall system:

ASTM E-119 (2016) Test Method for Fire Test of Building Construction and Materials

UL 263 (2015) Standards for Fire Test of Building Construction and Materials

ULC/CAN-S101 (2014) Standard Method of Fire Endurance Tests of Building Construction and Materials

Listed products are intended to be installed, unless otherwise noted, in accordance with the following:

NFPA-80, Fire Doors & Windows

Manufacturer's Instructions.

Listed maximum sizes of glazing are based on sizes tested and may exceed those allowed by local codes.

Dependent on the end use installation, local codes may require that additional criteria be met to address considerations such as radiant heat hazards and impact safety. Under such circumstances, the prior approval of the Authority Having Jurisdiction must be obtained unless conformance to relevant additional requirements is indicated within the individual listing.

Clearance between the edges of the glazing and the inside edge of the frame shall not exceed 1/8" unless otherwise noted in the individual listing or the manufacturer's installation instructions.

All glazing is identified by an etched mark or label bearing the WHI Certification Mark or ETL Mark.

<u>Attribute</u>	<u>Value</u>
Criteria	ASTM E119 (Engulfment)
Criteria	UBC 7-2 (1997)
Criteria	UL 10(b) (1997)
Criteria	ASTM E2074 (2000)
Criteria	UBC 7-4 (1997)
Criteria	NFPA 252 (2003)
Criteria	ASTM E152-81AE02
Criteria	CAN / ULC S104 1980 (R1985)
Criteria	UL 10(c) (R2001)
Criteria	UL 10(b) Revision 1 (2009)
Criteria	UL 10(c) (2009)
Criteria	CAN / ULC S104 (2010)
Criteria	UL 263 (2011)
Criteria	ANSI Z97.1 (2009)
Criteria	NFPA 252 (2012)
Criteria	CAN / ULC S101 (2014)
CSI Code	08 80 00 Glazing
Glazing	Fire Rated Glass
Intertek Services	Certification
Listed or Inspected	LISTED

Listing Section	GLAZING/GLASS
Report Number	3071996
Spec ID	39909
Verification Testing	No