

fire PROTECTIVE glass | fire RESISTANT glass

Knowing what is what

THE BIG DIFFERENCE

Between fire protective glass and fire resistive glass is summarized in the following illustrations by SAFTI <https://safti.com/wp-content/uploads/2014/11/Fire-Protective-vs.-Fire-Resistive-Glazing.pdf>.

Fire Resistive blocks heat transmission; Fire Protective does not.

Both types stop fire and smoke.

Fire rated glass can be laminated or fully tempered for locations where safety glass is required.



FIRE RESISTIVE GLASS

- **RATING LIMITS:** Up to **two hours**.
- **AREA LIMITS:** None for rated window wall areas.
- **BLOCKS:** Smoke, flames **and radiant heat up to 250 deg F**.
- **Regulated by the IBC** (application, area, and size limitations).
- **USE:** 1-2 hour glass walls, 60-90 minutes doors, and 60-120 sidelines and transom up to maximum size tested.
 - It is allowed in egress routes because it blocks radiant heat.
- **TYPES** - examples — check uses with manufacturers.
 - **Fire-retardant filled units** - Two tempered lites with cavity filled with a clear fire retardant.
 - **Multi-laminates** - Multiple sheets of annealed glass with an intumescent interlayer.

FIRE PROTECTIVE GLASS

- **RATING:** Up to **45 minutes**. Some fire protective glass products are rated from 60 to 180 minutes but they are limited to vision panels for doors with size limits.
- **LIMITS:** See code and manufacturers literature for more limitations.
- **BLOCKS:** Smoke and flames only.
- **DOES NOT BLOCK: Radiant heat.**
- **Regulated by the IBC** (application, area, and size limitations).
- **USE:** Doors and other openings within accepted limits. **Not allowed in egress routes**, regardless if the building is sprinklered or not.
- **TYPES** - examples — **check uses with manufacturers**.
 - **Specialty Tempered:** 20 minutes.
 - **Specialty Tempered, Heat Reflective:** 20-60 minutes.
 - **Specialty Fire Protective:** 90 minutes, optically clear.
 - **Wired Glass:** 20-90 minutes, annealed glass with wires: **DO NOT USE!**
 - **SAFETY Wired Glass:** Same as above with safety film: **DO NOT USE!**
 - **Ceramic:** 20-180 minutes.
 - **Film Safety Ceramic:** Same as above with safety film.
 - **Laminated Safety Ceramic:** Same as above with safety film, same uses.
 - **Fire-Rated or Fire Impact Safety Rated:** Insulated glass units.

FRAMING AND GLAZING TYPES should be the same! Both resistive, or both protected, no combinations!

Basis of Design Manufacturers: TPG by Pilkington: <https://www.fireglass.com>, and SaftiFirst by O'Keefe's <https://safti.com>.