TYCO Model WS & FireLite Plus WS Product Alert

Architects should read this alert before considering TYCO Model WS or FireLite Plus WS using ESR-2397 as an alternate to 1-2 hour wall assemblies.

Architects are Required to Obtain AHJ Approval Prior to Use

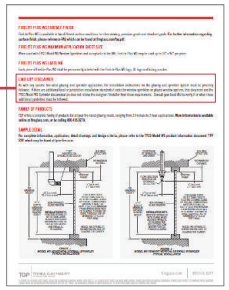
TYCO Model WS and FireLite Plus WS system both require prior approval by the Authority Having Jurisdiction (AHJ) for use as an *alternate* to readily available tested, listed and approved fire resistive glazing assembles in 1 and 2 hour wall applications. Furthermore, the responsibility of preparing documented proof that the design and installation requirements are met (including sprinkler orientation and required hydraulic calculations in Section 4 Installation) rests on the design professional. Per Section 5 Conditions of use in ESR-2397:

> ***Conditions of Use 5.2.*** *The design, with plans and details of the specific installation of fixed glazed assembly with special-purpose sprinklers, must be submitted to the code official for approval.* ***The design must be prepared by the registered design professional where required by the statues of the jurisdiction in which the project is to be constructed.***
>
> ***Conditions of Use 5.9.*** *The fixed glazed assembly is not permitted to be used in lieu of fire walls. Where the assemblies are used as an alternative to fire barriers for exit-passageways, horizontal exits, or exit enclosures, the fire area (Section 202 of the IBC) in which the assembly is located shall be fully sprinklered in accordance with Section 903.3.1 of the IBC. The water supply duration for the sprinklers, where used, shall be not less than the fire resistance rating that would have been required for a fire barrier.* ***In addition, the registered design professional shall provide the code official with documentation in accordance with Section 104.10 of the IBC for a code modification or Section 104.11 of the IBC for an alternative method of construction that addresses any anticipated impact on the functionality of the means of egress.***

Conveniently, TYCO and TGP have relieved themselves of any responsibility or liability when architects seek prior AHJ approval for their products. In TGP's FireLite Plus WS product data sheet, it says:

LIABILITY DISCLAIMER

As with any specific fire-rated glazing and sprinkler application, the installation instructions for the glazing and sprinkler system must be precisely followed. If there are additional local or jurisdiction installation standards / codes for window sprinklers on glazed window systems, this document and the TYCO Model WS Sprinkler documentation does not relieve the designer / installer from these requirements. Consult your local AHJ to verify if or when these additional guidelines must be followed.



Question for architects:

What is the benefit for you to go through the tedious approval process and assume all responsibility and liability for TYCO Model WS or FireLite Plus WS?

This all seems unnecessary and potentially problematic when architects can readily employ USA-made, code-approved, tested, listed and labeled fire resistive glazing products without prior AHJ approval. Visit www.safti.com to view our complete line of fire rated glass & framing products or call us toll-free at 888.653.3333.

See cost and design comparisons on the next page →

While the prospect of using non-rated glass or ceramic glass with sprinklers seems to be a cost-effective and aesthetically appealing solution, further examination shows that the promise of cost savings and design flexibility isn't really there.

Questionable Cost Savings

TYCO Model WS & FireLite Plus WS —	SAFTI *FIRST* Product +
Architects assume all costs for submitting required documentation necessary for the AHJ to evaluate the TYCO Model WS and FireLite Plus WS as alternative products to ASTM E-119 rated fire resistive glazing.	**No additional documentation required when using ASTM E-119 rated fire resistive glazing** because the code recognizes that this material meets all the requirements for a fire resistive wall.
TYCO Model WS and FireLite Plus WS uses a special wet-pipe sprinkler system. **Hydraulic calculations must be performed for each installation, and the automatic water supply must have the capability of supplying 1 or 2 hours of water,** depending on the rating of the wall.	**No sprinkler system whatsoever is required when using ASTM E-119 rated fire resistive glazing** because the glazing itself is capable of meeting the wall requirements.
In addition to the material and installation cost of TYCO Model WS, TGP's FireLite Plus WS uses laminated ceramic, which is already expensive. Premium laminated ceramic can cost $120/sq. ft. or more, and will have the amber tint typical of all ceramics despite the added expense of polishing.	**No need to purchase any sprinkler systems, and USA-made fire resistive glazing costs up to 50% less than laminated ceramic for 1 hour walls and up to 20% less for 2 hour walls.**
TYCO Model WS and FireLite Plus WS will require **ongoing maintenance of the special wet-pipe sprinkler system which the building owner pays for over time.**	**No maintenance costs over time when ASTM E-119 rated fire resistive glazing is used.** Unlike sprinklers, it will provide 24/7 protection without the need for any outside mechanical triggers.

Question for architects:

Why pay more for an alternative system that provides less protection than readily available, code-approved fire resistive glazing assemblies?

See design comparisons on the next page →

Design Restrictions

TYCO Model WS & FireLite Plus WS

- **Cannot exceed 13 feet (156”) in height.**
- **No horizontal mullions are allowed** in the design of the glazed assembly.
- **Cannot be used in exterior applications where the fire separation distance is less than 10 feet** for states adopting the 2009, 2012 and 2015 IBC.
- **36” minimum pony wall is required** when using heat strengthened or tempered glass.

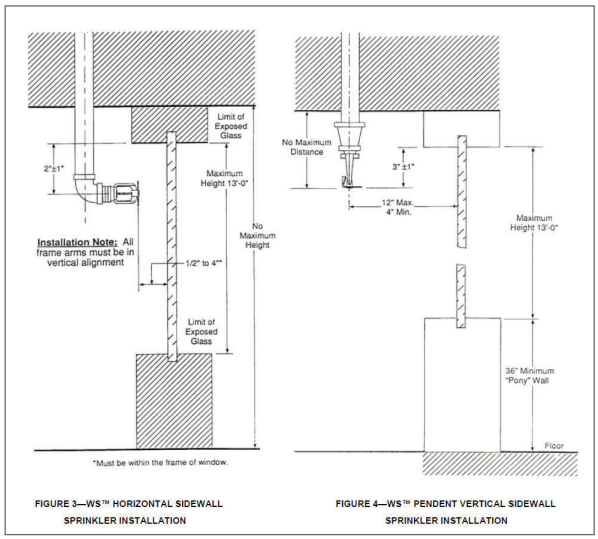


FIGURE 3—WS™ HORIZONTAL SIDEWALL SPRINKLER INSTALLATION

FIGURE 4—WS™ PENDENT VERTICAL SIDEWALL SPRINKLER INSTALLATION

From ICC-ES Report ESR-2397 - Figures 3 & 4

- Even if the pony wall is waived, **FireLite Plus is limited to 96” in height.** With most floors having a typical height of 10 feet (120”), **floor-to-ceiling glazing cannot be achieved without at least 2 feet (24”) of opaque wall** - and again, horizontal mullions are not allowed.
- **FireLite Plus WS has an amber tint** typical of all ceramics despite the added cost of expensive polishing.

SAFTI *FIRST* Product

- **No height restrictions** for fire resistive glass and framing assemblies.
- **No mullion restrictions** for fire resistive glass and framing assemblies.
- **No restrictions for fire resistive glazing regardless of the fire separation distance**.
- **No pony wall requirements** for fire resistive glazing.
- **10 feet (120”) clear view height can easily be achieved with fire resistive glazing products** such as SuperLite II-XL 60, SuperLite II-XL 120, SuperLite II-XLM 120 and SuperLite II-XLB 160-120. In addition, **butt-glazed wall assemblies are available** for SuperLite II-XLM and SuperLite II-XLB products.
- **Fire resistive glazing has the same coloration as float glass**, eliminating any amber tints.

Side-by-side comparison of FireLite Plus by TGP vs. SuperLite II-XL 60 by SAFTI FIRST against a white surface

Question for architects:

Why settle for an alternative system with limited transparency, application restrictions and amber tints, when you can have floor-to-ceiling and wall-to-wall glazing with readily available, code-approved fire resistive glazing assemblies?

See a better soulution on the next page →

Which Assembly Would You Choose?

What an ESR-2397 assembly would look like after obtaining AHJ approval:

What already tested, listed & approved fire resistive assembly looks like without having to obtain AHJ approval:

Looking at the additional work and liability that the architect assumes, paired with the questionable cost savings and design restrictions, it really doesn't make a whole lot of sense to propose the TYCO Model WS or FireLite Plus WS as an alternative to approved fire resistive glass and framing.

If you are looking for a readily available, USA-made, code-approved, tested, listed and labeled fire resistive glazing products that does not require prior AHJ approval, contact your local SAFTI *FIRST* architectural representative today or call us toll-free at 888.653.3333.

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