

FiberTite® UL Approval



Underwriters Laboratories is a not-for-profit product safety testing and certification organization. Established in 1894, UL has positioned itself as a world leader among third party certification organizations.

With respect to the Roofing Industry, UL holds a preeminent position in the testing and evaluation of roofing materials and systems for fire resistance and fire hazard characteristics. The results of their testing are published annually in the UL Roofing Materials and Systems Directory ([UL Blue Book](#)).

Classification

Underwriters Laboratories testing and evaluation involves the entire roof assembly, not just the individual membranes or components. The assembly includes the type of decking, incline, insulation, fasteners, adhesives and the membrane roof cover. When a given assembly passes the applicable criteria, the entire assembly becomes classified. Although the membranes and individual components become eligible to display the [UL Label](#), they are only classified with respect to their relationship to one another. Substitutions within the assembly may invalidate the rating or classification.

UL labels or logos printed within a manufacturer's sales literature do not guarantee that the product(s) delivered to the job site conform to the standards of those actually tested. The only way to guarantee that the delivered products conform to those actually tested is to require that all products carry the [UL Classification](#) on the packaging.

Follow-Up

Products that bear the UL Classification or Label provide the only means of assuring that the product is manufactured under the [UL Follow-Up Service](#) program. The [UL Follow-Up Service](#) is designed to serve as a check on the means manufacturers exercise to provide continued quality and compliance with UL requirements. [UL Follow-Up Service](#) field representatives make unannounced factory visits to observe the manufacturing process and retrieve samples for the evaluation of classified or recognized products. If examination of the manufacturing process or testing of the samples disclose features that do not comply with the criteria or formulations established within the manufacturer's follow-up procedures, the manufacturer must make appropriate corrections or remove the UL Mark from the product.

UL 790

The [UL 790 Tests for Fire Resistance of Roof Covering Materials](#) is the principle standard employed in the evaluation of roofing materials. Testing to determine a roof covering's fire classification is conducted under [ANSI/UL 790](#) and is intended to measure the roof covering material's fire-resistance characteristics against fire originating from outside a building or structure.

UL 790 External Fire Classifications

The following is a summary of Underwriters Laboratories Test Methods and Classification Requirements. The information consists of excerpts from UL Publications regarding the [UL 790 Test Protocol](#) and the 1998 UL Roofing Materials and Systems Directory ([Blue Book](#)).

- Class A** Includes roof coverings which are effective against severe fire exposures. Under such exposures roof coverings of this class are not readily flammable and do not readily carry or communicate fire; afford a fairly high degree of fire protection to the roof deck; do not slip from position; pose no flying brand hazard; and do not require frequent repairs in order to maintain their fire resisting properties.
- Class B** Includes roof coverings which are effective against moderate fire exposures. Under such exposures roof coverings of this class are not readily flammable and do not readily carry or communicate fire; afford a moderate degree of fire protection to the roof deck; do not slip from position; pose no flying brand hazard; but may require infrequent repairs in order to maintain their fire resisting properties.
- Class C** Although Underwriters Laboratories currently offers a Class C rating, it has little relevance in the design and specification of single-ply roofing. The testing for single-ply roof systems encompasses Intermittent Flame, Spread of Flame and Burning Brand Tests.

Intermittent Flame Intermittent Flame tests measure the reduction of the roofing material's ability to resist flame penetration, when flame is inconsistent in nature. 31/3 ft. wide by 41/3 ft. long plywood test decks with the roof coverings in place are positioned at a given slope and subjected to a 1400° F flame along the width of the test deck, fanned by a 12 mph. air current. The flame is extended approximately two feet beyond the upper edge of the test deck and is applied intermittently, two minutes on and two minutes off, for a total of fifteen cycles. In order to obtain an "A" rating, two roof assembly samples must withstand the 15 cycles and there must be no sustained flame on the underside of the test deck, no production of flaming brands and no displacement of portions of the test assembly. For a Class B, the test assembly is subjected to 8 cycles.

Spread of Flame Spread of Flame tests measure the reduction of the roofing material's ability to resist the propagation of flame spread. 31/3 ft. wide by 10 ft. long plywood test decks with the roof coverings in place are positioned at a given slope and tested using the same flame parameters, but the flame is applied continuously for ten minutes or until the actual flaming of the material being tested recedes from the point of maximum flame spread, which must not exceed 6 ft. for Class A or 8 ft. for Class B.

Burning Brand Burning Brand tests measure the roofing assembly's resistance to flame penetration caused by an ignited object falling on the roof. 31/3 ft. wide by 41/3 ft. long plywood test decks with the roof coverings in place are set up in the same manner as the intermittent flame test. Flaming grids of kiln-dried Douglas fir, 12 in. x 12 in. by 21/4 in. weighing approximately 41/2 pounds for Class A, and 6 in. x 6 in. by 21/4 in. weighing approximately one pound for Class B, are placed on the roof covering, fanned by a 12 mph. wind and allowed to burn freely. The test is concluded when the brand is consumed and all evidence of flame, glow, and smoke has disappeared from both the exposed surface of the roof covering and the underside of the test deck or until failure occurs. The criteria for passing is the same as in the case of the intermittent flame exposure.

Construction Types Non-Combustible (N/C): Deck constructions of metal, concrete or poured gypsum. Only Spread of Flame testing required.
Combustible (C): Deck constructions of wood, 3/4 inch thick sheathing boards or minimum thickness plywood recommended by the roofing manufacturer. Spread of Flame, Intermittent Flame and Burning Brand are required.
Classifications are applicable either for new construction, recovering or reroofing purposes. (Re-covering is defined as the process of covering an existing roofing system with a new roofing system. Re-roofing is defined as removing an existing roof system and replacing it with a new system.) For recovering situations, UL Classified uninsulated new construction assemblies are not intended for installation over existing UL Classified insulated assemblies unless specifically Classified under Maintenance and Repair Systems.
Systems Classified under Maintenance and Repair are specifically limited for installation (recover) over existing roofing systems as specified. They may not meet Classification requirements without being used in conjunction with the existing roofing system(s). Re-covering can also be accomplished with Classified new construction roofing systems where compatibility has been determined by either specific testing, empirical data or by known performance properties of similar materials to the test methods.

The following are some general guidelines in determining the suitability of a new construction roofing system as a recover system:

Non-Combustible Deck Construction:

Insulated roof systems may be utilized over any type of existing roof system and maintain its new construction rating when the roof deck is non-combustible.

Combustible Deck Construction:

Insulated roof systems classified for use over combustible deck can be used over any type of existing roof system and maintain its new construction rating.

Insulated roof systems classified for use over non-combustible deck may be used over any type of Class A, B or C existing roof systems. The resultant Class will be the lesser rating of the existing system or the new construction (recover) system.

[Click Here](#) to view current UL Product Listings for Seaman Corporation FiberTite.

