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UL-Combustible Decks Code Alert
October 7, 2020

This code-related document is being offered in the form of an electronic publication to enhance awareness of available Carlisle products and systems specifically targeted toward the combustible deck market. These assemblies offer simple and convenient roofing solutions without the use of thick insulation products.

Combustible Deck Fire Code Highlights

UL Class A - Wood Deck Applications

Carlisle has been committed to providing unique roofing solutions for the combustible deck market for many years, and its Class A fire rated assemblies have undergone many evolutions. The assemblies have steadily become more cost competitive, lighter in weight, and easier to install. Gypsum board was initially needed to pass the Class A penetration fire tests. Thick layers of polyiso insulation replaced the need for gypsum, and eventually thinner layers (1" and even 1/2") became possible. Most recently, Class A was achieved with direct membrane application.

The following tables highlight various lighter-weight assemblies that qualify for a UL Class A external fire rating. These assemblies are applicable for use in new construction and re-roofing/recover projects. The products highlighted include FleeceBACK® FR TPO membrane, 1/2" SecurShield® HD, 1/2" SecurShield HD RL, and 1" SecurShield.

Other UL approved options using thicker insulation are also available and may be selected when a greater R-value is needed above the deck.

Direct Membrane Application

FleeceBACK FR TPO				
Deck	Construction	Insulation¹	Membrane / Attachment	Fire Rating / Max. Slope
Combustible	New or re-roof (tear off)	None	FleeceBACK FR TPO mechanically fastened	Class A / 1/4" slope
Combustible	Recover	None	FleeceBACK FR TPO mechanically fastened	Maintain existing fire rating up to 1/4" slope

Note 1: Insulation is not permitted for use below FleeceBACK FR TPO membrane.

Consult the online UL listings and Carlisle's installation guidelines to confirm all assembly, application, and warranty requirements.

Insulation/Cover Board Application

Class A Fire Ratings					
Deck Type	Construction	Insulation	Cover Board	Membrane System	Max. Slope
Combustible	New, re-roof, recover	Optional ² - any Carlisle polyiso, any combination or thickness	½" SecurShield HD ² or ½" SecurShield HD RL ²	Any Carlisle membrane system assembly	The max. slope equals that of the chosen membrane system assembly, but cannot exceed 1"
Combustible	New, re-roof, recover	Optional ³ - any Carlisle polyiso, any combination or thickness	Min. 1" SecurShield ³	Any Carlisle membrane system assembly	The max. slope equals that of the chosen membrane system assembly, but cannot exceed 1/2"

Note 2: All insulation joints must be staggered a minimum of 12" from the roof deck joints or from the insulation joints directly below.

Note 3: All insulation joints must be staggered a minimum of 6" from the roof deck joints or from the insulation joints directly below.

Consult the online UL listings and Carlisle's installation guidelines to confirm all assembly, application, and warranty requirements.