



## INFORMATION SHEET

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**No. FS-01**

**DATE** : July 24, 2024

**CATEGORY** : Fire Safety

**SUBJECT** : **Combustible Roof Decks – Allowable Materials and Area**

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**PURPOSE** : The purpose of this information sheet is to clarify standards for allowable building materials used in the construction of roof decks that conform to the minimum standards for resistance to intrusion and spread of flames.

**REFERENCES** : San Francisco Building Code (SFBC), Current Edition  
Sections 104A.2.8 and 1511.10  
California Building Code (CBC), Current Edition  
Sections 703A.5.1, 703A.5.2, 703A.7, 709A.3, 2303.1.9, 2303.2  
California Referenced Standards Code (CRSC), Current Edition  
Section 12-7A-4 Decking SFM Standard 12-7A-4  
Section 12-7A-4A Decking Alternate Method A SFM Standard 12-7A-4A  
American Society for Testing and Materials (ASTM), E-84 Test for Surface Burning  
Characteristics of Building Materials  
California Department of Forestry and Fire Protection, Office of the State  
Fire Marshal (OSFM) - Wildland Urban Interface (WUI) Products Handbook

**BACKGROUND** :

SFBC 1511.10 provides conditions under which occupiable roof decks are allowed to be constructed of wood. SFBC 1511.10 #4 requires that the wood decking be constructed of fire-retardant treated wood material approved for exterior use, or 2-inch nominal, All Heart redwood. SFBC 104A.2.8 allows the Building Official to approve alternate materials when the material is at least the equivalent of that prescribed in the code. This information sheet clarifies the standards for allowable building materials that conform to the minimum standards for resistance to intrusion and spread of flames used in the construction of roof decks.

**DISCUSSION** :

All Heart redwood has been shown to conform to the ASTM E-84 Class B flame spread index and exhibit a net peak heat release rate in conformance with Decking SFM Standard 12-7A-4 and Decking Alternative Method A SFM Standard 12-7A-4A. As these are equivalent to the minimum standards stated in the CBC

709A.3, #4 for decking used in a wildland urban interface location, materials complying with this section and these standards may be considered equivalent and thus be allowed for use in roof deck construction.

Therefore, in order for the decking material to be considered equivalent to the requirements of SFBC 1511.10, the material must conform to the ASTM E-84 Class B flame spread index and must conform to the requirements of SFM Standard 12-7A-4 (Part A) or SFM 12-7A-4A. It must also pass an accelerated weathering test and be identified as exterior type in accordance with both ASTM D 2898 and ASTM D 3201.

Decking material that conforms with SFM 12-7A-4 and SFM12-7-4A, as well as ASTM D 2898 and ASTM D 3201 are listed in the current version of "California Department of Forestry and Fire Protection, Office of the State Fire Marshal - Wildland Urban Interface Products Handbook (WUI Products Handbook)", published by Cal-Fire, Fire Engineering Division, Building Materials Listing Program.

Only those materials listed in the WUI Product Handbook in the Decking section and conform to the ASTM E-84 Class B or Class A flame spread index are deemed equivalent materials that may be used for the construction of wood roof decks. Additionally, materials not listed in the WUI Products Handbook that have appropriate documentation showing that they conform to the above standards may also be considered equivalent on a case-by-case basis. The WUI Products Handbook is available at the Office of the State Fire Marshal (OSFM) website:

<https://osfm.fire.ca.gov/what-we-do/fire-engineering-and-investigations/building-materials-listing>

Materials must be installed in conformance with the structural provisions of the code, the manufacturer's installation instructions, and all other relevant code requirements. All such material must be verified by grade stamp, supplier receipt or other approved methods prior to final approval by the field building inspector.

Note that the deck substructure (supporting structure) below the wood decking surface may be constructed with non-fire-treated lumber but must be preservative-treated to comply with CBC 2303.1.9.

Note also that SFBC 1511.10 #1 requires that the roof decks be less than 500 square feet in area. Hence, the total area of all roof decks located on the same story shall not exceed 500 square feet.



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Date

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