



Summary of Flammability & Smoke Development

International Building Code

Chapter 26 - Plastic

2606.4 Specifications. Light-transmitting plastics, including thermoplastic, thermosetting or reinforced thermosetting plastic material, shall have a self-ignition temperature of 650°F (343°C) or greater where tested in accordance with ASTM D 1929; a smoke-developed index not greater than 450 where tested in the manner intended for use in accordance with ASTM E84, or not greater than 75 where tested in the thickness intended for use in accordance with ASTM D 2843 and shall conform to one of the following combustibility classifications:

Class CC1: Plastic materials that have a burning extent of 1 inch (25 mm) or less where tested at a nominal thickness of 0.060 inch (1.5 mm), or in the thickness intended for use, in accordance with ASTM D635,

Class CC2: Plastic materials that have a burning rate of 2.5 inches per minute (1.06 mm/s) or less where tested at a nominal thickness of 0.060 inch (1.5 mm), or in the thickness intended for use in accordance with ASTM D635.

Fire Classifications

Clear-PEP					
clear-PEP UV PC, clear-PEP UV PC stage, clear-PEP UV PC color					
Fire classification	ASTM D-2843 Smoke Destiny (%)	ASTM D-635 Burning Rate (inches)	ASTM D-1929 Self Ignition Temp. (°F)	ASTM E648-17/ NFPA253 WATTS/CM ²	ASTM E-84 Flame Spread Index
C1/CC1	53.30 %	<1"	1093	>1.10	50

clear-PEP UV Satin					
Fire classification	ASTM D-2843 Smoke Destiny (%)	ASTM D-635 Burning Rate (inches)	ASTM D-1929 Self Ignition Temp. (°F)	ASTM E648-17/ NFPA253 WATTS/CM ²	ASTM E-84 Flame Spread Index
C1/CC1	8.2 %	1.14"	853	>1.10	50



AIR-board					
AIR-board Acoustic					
Fire classification	ASTM D-2843 Smoke Destiny (%)	ASTM D-635 Burning Rate (inches)	ASTM D-1929 Self Ignition Temp. (°F)	ASTM E648-17/ NFPA253 WATTS/CM ²	ASTM E-84 Flame Spread Index
C1/CC1	68.40 %	0.49"	790	>1.10	50

AIR-board UV satin, Color AIR-board					
Fire classification	ASTM D-2843 Smoke Destiny (%)	ASTM D-635 Burning Rate (inches)	ASTM D-1929 Self Ignition Temp. (°F)	ASTM E648-17/ NFPA253 WATTS/CM ²	ASTM E-84 Flame Spread Index
C2/CC2	8.2 %	1.14"	853	>1.10	50

AIR-board UV PC, AIR-board UV PC color					
Fire classification	ASTM D-2843 Smoke Destiny (%)	ASTM D-635 Burning Rate (inches)	ASTM D-1929 Self Ignition Temp. (°F)	ASTM E648-17/ NFPA253 WATTS/CM ²	ASTM E-84 Flame Spread Index
C2/CC2	36.50 %	0.47"	1095	>1.10	50

These specific ASTM Tests are the criteria for a plastic material to be recognized by Building Officials and Code Administrators International (BOCA), International Conference of Building Officials (ICBO) and Southern Building Code Congress International (SBCCI). It should be understood building codes recognize that thermo plastics do not meet the requirements of Chapter 8 Interior Finishes as per ASTM E 84/UL 723 testing criteria. Per ASTM E-84, flammability criteria must achieve a flame spread rating less than 200 and a smoke development rating less than 450 in order to be designated Class A, B or C. These tests measure the flame spread index and smoke density of a material relative to red oak in a ceiling position. Both standards recognize that thermoplastics do not burn like red oak and soften and melt before they burn and due to the nature of the test method smoke generation becomes artificially high. Flame spread ratings for all our products are below the required rating of 200. But smoke development ratings for most thermo plastics exceed 450, hence the above classification per UBC / IBC Chapter 26 flammability smoke classification. NFPA 101 refers use of light transmitting plastics to authorities and organizations having local jurisdiction. Such authorities typically adopt the US Model Building Codes which are again supported by BOCA, ICBO and SBCII. Consult with your local officials if additional questions arise. Moxie Surfaces is the exclusive importer of design-composite panels to North America. All questions should be directed to Moxie Surfaces or your sales representative