



DIRTT Flame Spread Testing 2010 ASTM E84

Intertek Testing Services NA, Inc
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Finish Classifications have been established for all standard DIRTT finishes developed since initial testing was performed in 2006 in accordance with the ASTM E84 test as required by section 803.1 the International Building Code (2009 edition). Flame Spread testing must be conducted on all interior finishes to establish a *Finish Classification* which corresponds with Table 803.9 in the IBC that limits finish use in buildings based on *Occupancy Type, Location in the Building, and Sprinkler inclusion / exclusion*. This **does not** imply DIRTT walls are fire-rated; our walls **cannot** be specified where fire-resistance ratings are required.

DIRTT Tile Flame Spread Ratings:

Finish Assembly / Material	Flame Spread Index	Smoke Development Index	Finish Classification
Chromacoat on MDF	65	40	B
Chromacoat on FR MDF	0	5	A
Veneer on MDF	200	50	C
Veneer on FR MDF	175	30	C
Thermofoil on MDF	90	400	C
Thermofoil on FR MDF	25	400	A
Writeaway Film on MDF	110	300	C
Writeaway Film on FR MDF	35	250	B
Magnetic Markerboard on MDF	0	30	A
Magnetic Markerboard on FR MDF	0	50	A
Fabric (Tackable)	45	120	B
Fabric (Non-Tackable) on MDF	165	55	C
Fabric (Non-Tackable) on FR MDF	20	250	A

ASTM E84 Flame Spread / Smoke Development Finish Classifications:

Class A:	Flame spread index 0-25; smoke-developed index 0-450.
Class B:	Flame spread index 26-75; smoke-developed index 0-450.
Class C:	Flame spread index 76-200; smoke-developed index 0-450.

DIRTT ENVIRONMENTAL SOLUTIONS



Finish Applications (as listed in IBC 2009 edition):

803.9 Interior finish requirements based on group. Interior wall and ceiling finish shall have a flame spread index not greater than that specified in Table 803.9 for the group and location designated.

TABLE 803.9 INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY^k

GROUP	SPRINKLERED ^l			NONSPRINKLERED		
	Exit enclosures and exit passageways ^{a,b}	Corridors	Rooms and enclosed spaces ^c	Exit enclosures and exit passageways ^{a,b}	Corridors	Rooms and enclosed spaces ^c
A-1 & A-2	B	B	C	A	A ^d	B ^e
A-3 ^f , A-4, A-5	B	B	C	A	A ^d	C
B, E, M, R-1	B	C	C	A	B	C
R-4	B	C	C	A	B	B
F	C	C	C	B	C	C
H	B	B	C ^g	A	A	B
I-1	B	C	C	A	B	B
I-2	B	B	B ^{h, i}	A	A	B
I-3	A	A ⁱ	C	A	A	B
I-4	B	B	B ^{h, i}	A	A	B
R-2	C	C	C	B	B	C
R-3	C	C	C	C	C	C
S	C	C	C	B	B	C
U	No restrictions			No restrictions		

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929m².

a. Class C interior finish materials shall be permitted for wainscoting or paneling of not more than 1,000 square feet of applied surface area in the grade lobby where applied directly to a noncombustible base or over furring strips applied to a noncombustible base and fireblocked as required by [Section 803.11.1](#).

b. In exit enclosures of buildings less than three stories above grade plane of other than Group I-3, Class B interior finish for nonsprinklered buildings and Class C interior finish for sprinklered buildings shall be permitted.

c. Requirements for rooms and enclosed spaces shall be based upon spaces enclosed by partitions. Where a fire-resistance rating is required for structural elements, the enclosing partitions shall extend from the floor to the ceiling. Partitions that do not comply with this shall be considered enclosing spaces and the rooms or spaces on both sides shall be considered one. In determining the applicable requirements for rooms and enclosed spaces, the specific occupancy thereof shall be the governing factor regardless of the group classification of the building or structure.

d. Lobby areas in Group A-1, A-2 and A-3 occupancies shall not be less than Class B materials.

e. Class C interior finish materials shall be permitted in places of assembly with an occupant load of 300 persons or less.

f. For places of religious worship, wood used for ornamental purposes, trusses, paneling or chancel furnishing shall be permitted.

g. Class B material is required where the building exceeds two stories.

h. Class C interior finish materials shall be permitted in administrative spaces.

i. Class C interior finish materials shall be permitted in rooms with a capacity of four persons or less.

j. Class B materials shall be permitted as wainscoting extending not more than 48 inches above the finished floor in corridors.

k. Finish materials as provided for in other sections of this code.

l. Applies when the exit enclosures, exit passageways, corridors or rooms and enclosed spaces are protected by an automatic sprinkler system installed in accordance with [Section 903.3.1.1](#) or [903.3.1.2](#).