

LABELING OF FIRE-RATED GLAZING STUDY GROUP
REPORT TO CTC MEETING – CHICAGO, IL - OCTOBER 13-14, 2011
CODE CHANGES

Issue 1: Clarification of when 703.6 can be used rather than 716

1. Revise as follows:

716.2 Fire-resistance-rated glazing. Fire-resistance-rated glazing tested as part of a fire-resistance-rated wall or floor/ceiling assembly in accordance with ASTM E 119 or UL 263 and labeled in accordance with Section 703.6 ~~shall be permitted in fire doors and fire window assemblies where tested and installed in accordance with their listings and~~ shall not otherwise be required to comply with this section when used as part of a wall or floor/ceiling assembly. ~~Fire-resistance-rated glazing shall be permitted in fire door and fire window assemblies where tested and installed in accordance with their listings and when in compliance with the requirements of this section.~~

Reason: Needs to be drafted.

Issue 2 - Option #1:

Clarification and relocation of fire-rated glazing identification requirements

Sections 716.3, 716.3.1, 716.3.2, 716.5.8.3, 716.5.8.3.1 and 716.6.8

Revise as follows:

716.3 Marking fire-rated glazing assemblies. *Fire-rated glazing* assemblies shall be marked in accordance with Tables 716.3, 716.5, and 716.6.

716.3.1 Identification. For fire-protection-rated glazing, the label shall bear the identification required in Table 716.3 and Table 716.5. “D” indicates that the glazing is permitted to be used in fire door assemblies and that the glazing meets the fire protection requirements of NFPA 252. “H” shall indicate that the glazing meets the hose stream requirements of NFPA 252. “T” shall indicate that the glazing meets the temperature requirements of Section 716.5.5.1. The placeholder “XXX” represents the fire -rating period, in minutes.

716.3.2 Identification. For fire-protection-rated glazing, the label shall bear the following identification required in Table 716.3 and Table 716.6: “OH – XXX.” “OH” indicates that the glazing meets both the fire protection and the hose-stream requirements of NFPA257 or UL9 and is permitted to be used in fire window openings. The placeholder “XXX” represents the fire-rating period, in minutes.

~~716.3.1~~ **716.3.3 Fire-rated glazing that exceeds the code requirements.** *Fire-rated glazing* assemblies marked as complying with hose stream requirements (H) shall be permitted in applications that do not require compliance with hose stream requirements. *Fire-rated glazing* assemblies marked as complying with temperature rise requirements

(T) shall be permitted in applications that do not require compliance with temperature rise requirements. *Fire-rated glazing* assemblies marked with ratings (XXX) that exceed the ratings required by this code shall be permitted.

716.5.8.3 Labeling. Fire-protection-rated glazing shall bear a *label* or other identification showing the name of the manufacturer, the test standard and information required in Section 716.3.1 ~~716.5.8.3.1~~ that shall be issued by an *approved agency* and shall be permanently identified on the glazing.

716.5.8.3.1 Identification. For fire-protection-rated glazing, the *label* shall bear the following four-part identification: ~~“D – H or NH – T or NT – XXX.”~~ “D” indicates that the glazing shall be used in *fire door* assemblies and that the glazing meets the fire protection requirements of NFPA 252. “H” shall indicate that the glazing meets the hose stream requirements of NFPA 252. “NH” shall indicate that the glazing does not meet the hose stream requirements of the test. “T” shall indicate that the glazing meets the temperature requirements of Section

~~716.5.5.1.~~ “NT” shall indicate that the glazing does not meet the temperature requirements of Section

~~716.5.5.1.~~ The placeholder “XXX” shall specify the fire protection rating period, in minutes.

716.6.8 Labeling requirements. Fire-protection-rated glazing shall bear a label or other identification showing the name of the manufacturer, the test standard and information required in Section 716.3.2 and Table 716.6 that shall be issued by an approved agency and shall be permanently identified on the glazing.

Reason: Needs to be drafted.

Issue 2 - Option #2:

716.3 Marking fire-rated glazing assemblies. *Fire-rated glazing* assemblies shall be marked in accordance with Tables 716.3, 716.5, and 716.6.

716.3.1 Identification. For fire-rated glazing, the *label* shall bear the identification required in Table 716.3 and Table 716.5. “D” indicates that the glazing is permitted to be used in *fire door* assemblies and that the glazing meets the fire protection requirements of NFPA 252. “H” shall indicate that the glazing meets the hose stream requirements of NFPA 252. “T” shall indicate that the glazing meets the temperature requirements of Section 716.5.5.1. The placeholder “XXX” represents the fire -rating period, in minutes.

(provisions of Option #1 not shown remain unchanged)

Discussion: Late comments were received to revise Section 716.3.1 to change “fire-protection-rated glazing” to “fire-rated glazing” in the first sentence. This change was considered necessary because, without it, the provision only applies to fire protection rated glazing and marking the glazing with "T" means that it can be used in excess of 100 sq. in. and must be fire resistance rated (See 716.5.5.1).

Issue 3: Clarifications to Table 716.5 to reflect current code requirements.

Table 716.5

Revise as follows:

**TABLE 716.5
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS**

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE ^b	FIRE RATED GLAZING MARKING DOOR VISION PANEL ^{e,d}	MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours)		FIRE-RATED GLAZING MARKING SIDELITE/TRANSOM PANEL	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Fire walls and fire barriers having a required fire-resistance rating greater than 1 hour	4	3	Not Permitted	Not Permitted	Not Permitted	4	Not Permitted	W-240
	3	3 ^a	Not Permitted	Not Permitted	Not Permitted	3	Not Permitted	W-180
	2	1½	100 sq. in. ^e	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	2	Not Permitted	W-120
	1½	1½	100 sq. in. ^e	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	1½	Not Permitted	W-90
<u>Horizontal exits in fire walls ^e</u>	<u>4</u>	<u>3</u>	<u>100 sq. in.</u>	<u>D-H-180</u>	<u>Not Permitted</u>	<u>4</u>	<u>Not Permitted</u>	<u>W-240</u>
	<u>3</u>	<u>3^a</u>	<u>100 sq. in.</u>	<u>D-H-180</u>	<u>Not Permitted</u>	<u>3</u>	<u>Not Permitted</u>	<u>W-180</u>
Shaft, exit enclosures and exit passageway walls	2	1½	100 sq. in. ^{c,d}	≤100 sq.in. = D-H-90 > 100 sq.in.= D-H-T-or D-H-T-W-90	Not Permitted	2	Not Permitted	W-120

Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access ramps, interior exit stairways, interior exit ramps and exit passageway walls	1	1	100 sq. in. ^{c-d}	≤100 sq.in. = D-H-60 >100 sq.in.= D-H-T-60 or D-H-T-W-60	Not Permitted	1	Not Permitted	W-60
Fire protection								
Other fire barriers	1	3/4	Maximum size tested	D-H-NT-45	3/4	D-H-NT-45		
Fire partitions: Corridor walls	1	1/3 ^b	Maximum size tested	D-20	3/4 ^b	D-H-OH-45		
	0.5	1/3 ^b	Maximum size tested	D-20	1/3	D-H-OH-20		
Other fire partitions	1	3/4	Maximum size tested	D-H-45	3/4	D-H-45		
	0.5	1/3	Maximum size tested	D-H-20	1/3	D-H-20		

(continued)

**TABLE 716.5—continued
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS**

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE ^b	FIRE RATED GLAZING MARKING DOOR VISION PANEL ^{e-d}	MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours)		FIRE-RATED GLAZING MARKING SIDELITE/TRANSOM PANEL		
					Fire protection	Fire resistance	Fire protection	Fire resistance	
Exterior walls	3	1 1/2	100 sq. in. ^{e-b}	≤100 sq.in. = D-H-90 >100 sq.in = D-H-W-90	Not Permitted	3	Not Permitted	W-180	
	2	1 1/2	100 sq. in. ^{e-b}	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	2	Not Permitted	W-120	
	Fire Protection								
	1	3/4	Maximum size tested	D-H-45	3/4	D-H-45			
Smoke barriers	Fire protection								
	1	1/3 ^b	Maximum size tested	D-20	3/4	D-H-OH-45			

For SI: 1 square inch = 645.2 mm.

- a. Two doors, each with a fire protection rating of 1¹/₂ hours, installed on opposite sides of the same opening in a fire wall, shall be deemed equivalent in fire protection rating to one 3-hour fire door.
- ~~b. For testing requirements, see Section 716.6.3.~~
- b.e. Fire-resistance-rated glazing tested to ASTM E 119 in accordance with Section 716.2 shall be permitted, in the maximum size tested.
- c.d. Except where the building is equipped throughout with an automatic sprinkler and the fire-rated glazing meets the criteria established in Section 716.5.5.
- d.e. Under the column heading "Fire-rated glazing marking door vision panel," W refers to the fire-resistance rating of the glazing, not the frame.
- e. See Section 716.5.8.1.2.1.

Reason: Needs to be drafted.

Issue 4: Clarify safety glazing requirements apply to all fire rated glazing and simplify the reference to Chapter 24.

Revise as follows:

716.5.8.4 Safety glazing. ~~Fire-protection-rated glazing installed in *fire doors assemblies in areas subject to human impact in hazardous locations* shall also comply with the safety glazing requirements of Chapter 24 where applicable.~~

716.6.3 Safety glazing. ~~Fire-protection-rated glazing installed in *fire window assemblies in areas subject to human impact in hazardous locations* shall also comply with the safety glazing requirements of Chapter 24 where applicable.~~

Reason: Needs to be drafted.