



Fire Doors and Windows

In the *NFPA 101, 2009 Edition*, under **8.3 Fire Barriers**, the following paragraphs **8.3.3 Fire Doors and Windows** through **8.3.3.11.2** address the requirements of fire protection rated glazing materials.

8.3.3 Fire Doors and Windows.

8.3.3.5 Fire protection-rated glazing shall be permitted in fire barriers having a required fire resistance rating of 1 hour or less and shall be of an approved type with the appropriate fire protection rating for the location in which the barriers are installed.

8.3.3.7 Fire resistance-rated glazing complying with **8.3.2.1.1** shall be permitted in fire doors and fire window assemblies in accordance with their listings.

8.3.3.8 Wired glass of ¼ in. (6mm) thickness and labeled for fire protection purposes shall be permitted to be used in approved opening protectives, provided that the maximum size specified by the listing is not exceeded. Other glazing materials that have been tested and labeled to indicate the type of opening to be protected for fire protection purposes shall be permitted to be used in approved opening protectives in accordance with their listing, with the maximum sizes tested.

8.3.3.9 Non symmetrical fire protection-rated glazing systems shall be tested with each face exposed to the furnace, and the assigned fire protection rating shall be that of the shortest duration obtained from the two tests conducted in compliance with NFPA 257, *Standard on Fire Test for Window and Glass Block Assemblies*; ASTM E 2010, *Standard Test Method for Positive Pressure Fire Tests of Window Assemblies*; or ANSI/UL 9, *Standard for Fire Tests of Window Assemblies*.

8.3.3.10 The total combined area of glazing in fire-rated window assemblies and fire-rated door assemblies used in fire barriers shall not exceed 25 percent

of the area of the fire barrier that is common with any room, unless the installation meets one of the following criteria:

1. The installation is an existing fire window installation of wired glass and other fire-rated glazing material in approved metal frames.
2. The installation is an existing fire window installation of wired glass and other fire-rated glazing materials in approved frames.
3. The fire protection-rated glazing material is installed in approved existing frames.

8.3.3.11 Fire protection-rated glazing shall bear identification as described in **8.3.3.11.1** or **8.3.3.11.2** and shall be permanently affixed.

8.3.3.11.1 Fire protection-rated glazing used in doors shall bear a four-part identification in the form of D – H (or NH) – T (or NT) – XXX, with the component parts defined as follows:

1. D, which indicates that the glazing is to be used in fire door assemblies and that the glazing meets the fire protection requirements of NFPA 252, *Standard Methods of Fire Tests of Door Assemblies*.
2. H, which indicates that the glazing meets the hose stream requirements of the test standard
3. NH, which indicates that the glazing does not meet the hose stream requirements of the test standard
4. T, which indicates that the glazing has a maximum transmitted temperature endpoint of not more than 450°F (250°C) above ambient at the end of 30 minutes of standard fire test exposure

tech tip

do you know?



5. NT, which indicates that the glazing does not have a temperature rise rating
6. XXX, which is the placeholder that specifies the fire protection rating period, in minutes

8.3.3.11.2 Fire protection-rated glazing used in fire resistance-rated walls and partitions shall bear the identification OH-XXX, which is defined as follows:

1. OH indicates that the glazing meets both the fire protection and the hose stream requirements of NFPA 257, *Standard on Fire Test for*

Window and Glass Block Assemblies; ASTM E 2010, *Standard Test Method for Positive Pressure Fire Tests of Window Assemblies*; or ANSI/UL 9, *Standard for Fire Tests of Window Assemblies*; and is permitted to be used in openings.

2. XXX indicates the fire protection rating period, in minutes, that was tested.

You can find standard product features and fire rating classification markings and impact-safety ratings through industry manufacturers.

To acquire CEP points, answer the following questions:

1. Glazing material shall be permitted in fire doors when tested with what standard?
2. Only labeled fire-resistance rated glazing material shall be used in fire door assemblies.

True False

3. What do the following fire-protection glazing identification components indicate?

H _____

T _____

D _____

NH _____

4. Fire windows are classified by an hourly rating designation.

True False

You will earn 3 CEP points by reading the article and answering the problems. Upon completion, copy or detach this page, fill in the form below, and submit your answers by mailing or faxing the page to DHI.



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Retain a copy of this exercise for your Continuing Education renewal application. Answers to these problems will be posted on our website (www.dhi.org) on the first day of the next month following the issue month of the magazine.

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To acquire CEP points, answer the following questions:

1. Glazing material shall be permitted in fire doors when tested with what standard?
NFPA 252
 2. Only labeled fire-resistance rated glazing material shall be used in fire door assemblies.
 True False
 3. What do the following fire-protection glazing identification components indicate?
H meets hose stream test
T meets temperature rise standard
D glazing to be used in fire door
NH does not meet hose stream requirements
 4. Fire windows are classified by an hourly rating designation.
 True False
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