



NFPA 705

Recommended Practice for a Field Flame Test for Textiles and Film

- 2003 Edition -

Chapter 1 Administration

1.1 Scope.

1.1.1 This recommended practice provides guidance to enforcement officials for the field application of an open flame to textiles and films that have been in use in the field or for which reliable laboratory data are not available.

1.1.2 There is no known correlation between this recommended practice and NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*, or full-scale fire behaviour.

1.2 Purpose.

1.2.1 The purpose of this recommended practice is to provide authorities having jurisdiction with a field means of determining the tendency of textiles and films to sustain burning subsequent to the application of a relatively small open flame.

1.2.2 The methods described herein and the results do not correlate with any known test method, and factors relating to reproducibility and correlation have not been determined; therefore, they should not be relied upon when more definitive test data are available.

1.3.1.1* The field test method can be useful to regulatory officials as an indicator of whether a material being used or installed burns very easily or can be flame resistant as indicated by the following :

- (1) Cessation of burning when the igniting flame is removed
- (2) Failure to burn at all
- (3) Continuing to burn non-aggressively after igniting flame is removed

1.3.1.2 The field test method has utility only when the authority having jurisdiction has no reliable data and, therefore, is forced to rely solely on the field test findings.

Chapter 4 Procedure

4.1* Materials.

4.1.1 Specimens should be samples removed from the existing material.

4.1.2 Specimens should be dry and should be a minimum of 12.7 mm x 101.6 mm (1/2 in. x 4 in.).

4.2 Open Flame. The fire exposure should be from a common wood kitchen match or source with equivalent flame properties.

4.2.1 The flame should be applied for 12 seconds.

4.3* Method.

4.3.1 The Test should be performed in a draft-free and safe location free of other combustibles.

4.3.2 The sample should be suspended (preferably by means of a spring clip, tongs, or similar device) with the long axis vertical, the flame supplied to the center of the bottom edge, and the bottom edge 12.7 mm (1/2 in.) above the bottom of the flame.

4.3.3 After 12 seconds of exposure, the match is to be removed gently away from the sample.

4.4 Requirements. During the exposure, flaming should not spread over the complete length of the sample or, in the case of larger samples, in excess of 101.6 mm (4 in.) from the bottom of the sample.

4.4.1 There should be not more than 2 seconds of after-flame.

4.4.2 Materials that break or drip flaming particles should be rejected if the materials continue to burn after they reach the floor.

Chapter 5 Summary

5.1 Limitations. The deficiencies and limitations of the field test method can lead to misleading or erroneous results, and the error can be in both directions. It is quite possible to have a too-small sample show several seconds of after-flaming, causing the material to be rejected. It is equally possible for improper or inadequate field procedures to incorrectly indicate satisfactory flame resistance. This can result in dangerous errors.

5.2 Precautions. Field procedures are useful, but they must be used with good judgment and their limitations should be recognized. Field tests should not be relied on as the sole means for ensuring adequate flame resistance of decorative materials. They are, however, useful in augmenting a comprehensive regulatory program.

Please Note :

These portions of information were taken from the NFPA 705 Recommended Practice for a Field Flame Test for Textiles and Films 2003 Edition. A complete version of the NFPA 705 Document may be purchased from the NFPA at www.nfpa.org