

## APPENDIX H

# TEST REQUIREMENTS FOR FLAME-RETARDANT CHEMICALS USED ON CHRISTMAS TREES

*The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.*

### SECTION H101 GENERAL

**H101.1 Scope.** The testing protocol outlined in Appendix H shall be performed by an approved laboratory.

**H101.2 Submittals.** Sufficient quantities of the chemical and fresh green Christmas tree branches of Frazier Fir or Douglas Fir shall be submitted to the laboratory, where the chemical shall be applied in accordance with the manufacturer's directions.

**H101.3 Chemical application.** The chemical shall be applied to fresh green branches of Frazier Fir or Douglas Fir approximately 3 feet (914 mm) long.

**H101.4 Testing procedure.** The laboratory shall allow treated and untreated specimens to age in controlled conditions [70°F (21°C) and 50 percent relative humidity] for 30 days during and after which period the specimens shall be examined and the condition and appearance of the chemical or coating noted. The chemical or coating shall be dry to the touch within 4 hours and dry completely within 24 hours. During and after the aging period, there shall be no appreciable change in color or appearance, and no evidence of poor adhesive qualities (such as would be indicated by a tendency toward flaking or powdering off). At the completion of the 30-day aging period, the treated branches shall not lose their needles more readily nor shall they have turned brown to a greater extent than those of the untreated branches similarly aged.

### SECTION H102 TEST METHOD

**H102.1 Specimen preparation.** Six specimens, each approximately 3 feet (914 mm) long, shall be subjected to the fire-resistance test. The specimens shall be suspended vertically in a rack which covers the upper  $\frac{1}{2}$  inch (12.7 mm) of the length. To protect the specimens from drafts, the apparatus shall be enclosed in a sheet metal shield, and provided with a vertical sliding glass front. Sufficient room shall be left at the bottom of the front to allow manipulation of the gas burner used in lighting the specimens.

**H102.2 Specimen testing.** The specimens shall be suspended with their lower end  $\frac{3}{4}$  inch (19.1 mm) above the top of a  $\frac{3}{8}$ -inch (9.5 mm) i.d. Bunsen or Tirril gas burner, with the air supply completely shut off and adjusted to give a luminous flame  $1\frac{1}{2}$  inches (38 mm) long. The flame shall be applied vertically to the lower end of the specimens for 12 seconds, then withdrawn, and the duration of flaming in the specimens after withdrawal of the burner noted. After complete extinction of all flame and glow in the specimen, the length of char shall be measured, as specified in Federal Specification CCC-T-191a,

Supplement October 1945. Tests shall be made on several different areas of the treated branches.

**H102.3 Flame.** There shall be no spread of flame from the area in contact with the test flame and any after flaming shall not exceed 10 seconds.

### SECTION H103 REPORTING REQUIREMENTS

**H103.1 Report submittal.** A copy of the laboratory report shall be submitted to the Engineering Division of the North Carolina Department of Insurance covering the method of application or treatment (number of coats, coverage in square feet per gallon, dilution, if any, etc.), the results of tests and the description of the condition or appearance of the treated specimens after aging (including change of color, dryness, brittleness, and any other pertinent qualities). The laboratory or manufacturer shall also submit to the Engineering Division of the North Carolina Department of Insurance at least 1 quart of this chemical of which approval is desired.

**H103.2 Additional testing.** The Engineering Division of the North Carolina Department of Insurance may perform or cause to be performed such additional tests as deemed advisable or necessary, and whose decision in so far as approval of the chemical is concerned, shall be final.

