



## California Department of Forestry and Fire Protection

### [OSFM Home](#) → [Fire Engineering](#) → **Flame Retardant Fabrics and Chemicals Program**



All approved and registered flame retardant chemicals are first subjected to laboratory testing and satisfactorily demonstrate their flame-retardant capabilities.

## FLAME RETARDANT FABRICS AND CHEMICALS PROGRAM

In California, the Office of the State Fire Marshal staff issue certificates of registration for approved flame retardant chemicals, for those individuals and companies that apply flame retardant chemicals, for nonflammable materials, and for fabrics that have been treated with flame retardant chemicals. All approved and registered flame-retardant chemicals; nonflammable materials and treated fabrics are first subjected to laboratory testing and must satisfactorily demonstrate their flame-retardant capabilities. The SFM has the authority in drinking and dining establishments, places of public assembly and schools, to require decorative materials and fabrics (curtains, drapes, drops, hangings and tents, awnings or other fabric enclosures) be made from a nonflammable material, or treated with approved flame retardant chemicals. That authority has expanded over the years to include other decorative materials such as artificial plants, Christmas trees, and trade show display equipment.

Other SFM laws and regulations address the fire retardant qualities of fabrics for children's sleep-ware and sheets and pillowcases used in health care facilities. Many countries such as France, England and Germany have adopted programs similar to the Office of the State Fire Marshal's program.

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## California State Fire Marshal

### FIELD TESTING FOR FLAMMABILITY: MATCH FLAME TEST

State regulations require that drapes, hangings, curtains, etc... that would tend to increase fire and panic hazards in Groups A, E, I, and R-1 occupancies be made from non-flammable material or treated and maintained in a non-flammable condition by CSFM registered chemicals or processes. (See California Code of Regulations (CCR), Title 19, Section 3.08) CSFM evaluates materials, chemicals and applicators and issues certificates of registration to those who comply with state standards.

Local fire authorities may encounter existing conditions where an alternate means of compliance may be warranted. Field testing for flammability may be accepted, (CCR, T-19, Section 1310), if fire and panic safety can be maintained while permitting reasonable economic or time allowances for a building owner to exhibitor.

The most commonly used method of field testing is the "match flame test". The "match test" is based on requirements of small scale fire tests. It is important to note that field testing may not be used in place of the requirements for certification of new products.

#### MATCH FLAME TEST

Materials: Specimens must be dry. Specimen size should be a minimum of 3 inches wide by 10 inches long. Flame exposure should be from a common wood kitchen-type match.

Method: The test is performed in a draft-free and safe location. The sample is suspended (preferably held with tongs or some similar device) with the long axis vertical. The flame is applied to the center of the bottom edge with the bottom edge ½-inch above the flame. After 12 seconds of exposure, the match is removed.

Requirements: During the exposure, flaming shall not spread over the complete length of the sample or in excess of 4 inches from the bottom of the sample. There shall not be more than 2 seconds of afterflame. Materials that break and drip flaming particles shall be rejected if the materials continue to burn after they reach the floor.

The inspection authority shall use reasonable judgement in taking test specimens to avoid unnecessary damage to the product/article.

For further information concerning field testing for flammability or information concerning the California State Fire Marshal's Flame Retardant Fabrics and Chemicals Program, contact the following:

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