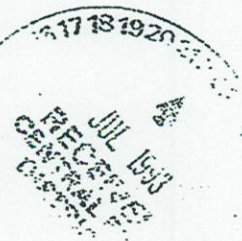


TechNotes

California State Fire Marshal
Technical Services Division

#93-001



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 Section 3.08, Title 19, California Code of Regulations.) 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, (T-19 CRC, section 1310), if fire and panic safety can be maintained while permitting reasonable economic or time allowances for a building owner or 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 1/2-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 for information concerning the California State Fire Marshal's Flame Retardant Fabrics and Chemicals program, contact Deputy Ellie Shelton by telephoning (916) 262-1936.

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ARTICLE 85 — ELECTRICAL EQUIPMENT AND WIRING

SECTION 8501 — SCOPE

Permanent and temporary use of electrical appliances, fixtures, motors and wiring shall be in accordance with Article 85.

EXCEPTION: Low-voltage wiring, such as communications and signal wiring.

Article 85 shall be enforced in cooperation with the authority having jurisdiction for the enforcement of the Electrical Code.

SECTION 8502 — DEFINITIONS

For definitions of APPLIANCE, PORTABLE; APPLIANCE, STATIONARY; EXTENSION CORD; FLEXIBLE CORD; MULTIPLUG ADAPTER; PANEL BOARD, ELECTRICAL; PERMANENT WIRING; POWER TAP; RECEPTACLE; SWITCHBOARD, ELECTRICAL; and TEMPORARY WIRING, see Article 2.

SECTION 8503 — USE OF TEMPORARY WIRING

8503.1 During Construction. Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities.

8503.2 During Special Events and Holidays. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days for Christmas decorative lighting, carnivals and similar purposes, and for experimental or developmental work.

8503.3 Attachment to Structures. When temporary wiring is attached to a structure, it shall be attached in an approved manner.

SECTION 8504 — ABATEMENT OF ELECTRICAL HAZARDS

When electrical hazards are identified, measures to abate such conditions shall be taken. Identified hazardous electrical conditions in permanent wiring or temporary wiring shall be corrected in cooperation with the authority enforcing the Electrical Code.

Electrical wiring, devices, appliances and other equipment which are modified or damaged and constitute an electrical shock or fire hazard shall not be used.

SECTION 8505 — ELECTRICAL MOTORS

Electrical motors shall be maintained in a manner free from accumulations of oil, dirt, waste and other debris which will interfere with required motor ventilation or create a fire hazard.

SECTION 8506 — EXTENSION CORDS AND FLEXIBLE CORDS

8506.1 General. Extension cords shall not be used as a substitute for permanent wiring.

8506.2 Use with Portable Appliances.

8506.2.1 General. The use of extension cords shall be in accordance with Section 8506.2.

8506.2.2 Applications. Extension cords shall be used only with portable appliances.

8506.2.3 Power supply. Extension cords shall be plugged directly into an approved receptacle, power tap or multiplug adapter and shall, except for approved multiplug extension cords, serve only one portable appliance.

8506.2.4 Ampacity. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord.

8506.2.5 Maintenance. The extension cords shall be maintained in good condition without splices, deterioration or damage.

8506.2.6 Grounding. Extension cords shall be grounded when servicing grounded portable appliances.

8506.3 Installation. Extension cords and flexible cords shall not be affixed to structures; extend through walls, ceilings, floors, under doors or floor coverings; or be subject to environmental or physical damage.

SECTION 8507 — MULTIPLUG ADAPTERS

Multiplug adapters, such as multiplug extension cords, cube adapters, strip plugs and other devices, that do not comply with this code or the Electrical Code shall not be used.

SECTION 8508 — POWER TAPS

8508.1 General. The use of power taps shall be in accordance with Section 8508.

8508.2 Design. Power taps shall be of the polarized or grounded type, having overcurrent protection, and shall be listed.

8508.3 Power Supply. The power taps shall be directly connected to a permanently installed receptacle.

8508.4 Installation. Power tap cords shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage.

SECTION 8509 — ACCESS TO SWITCHBOARDS AND PANELBOARDS

8509.1 General. Work space around switchboards and panelboards shall be provided and maintained as required by the Electrical Code. Such space shall not be used for storage.

8509.2 Access. A clear and unobstructed means of access with a minimum width of 30 inches (762 mm) and a minimum height of 78 inches (1981 mm) shall be maintained from the operating face of the switchboard or panelboard to an aisle or corridor.

EXCEPTIONS: 1. Where reduced dimensions are allowed by the Electrical Code.

2. Access openings into attics or under-floor areas which provide a minimum clear opening of 22 inches by 30 inches (559 mm by 762 mm).

8509.3 Labeling. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating ELECTRICAL ROOM or similar approved wording. The disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident.