joints are completely supported by a framing member.

(5) Kitchen cabinet doors, countertops, backsplashes, exposed bottoms, and end panels shall have a flame spread rating not to exceed 200. Cabinet rails, stiles, mullions, and top strips are exempted.

(6) Finish surfaces of plastic bathtubs, shower units, and tub or shower doors shall not exceed a flame spread rating of 200.

(c) Fire protective requirements.

(1) Materials used to surface the following areas shall be of limited combustible material (e.g., 5/16-inch gypsum board, etc.):

(i) The exposed wall adjacent to the cooking range (see § 3280.203(b)(4));

(ii) Exposed bottoms and sides of kitchen cabinets as required by § 3280.204;

(iii) Interior walls and ceilings enclosing furnace and/or water heater spaces; and

(iv) Combustible doors which provide interior or exterior access to furnace and/or water heater spaces. The surface may be interrupted for louvers ventilating the enclosure. However, the louvers shall not be constructed of a material of greater combustibility than the door itself (e.g., plastic louvers on a wooden door).

(2) No burner of a surface cooking unit shall be closer than 12 horizontal inches to a window or an exterior door with glazing.

[49 FR 32008, Aug. 9, 1984, as amended at 58 FR 55005, Oct. 25, 1993; 70 FR 72042, Nov. 30, 2005]

§ 3280.204 Kitchen cabinet protection.

(a) The bottom and sides of combustible kitchen cabinets over cooking ranges to a horizontal distance of 6 inches from the outside edge of the cooking range shall be protected with at least 5/16-inch thick gypsum board or equivalent limited combustible material. One-inch nominal framing members and trim are exempted from this requirement. The cabinet area over the cooking range or cooktops shall be protected by a metal hood (26-gauge sheet metal, or .017 stainless steel, or .024 aluminum, or .020 copper) with not less than a 3-inch eyebrow projecting horizontally from the front cabinet face. The 5/16-inch thick gypsum board or equivalent material which is above the top of the hood may be supported by the hood. A 3/8-inch enclosed air space shall be provided between the bottom surface of the cabinet and the gypsum board or equivalent material. The hood shall be at least as wide as the cooking range.

(b) The 3-inch metal eyebrow required by paragraph (a) of this section will project from the front and rear cabinet faces when there is no adjacent surface behind the range, or the 5/16-inch thick gypsum board or equivalent material shall be extended to cover all exposed rear surfaces of the cabinet.

(c) The metal hood required by paragraphs (a) and (b) of this section can be omitted when an oven of equivalent metal protection is installed between the cabinet and the range and all exposed cabinet surfaces are protected as described in paragraph (a) of this section.

(d) When a manufactured home is designed for the future installation of a cooking range, the metal hood and cabinet protection required by paragraph (a) of this section and the wall-surfacing protection behind the range required by § 3280.203 shall be installed in the factory.

(e) Vertical clearance above cooking top. Ranges shall have a vertical clearance above the cooking top of not less than 24 inches to the bottom of combustible cabinets.

§ 3280.205 Carpeting.

Carpeting shall not be used in a space or compartment designed to contain only a furnace and/or water heater. Carpeting may be used in other areas where a furnace or water heater is installed, provided that it is not located under the furnace or water heater.

§ 3280.206 Fireblocking.

(a) *General.* Fireblocking must comply with the requirements of this section. The integrity of all fireblocking materials must be maintained.

(b) *Fireblocking materials.* Fireblocking must consist of the following materials:

(1) Minimum one inch nominal lumber, 5/16 inch thick gypsum board, or equivalent fire resistive materials; or

(2) Other Listed or Approved Materials;

(c) *Fireblocking locations.* (1) Fireblocking must be installed in concealed spaces of stud walls, partitions, and furred spaces at the floor and ceiling levels. Concealed spaces must not communicate between floor levels. Concealed spaces must not communicate between a ceiling level and a concealed roof area, or an attic space.

(2) Fireblocking must be installed at the interconnection of a concealed vertical space and a concealed horizontal space that occurs:

(i) Between a concealed wall cavity and the ceiling joists above; and

(ii) At soffits, drop ceilings, cover ceilings, and similar locations.

(3) Fireblocking must be installed around the openings for pipes, vents, and other penetrations in walls, floors, and ceilings of furnace and water heater spaces. Pipes, vents, and other penetrations that cannot be moved freely within their opening are considered to be fireblocked. Materials used to fireblock heat producing vent penetrations must be noncombustible or limited combustible types.

[71 FR 72042, Nov. 30, 2005]

§ 3280.207 Requirements for foam plastic thermal insulating materials.

(a) *General.* Foam plastic thermal insulating materials shall not be used within the cavity of walls (not including doors) or ceilings or be exposed to the interior of the home unless:

(1) The foam plastic insulating material is protected by an interior finish of 5/16-inch thick gypsum board or equivalent material for all cavities where the material is to be installed; or

(2) The foam plastic is used as a sheathing or siding backerboard, and it:

(i) Has a flame spread rating of 75 or less and a smoke-developed rating of 450 or less (not including outer covering of sheathing);

(ii) Does not exceed 3/8-inch in thickness; and

(iii) Is separated from the interior of the manufactured home by a minimum of 2 inches of mineral fiber insulation or an equivalent thermal barrier; or

(3) The foam plastic insulating material has been previously accepted by the Department for use in wall and/or ceiling cavities of manufactured homes, and it is installed in accordance with any restrictions imposed at the time of that acceptance; or

(4) The foam plastic insulating material has been tested as required for its location in wall and/or ceiling cavities in accordance with testing procedures described in the Illinois Institute of Technology Research Institute (IIT) Report, ''Development of Mobile Home Fire Test Methods to Judge the Fire-Safe Performance of Foam Plastic Sheathing and Cavity Insulation, IITRI Fire and Safety Research Project J–6461, 1979'' or other full-scale fire tests accepted by HUD, and it is installed in a manner consistent with the way the material was installed in the foam plastic test module. The materials must be capable of meeting the following acceptance criteria required for their location:

(i) *Wall assemblies.* The foam plastic system shall demonstrate equivalent or superior performance to the control module as determined by:

(A) Time to reach flashover (600 °C in the upper part of the room);

(B) Time to reach an oxygen (O_2) level of 14% (rate of O_2 depletion), a carbon monoxide (CO) level of 1%, a carbon dioxide (CO_2) level of 6%, and a smoke level of 0.26 optical density/meter measured at 5 feet high in the doorway; and

(C) Rate of change concentration for O_2, CO, CO_2 and smoke measured 3 inches below the top of the doorway.

(ii) *Ceiling assemblies.* A minimum of three valid tests of the foam plastic system and one valid test of the control module shall be evaluated to determine if the foam plastic system demonstrates equivalent or superior performance to the control module. Individual factors to be evaluated include intensity of cavity fire (temperature-time) and post-test damage.

(iii) *Post-test damage assessment for wall and ceiling assemblies.* The overall performance of each total system shall also be evaluated in determining the acceptability of a particular foam plastic insulating material.

(b) All foam plastic thermal insulating materials used in manufactured