

SECTION 719 FIRE-RESISTANCE REQUIREMENTS FOR PLASTER

719.1 Thickness of plaster. The minimum thickness of gypsum plaster or Portland cement plaster used in a fire-resistance-rated system shall be determined by the prescribed fire tests. The plaster thickness shall be measured from the face of the lath where applied to gypsum lath or metal lath.

719.2 Plaster equivalents. For *fire-resistance* purposes, $\frac{1}{2}$ inch (12.7 mm) of unsanded gypsum plaster shall be deemed equivalent to $\frac{3}{4}$ inch (19.1 mm) of one-to-three gypsum sand plaster or 1 inch (25 mm) of Portland cement sand plaster.

719.3 Noncombustible furring. In buildings of Type I and II construction, plaster shall be applied directly on concrete or masonry or on *approved* noncombustible plastering base and furring.

719.4 Double reinforcement. Plaster protection more than 1 inch (25 mm) in thickness shall be reinforced with an additional layer of *approved* lath embedded not less than $\frac{3}{4}$ inch (19.1 mm) from the outer surface and fixed securely in place.

Exception: Solid plaster partitions or where otherwise determined by fire tests.

719.5 Plaster alternatives for concrete. In reinforced concrete construction, gypsum plaster or Portland cement plaster is permitted to be substituted for $\frac{1}{2}$ inch (12.7 mm) of the required poured concrete protection, except that a minimum thickness of $\frac{3}{8}$ inch (9.5 mm) of poured concrete shall be provided in reinforced concrete floors and 1 inch (25 mm) in reinforced concrete columns in addition to the plaster finish. The concrete base shall be prepared in accordance with Section 2510.7.

SECTION 720 THERMAL- AND SOUND-INSULATING MATERIALS

720.1 General. Insulating materials shall comply with the requirements of this section. Where a flame spread index or a smoke-developed index is specified in this section, such index shall be determined in accordance with ASTM E84 or UL 723. Any material that is subject to an increase in flame spread index or smoke-developed index beyond the limits herein established through the effects of age, moisture or other atmospheric conditions shall not be permitted. Insulating materials, when tested in accordance with the requirements of this section, shall include facings, when used, such as vapor retarders, vapor permeable membranes and similar coverings, and all layers of single and multilayer reflective foil insulation and similar materials.

Exceptions:

1. Fiberboard insulation shall comply with Chapter 23.
2. Foam plastic insulation shall comply with Chapter 26.
3. Duct and pipe insulation and duct and pipe coverings and linings in plenums shall comply with the *International Mechanical Code*.

4. All layers of single and multilayer reflective plastic core insulation shall comply with Section 2614.

720.2 Concealed installation. Insulating materials, where concealed as installed in buildings of any type of construction, shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 450.

Exception: Cellulosic fiber loose-fill insulation complying with the requirements of Section 720.6 shall not be required to meet a flame spread index requirement but shall be required to meet a smoke-developed index of not more than 450 when tested in accordance with CAN/ULC S102.2.

720.2.1 Facings. Where such materials are installed in concealed spaces in buildings of Type III, IV or V construction, the flame spread and smoke-developed limitations do not apply to facings, coverings, and layers of reflective foil insulation that are installed behind and in substantial contact with the unexposed surface of the ceiling, wall or floor finish.

Exception: All layers of single and multilayer reflective plastic core insulation shall comply with Section 2614.

720.3 Exposed installation. Insulating materials, where exposed as installed in buildings of any type of construction, shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 450.

Exception: Cellulosic fiber loose-fill insulation complying with the requirements of Section 720.6 shall not be required to meet a flame spread index requirement but shall be required to meet a smoke-developed index of not more than 450 when tested in accordance with CAN/ULC S102.2.

720.3.1 Attic floors. Exposed insulation materials installed on *attic* floors shall have a critical radiant flux of not less than 0.12 watt per square centimeter when tested in accordance with ASTM E970.

720.4 Loose-fill insulation. Loose-fill insulation materials that cannot be mounted in the ASTM E84 or UL 723 apparatus without a screen or artificial supports shall comply with the flame spread and smoke-developed limits of Sections 720.2 and 720.3 when tested in accordance with CAN/ULC S102.2.

Exception: Cellulosic fiber loose-fill insulation shall not be required to meet a flame spread index requirement when tested in accordance with CAN/ULC S102.2, provided that such insulation has a smoke-developed index of not more than 450 and complies with the requirements of Section 720.6.

720.5 Roof insulation. The use of combustible roof insulation not complying with Sections 720.2 and 720.3 shall be permitted in any type of construction provided that insulation is covered with *approved* roof coverings directly applied thereto.

720.6 Cellulosic fiber loose-fill insulation and self-supported spray-applied cellulosic insulation. Cellulosic fiber