TABLE 721.1(1)—continued
MINIMUM PROTECTION OF STRUCTURAL PARTS BASED ON TIME PERIODS FOR VARIOUS NONCOMBUSTIBLE INSULATING MATERIALS[m]

STRUCTURAL PARTS TO BE PROTECTED	ITEM NUMBER	INSULATING MATERIAL USED	MINIMUM THICKNESS OF INSULATING MATERIAL FOR THE FOLLOWING FIRE-RESISTANCE PERIODS (inches)			
			4 hours	3 hours	2 hours	1 hour
4. Bonded or unbonded post-tensioned tendons in pre-stressed concrete[e, i]	4-1.1	Carbonate, lightweight, sand-lightweight and siliceous[f] aggregate concrete Unrestrained members: Solid slabs[h] Beams and girders[j] 8" wide greater than 12" wide	 — 3	 2 4 1/2 2 1/2	 1 1/2 2 1/2 2	 — 1 3/4 1 1/2
	4-1.2	Carbonate, lightweight, sand-lightweight and siliceous aggregate Restrained members:[k] Solid slabs[h] Beams and girders[j] 8" wide greater than 12" wide	 1 1/4 2 1/2 2	 1 2 1 3/4	 3/4 1 3/4 1 1/2	 — — —
5. Reinforcing steel in reinforced concrete columns, beams girders and trusses	5-1.1	Carbonate, lightweight and sand-lightweight aggregate concrete, members 12" or larger, square or round. (Size limit does not apply to beams and girders monolithic with floors.) Siliceous aggregate concrete, members 12" or larger, square or round. (Size limit does not apply to beams and girders monolithic with floors.)	1 1/2 2	1 1/2 1 1/2	1 1/2 1 1/2	1 1/2 1 1/2
6. Reinforcing steel in reinforced concrete joists[l]	6-1.1 6-1.2	Carbonate, lightweight and sand-lightweight aggregate concrete Siliceous aggregate concrete	1 1/4 1 3/4	1 1/4 1 1/2	1 1	3/4 3/4
7. Reinforcing and tie rods in floor and roof slabs[l]	7-1.1 7-1.2	Carbonate, lightweight and sand-lightweight aggregate concrete Siliceous aggregate concrete	1 1 1/4	1 1	3/4 1	3/4 3/4

For SI: 1 inch = 25.4 mm, 1 square inch = 645.2 mm^2, 1 cubic foot = 0.0283 m^3, 1 pound per cubic foot = 16.02 kg/m^3.

a. Reentrant parts of protected members to be filled solidly.

b. Two layers of equal thickness with a 3/4-inch airspace between.

c. For all of the construction with gypsum wallboard described in Table 721.1(1), gypsum base for veneer plaster of the same size, thickness and core type shall be permitted to be substituted for gypsum wallboard, provided that attachment is identical to that specified for the wallboard and the joints on the face layer are reinforced, and the entire surface is covered with not less than 1/16-inch gypsum veneer plaster.

d. An approved adhesive qualified under ASTM E119 or UL 263.

e. Where lightweight or sand-lightweight concrete having an oven-dry weight of 110 pounds per cubic foot or less is used, the tabulated minimum cover shall be permitted to be reduced 25 percent, except that the reduced cover shall be not less than 3/4 inch in slabs or 1 1/2 inches in beams or girders.

f. For solid slabs of siliceous aggregate concrete, increase tendon cover 20 percent.

g. Adequate provisions against spalling shall be provided by U-shaped or hooped stirrups spaced not to exceed the depth of the member with a clear cover of 1 inch.

h. Prestressed slabs shall have a thickness not less than that required in Table 721.1(3) for the respective fire-resistance time period.

i. Fire coverage and end anchorages shall be as follows: Cover to the prestressing steel at the anchor shall be 1/2 inch greater than that required away from the anchor. Minimum cover to steel-bearing plate shall be 1 inch in beams and 3/4 inch in slabs.

j. For beam widths between 8 inches and 12 inches, cover thickness shall be permitted to be determined by interpolation.

k. Interior spans of continuous slabs, beams and girders shall be permitted to be considered restrained.

l. For use with concrete slabs having a comparable fire endurance where members are framed into the structure in such a manner as to provide equivalent performance to that of monolithic concrete construction.

m. Generic fire-resistance ratings (those not designated as PROPRIETARY* in the listing) in GA 600 shall be accepted as if herein listed.

n. Additional insulating material is not required on the exposed outside face of the column flange to achieve a 1-hour fire-resistance rating.