INSIGHT



BALANCED RISK ENGINEERING SOLUTIONS

OPEN GRID CEILINGS PROTECTION

Understanding the risk

Open grid ceilings are an architectural feature that provide a visual sense of openness, but create potential obstructions for sprinkler discharge.

Controlling the hazard

To avoid putting sprinklers beneath an open grid ceiling, the openings must be at least 1/4 - inch (6.35 - mm) in the smallest dimension, the ceiling material thickness or depth cannot exceed the smallest dimension of the opening, and the sum of the area of all openings must be at least 70% of the area of the ceiling material.

If sprinklers are installed above the open grid ceiling, there must be adequate clearance beneath the sprinkler deflector to develop an unobstructed spray pattern.

The table below provides minimum clearances measured between the sprinkler deflector and the upper surface of an open grid ceiling. **



Hazard Class	Sprinkler Style		Sprinkler Spacing – (S.S)	Clearance
	Spray	Old Style	ft. (m)	In. (mm)
Light	X	X	S.S < 10x10 (3x3)	≥ 18 (457)
	X		10x10 (3x3) < S.S < 10x12 (3x3.7)	≥ 24 (610)
		X	10x10(3x3) < S.S < 10x12(3x3.7)	≥ 36 (914)
	X	X	S.S > 10x12 (3x3.7)	≥ 48 (1219)
Ordinary	X	NP	S.S < 10x10 (3x3)	≥ 24 (610)
	X	NP	S.S > 10x10(3x3)	≥ 36 (914)

NP = Not Permitted

**Reference, Article 9.3.10 - NFPA 13 / 2022 edition.



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