HAZARD CLASS. VS. DESIGN CRITERIA

SPRINKLER HAZARDS AND OCCUPANCY SERIES BY MEYERFIRE UNIVERSITY | OCTOBER 2022

SUMMARY

A **Sprinkler Occupancy Hazard Classification** is the way we categorize a fuel load and fire severity.

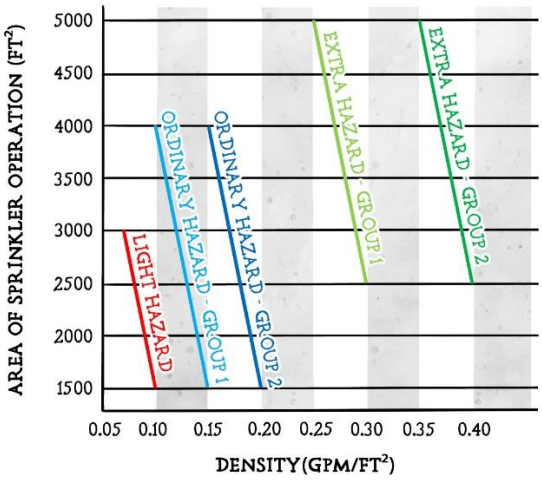
- Examples include: Light Hazard, Ordinary Hazard Group 1, or Extra Hazard Group 2

A **Sprinkler Design Criteria is the quantitative way to hydraulically calculate** a fire sprinkler system.

- Examples of design criteria include: 0.10 gpm/sqft over the most remote 1,500 sqft, 6.1 mm/min over the most remote 140 sq. meters, or (12) K-14.0 Upright ESFRs at 50 psi (3.4 bar)
- We determine the design criteria *after* we know the hazard classification.
- Design criteria doesn't have to be a **Density/Area** (under the Density/Area Method), it could also use the **Room Design Method**, or use a **Special Design Approach.** Special Design Approaches include residential sprinklers, exposure protection, water curtains, combustible sloped roofs, sprinkler-protected glazing, and others.

To get a density/area design criteria from a **hazard classification**:

- Go to Table 19.2.3.1.1 (NFPA 13 2022 Edition), or Figure 11.2.3.1.1 in older editions
- Select the design criteria from the hazard classification.
- In older editions of NFPA 13, these were represented as "curves" where we could select any point along the curve to get the appropriate design criteria.



The Former Density/Area Table from NFPA 13
(Note the design "curves". These are now represented in Table form)

CODE/STANDARD REFERENCES

NFPA 13 – 2019-2022: Table & Figure 19.2.3.1.1 Density/Area Curves
NFPA 13 – 2007-2016: Figure 11.2.3.1.1 Density/Area Curves

VIDEO LINK

www.meyerfire.com/university/hazard-classification-design-criteria-difference

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