



# Coffee Break Training - Fire Protection Series

## Automatic Sprinklers: Sprinkler Temperature Ratings

No. FP-2010-8 February 23, 2010

**Learning Objective:** The student shall be able to identify by color-code the temperature ratings of various automatic sprinklers.

Automatic sprinklers have various temperature ratings at which their fusible or frangible element (see Coffee Break Training 2008-48) is expected to fail and release water onto a fire.

The temperature rating of fusible element automatic sprinklers is stamped on the fusible link. For glass bulb sprinklers, the temperature rating is stamped or cast on a visible part. Color codes also are used for glass bulbs and the frame arms of fusible element sprinklers.

In general terms, one must be careful to match the temperature rating of the sprinkler to the maximum expected ceiling temperature to avoid inadvertent discharges. There are many specific rules in National Fire Protection Association (NFPA) 13, *Standard for the Installation of Automatic Sprinkler Systems* regarding sprinkler placement and temperature rating, so the code official should always check the details carefully.



The blue frame on this sidewall sprinkler indicates its fusible element has an operating temperature range of (250 to 300 °F [121 to 149 °C]) ranking it in the “high temperature” category.

### Temperature Ratings, Classifications, and Color Codes

Maximum Ceiling Temperature		Sprinkler Temperature Rating		Temperature Classification	Color Code	Glass Bulb Color
°F	°C	°F	°C			
100	38	135-170	57-77	Ordinary	Uncolored or black	Orange or red
150	66	175-225	79-107	Intermediate	White	Yellow or green
225	107	250-300	121-149	High	Blue	Blue
300	149	325-375	163-191	Extra high	Red	Purple
375	191	400-475	204-246	Very extra high	Green	Black
475	246	500-575	260-302	Ultra high	Orange	Black
625	329	600	343	Ultra high	Orange	Black

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For additional information, refer to NFPA 13, *Standard for the Installation of Automatic Sprinkler Systems*.



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