

National Bureau of Standards

Certificate

Standard Reference Material 1007

Smoke Density Chamber Standard

Flaming Exposure Condition

This Standard Reference Material is recommended for checking the operation of the Smoke-Density Chamber under flaming exposure conditions. However, it does not obviate the need for following the prescribed calibration and standardization techniques outlined in the test procedure.

The certified value for maximum specific optical density is:

$$D_m(\text{corr.}) = 455 \pm 26$$

The value for $D_m(\text{corr.})$ is the mean value of 25 tests determined on representative samples of a lot of 0.032 inch (0.81 mm) thick plastic. The estimate of precision is the standard deviation of the 25 measurements. The window deposit correction (D_c) was 22 ± 3 . Smoke-density measurements were made under flaming exposure conditions in accordance with the detailed procedures outlined in "Test Method for Measuring the Smoke Generation Characteristics of Solid Materials."*

Round-robin tests by 12 laboratories (24 tests) indicated $D_m(\text{corr.}) = 458 \pm 26$.

NOTE: Prior to test, the material must be dried for 24 hours at 60°C and then conditioned to equilibrium at $23 \pm 3^\circ\text{C}$ and 50 ± 5 percent relative humidity.

Engineering tests leading to the certification of this Standard Reference Material were performed by T. G. Lee of the Fire Research Section, NBS Building Research Division, using a commercially available Smoke-Density Chamber.

Washington, D. C. 20234
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*Copies are available from the Fire Research Section, Room B66, Technology Building, National Bureau of Standards, Washington, D.C. 20234.