

# National Bureau of Standards Certificate Standard Reference Material 707 for Water Vapor Permeance

This Standard Reference Material is intended for use in the measurement of water vapor permeance in accordance with the procedures described in ASTM Standard E96-66. The material is a sheet of poly(ethylene terephthalate) film approximately 0.03 mm (0.001 in) in thickness. The values for water vapor permeance by both procedure A (dry cup) and procedure B (wet cup) are given below:

Procedure A (dry cup)	$0.66 \pm 0.03$ perm
Procedure B (wet cup)	$0.72 \pm 0.03$ perm

A perm is defined as the water vapor transmission rate of one grain of water vapor per square foot per hour per inch of mercury difference in vapor pressure. The stated precision is twice the standard deviation (commonly referred to as the "95 percent confidence limit").

Experimental work leading to the certification of this Standard Reference Material was performed by members of the Materials Durability and Analysis Section of the Building Research Division, W. C. Cullen, Chief. The results of tests were supported by an interlaboratory study involving six laboratories. This study was conducted with the cooperation of Sub-Committee T-IX of ASTM Committee C-16 on Thermal Insulating Materials.

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Office of Standard Reference Materials