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ASTM C1549-2009 Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer

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Abbreviation

ASTM C1549-09

Valid from

01/01/2009

Information provider

American Society of Testing and Materials

Author

American Society of Testing and Materials

Information type

ASTM Standard

Format

PDF

Cited By

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Description

This test method covers a technique for determining the solar reflectance of flat opaque materials in a laboratory or in the field using a commercial portable solar reflectometer. The purpose of the test method is to provide solar reflectance data required to evaluate temperatures and heat flows across surfaces exposed to solar radiation.

This test method does not supplant Test Method [E903](#) which measures solar reflectance over the wavelength range 250 to 2500 nm using integrating spheres. The portable solar reflectometer is calibrated using specimens of known solar reflectance to determine solar reflectance from measurements at four wavelengths in the solar spectrum: 380 nm, 500 nm, 650 nm, and 1220 nm. This technique is supported by comparison of reflectometer measurements with measurements obtained using Test Method [E903](#). This test method is applicable to specimens of materials having both specular and diffuse optical properties. It is particularly suited to the measurement of the solar reflectance of opaque materials.

Scope

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Other

- [ASTM C168-08 ASTM C168-08](#)

ASTM C1549-09 cites ASTM C168-08 Standard Terminology Relating to Thermal Insulation

- [ASTM E1980-01](#)

ASTM C1549-09 cites ASTM E1980-01 Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces

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