



Standard Test Method for Color of Asbestos¹

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^{ε1} NOTE—Units information was editorially corrected in February 2012.

1. Scope

1.1 This test method covers the determination of color, whiteness, and yellowness of asbestos by means of a photo-electric reflectometer.

1.2 The test method is applicable to all grades and varieties of homogeneous milled asbestos.

1.3 This test method may be applied to samples that are not dry or homogeneous, or that contain impurities or adulterants. However, in such cases, results may not be comparable with those obtained on clean dry samples.

1.4 To obtain similar results from spectrophotometers, see Test Method E308.

1.5 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.6 **Warning**—Breathing of asbestos dust is hazardous. Asbestos and asbestos products present demonstrated health risks for users and for those with whom they come into contact. In addition to other precautions, when working with asbestos-cement products, minimize the dust that results. For information on the safe use of chrysotile asbestos, refer to “Safe Use of Chrysotile: A Manual of Preventive and Control Measures.”²

1.7 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards*:³

D2244 Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates

D2590 Test Method for Sampling Chrysotile Asbestos

D2946 Terminology for Asbestos and Asbestos-Cement Products

D3879 Test Method for Sampling Amphibole Asbestos (Withdrawn 2009)⁴

E3 Guide for Preparation of Metallographic Specimens

E259 Practice for Preparation of Pressed Powder White Reflectance Factor Transfer Standards for Hemispherical and Bi-Directional Geometries

E308 Practice for Computing the Colors of Objects by Using the CIE System

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *black, adj, adj*—color name applied to opaque objects that are highly absorbing throughout the visible spectrum.

3.1.2 *CIE, n*—acronym for International Commission on Illumination, which in French is Commission Internationale de l’Eclairage.

3.1.3 *CIE observer, n*—See **observer, standard, CIE 1931** and **observer, supplementary, CIE 1964**.

3.1.4 *CIE source C, n*—See **standard source**.

3.1.5 *color, psychophysical, n*—characteristics of a color stimulus (that is, light producing a sensation of color) denoted by three dimension values such as three tristimulus values.

3.1.6 *daylight 0.785 rad, 0 rad (45°, 0°) luminous directional reflectance*—daylight 0.785 rad, 0 rad (45°, 0°) luminous directional reflectance (for brevity called reflectance) is the

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² Available from The Asbestos Institute, http://www.chrysotile.com/en/sr_use/manual.htm.

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard’s Document Summary page on the ASTM website.

⁴ The last approved version of this historical standard is referenced on www.astm.org.

⁵ Taken in part from Procedure No. B5-9 of Société Asbestos Ltée, with permission.