



Designation: ~~D1865-89 (Reapproved 2002)~~ Designation: D1865/D1865M - 09

Standard Test Method for Hardness of Mineral Aggregate Used on Built-Up Roofs¹

This standard is issued under the fixed designation D1865/D1865M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method covers the determination of hardness of all types of mineral surfacing for use on built-up roofs and is intended to provide an index of their ability to withstand physical breakdown in handling.

~~1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.~~

1.2 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.

1.3 *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:*²

D75 Practice for Sampling Aggregates

D451 Test Method for Sieve Analysis of Granular Mineral Surfacing For Asphalt Roofing Products

E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves

3. Summary of Test Method

3.1 Mineral aggregate is empirically evaluated for degree of breakdown into smaller pieces. The procedure calls for a sample, free of fines, to be dropped a nominal distance of ~~1.2 m (4 ft)~~ 1.2 m [4 ft] 400 times while inside a standardized test apparatus.

4. Significance and Use

4.1 This test method measures the resistance to physical breakdown in handling of built-up roofing aggregates.

5. Apparatus

5.1 A ~~1.2-m (4-ft)~~ 1.2 m [4 ft] length of clean 50-mm (~~2-in.~~) 2-in. iron pipe fitted with a removable screw cap on both ends, and mounted on a suitable stand so that it can be rotated about an axis perpendicular to the long dimension of the pipe.

5.2 *Balance*, 500-g (~~1-lb~~) 1 lb capacity, sensitive to 0.01 % of the capacity.

5.3 *Sample Splitter*, riffle-type.

5.4 *Sieves*—A series of square-opening sieves, 8 in. in diameter, conforming to the requirements prescribed in Specification E11 and consisting of the following:

Sieve Designation	
9.5-mm	(3/8 in.)
9.5-mm	[3/8 in.]
6.3-mm	(1/4 in.)
6.3-mm	[1/4 in.]
3.35-mm	(No. 6)
3.35-mm	[No. 6]

A solid collecting pan shall be fitted to the bottom of the stack of sieves.

¹ This test method is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.03 on Surfacing and Bituminous Materials for Membrane Waterproofing and Built-up Roofing.

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² Annual Book of ASTM Standards, Vol 04.03.

² 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.