



Designation: E1638 – 10

## Standard Terminology Relating to Sieves, Sieving Methods, and Screening Media<sup>1</sup>

This standard is issued under the fixed designation E1638; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### INTRODUCTION

Particle size analysis through the use of standard test sieves, and particle separation through the use of screening media, are commonly adopted methods of achieving desired process specifications related to particles. To ensure a better understanding of sizing and separation systems and processes and to ensure appropriate comparison of data, terminology common to the processes must be documented and defined.

For Subcommittee E29.01 on Sieves, Sieving Methods, and Screening Media, this is an ongoing process of developing new related terms. Every effort has been made to ensure accuracy, precision, and clarity for the terms included. Suggestions and comments for additions, corrections, and revisions are welcomed.

### 1. Scope

1.1 This terminology includes all those terms used in all of the standards under the jurisdiction of Subcommittee E29.01. Terms are defined that are related to the manufacture of standard test sieves and screening media, as well as terms related to the methods, analysis, procedures, and equipment for sizing and separating particles.

1.2 Committee E29 on Particle and Spray Characterization feels that it is essential to include terms and definitions explicit to the scope, regardless of whether the terms appear in existing ASTM standards. Terms that are in common usage and appear in common-language dictionaries are generally not included.

### 2. Referenced Documents

2.1 *ASTM Standards*:<sup>2</sup>

[ASTM STP 447B Manual on Testing Sieving Methods](#)  
[E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves](#)

2.2 *ISO Standard*:<sup>3</sup>

[ISO 2395 Test Sieves and Test Sieving—Vocabulary](#).

### 3. Significance and Use

3.1 This terminology contains terms used in the description and procedure of analysis of the size of particulate materials through sieve analysis with standard testing sieves and is applicable to the work of many ASTM technical committees. For a composite listing of published ASTM standards using standard testing sieves, refer to [ASTM STP 447B](#).

3.2 While some of the terms appearing in this terminology may also be used in the description, procedure, and end products of production screening (either on a batch-fed or continuous basis), it is the intent of this terminology to present the definitions and usage of terms strictly in the context of sieve analysis using standard testing sieves.

### 4. Terminology

4.1 *Definitions*:

**agglomerate**, *n*—two or more particles adhering together.

**aperture size**, *n*—the dimension defining an opening in a screening or sieving medium.

**bar**, *n*—the metal between perforations.

**blank**, *n*—an unperforated area located other than along the perimeter of a plate.

<sup>1</sup> This terminology is under the jurisdiction of ASTM Committee E29 on Particle and Spray Characterization and is the direct responsibility of Subcommittee E29.01 on Sieves, Sieving Methods, and Screening Media.

Current edition approved Dec. 1, 2010. Published January 2011. Originally approved in 1994. Last previous edition approved in 2009 as E1638–09. DOI: 10.1520/E1638-10.

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.