



Designation: D1241 – 15

Standard Specification for Materials for Soil-Aggregate Subbase, Base, and Surface Courses¹

This standard is issued under the fixed designation D1241; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This specification covers the quality and grading of the following materials for use in the construction of subbase, base, and surface courses: sand-clay mixtures; gravel; stone or slag screenings; sand; crusher-run coarse aggregate consisting of gravel, crushed stone, or slag combined with soil mortar; or any combination of these materials. The requirements are intended to cover materials having normal specific gravity, absorption, and gradation characteristics. Where other materials are to be used, appropriate limits suitable to their use must be specified.

1.2 *Units*—The values stated in SI units are to be regarded as standard. The sieve designations are identified using the “standard” system in accordance with Specification E11, such as 25-mm and 75- μ m, followed by the “alternative” system of 1-in. and No. 200, respectively. Use of the “alternative” system shall not be regarded as nonconformance with this standard.

1.3 The following precautionary caveat pertains only to the Test Methods portion, Section 9, of this specification. *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

C117 Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing

C131 Test Method for Resistance to Degradation of Small-

Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

C136 Test Method for Sieve Analysis of Fine and Coarse Aggregates

D75 Practice for Sampling Aggregates

D421 Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants

D653 Terminology Relating to Soil, Rock, and Contained Fluids

D3740 Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

D4318 Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

D4700 Guide for Soil Sampling from the Vadose Zone

E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves

3. Terminology

3.1 *Definitions*—See Terminology D653 for general definitions.

4. Types

4.1 The following types of mixtures are specified:

4.1.1 *Type I*—Mixtures shall consist of stone, gravel, or slag with natural or crushed sand and fine mineral particles passing a 75- μ m (No. 200) sieve and shall conform to the requirements of Table 1 for Gradation A, B, C, or D.

4.1.2 *Type II*—Mixtures shall consist of natural or crushed sand with fine mineral particles passing a 75- μ m (No. 200) sieve, with or without stone, gravel, or slag, and shall conform to the requirements of Table 1 for Gradation E or F.

5. General Requirements

5.1 *Coarse Aggregate*—Coarse aggregate, retained on a 4.75 mm (No. 4) sieve, for use in Type I and Type II mixtures, shall consist of hard, durable, and sound particles or fragments of stone, gravel, or slag. Coarse aggregate shall have abrasion loss, determined by Test Method C131, of not more than 50 percent.

¹ This specification is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.08 on Special and Construction Control Tests.

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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.

*A Summary of Changes section appears at the end of this standard