



Designation: D6711/D6711M – 22

Standard Practice for Specifying Rock to Fill Gabions, Revet Mattresses, and Gabion Mattresses¹

This standard is issued under the fixed designation D6711/D6711M; 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 practice covers the sizes and quality of rock to fill gabions and mattresses.

1.2 This practice does not cover the sizes and quality of rock for other erosion control uses such as riprap or drainage.

1.3 This practice does not cover the material properties or construction of gabions or mattresses.

1.4 *Units*—The values stated in either inch-pound units or SI 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 nonconformance with the standard.

1.5 *This practice offers a set of instructions for performing one or more specific operations. This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of a project's many unique aspects. The word "Standard" in the title of this document means only that the document has been approved through the ASTM consensus process.*

1.6 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This practice is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.25 on Erosion and Sediment Control Technology.

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2. Referenced Documents

2.1 *ASTM Standards*:²

A974 Specification for Welded Wire Fabric Gabions and Gabion Mattresses (Metallic-Coated or Polyvinyl Chloride (PVC) Coated)

A975 Specification for Double-Twisted Hexagonal Mesh Gabions and Revet Mattresses (Metallic-Coated Steel Wire or Metallic-Coated Steel Wire With Poly(Vinyl Chloride) (PVC) Coating)

D653 Terminology Relating to Soil, Rock, and Contained Fluids

D4992 Practice for Evaluation of Rock to be Used for Erosion Control

D5519 Test Methods for Particle Size Analysis of Natural and Man-Made Riprap Materials

3. Terminology: Definitions, Symbols, Acronyms, and Abbreviations

3.1 For definitions of common technical terms used in this standard, refer to Terminology D653.

3.2 *Definitions of Terms Specific to This Standard*:

3.2.1 *gabion, n*—in erosion control, a wire mesh container of variable size and interconnected with other similar containers. It is filled with rock to form flexible, permeable, monolithic structures.

3.2.2 *mattress, n*—in erosion control, a wire mesh container uniformly partitioned into internal cells with relatively small height in relation to other dimensions. Mattresses have smaller mesh openings than the mesh used for gabions.

3.2.2.1 *Discussion*—The term mattress as used in this standard shall include the terminology of gabion mattresses and revet mattresses used in Specifications A974 and A975.

4. Summary of Practice

4.1 The designer establishes the suitable sizes, weight, and quality of rock for project use, and examine sources to ensure that the required rock is available.

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