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Standard Terminology Relating to Soil, Rock, and Contained Fluids¹

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These definitions were prepared jointly by the American Society of Civil Engineers and the American Society for Testing and Materials.

INTRODUCTION

A number of the definitions include symbols and indicate the units of measurement. The symbols appear in italics immediately after the name of the term, followed by the unit in parentheses. No significance should be placed on the order in which the symbols are presented where two or more are given for an individual term. The applicable units are indicated by capital letters, as follows:

F—Force, such as pound-force, ton-force, newton

L—Length, such as inch, foot, ~~centimetre~~ millimeter

T—Time, such as second, minute

D—Dimensionless

Positive exponents designate multiples in the numerator. Negative exponents designate multiples in the denominator. Degrees of angle are indicated as “degrees.”

Expressing the units either in SI or the inch-pound system has been purposely omitted in order to leave the choice of the system and specific unit to the engineer and the particular application, for example:

FL^{-2} —may be expressed in pounds-force per square inch, kilopascals, tons per square foot, etc.

LT^{-1} —may be expressed in feet per minute, ~~centimetres~~ millimeters per second, etc.

Where synonymous terms are cross-referenced, the definition is usually included with the earlier term alphabetically. Where this is not the case, the later term is the more significant.

Definitions marked with (ISRM) are ~~taken directly from the publication in Ref 42 and are included for the convenience of the user and were taken directly from the International Society for Rock Mechanics.~~ For a list of ISRM symbols relating to soil and rock mechanics, refer to Appendix X1.

~~A list of references used in the preparation of these definitions appears~~

~~See Reference section at the end of this standard.~~

AASHTO compaction— see **compaction test**.

“A” Horizon— see **horizon**.

abandonment—see **decommissioning**.

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abrasion—a rubbing and wearing away. (ISRM)

abrasion—the mechanical wearing, grinding, scraping or rubbing away (or down) of rock surfaces by friction or impact, or both.

abrasive—any rock, mineral, or other substance that, owing to its superior hardness, toughness, consistency, or other properties, is suitable for grinding, cutting, polishing, scouring, or similar use.

abrasiveness—the property of a material to remove matter when scratching and grinding another material. (ISRM)

absorbed water—water held mechanically in a soil or rock mass and having physical properties not substantially different from ordinary water at the same temperature and pressure.

absorption—the assimilation of fluids into interstices.

absorption loss—that part of transmitted energy (mechanical) lost due to dissipation or conversion into other forms (heat, etc.).

¹ This terminology is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.93 on Terminology for Soil, Rock, and Contained Fluids.

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This extensive list of definitions represents the joint efforts of Subcommittee D18.93 on Terminology for Soil, Rock, and Contained Fluids of ASTM Committee D-18 on Soil and Rock, and the Committee on Definitions and Standards of the Geotechnical Engineering Division of the American Society of Civil Engineers. These two groups function together as the Joint ASCE/ASTM Committee on Nomenclature in Soil and Rock Mechanics. This list incorporates some terms from ASTM Definitions D 1707, Terms Relating to Soil Dynamics, which were discontinued in 1967.