



Designation: D 4175 – 02a

An American National Standard

## Standard Terminology Relating to Petroleum, Petroleum Products, and Lubricants<sup>1</sup>

This standard is issued under the fixed designation D 4175; 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.

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

### 1. Scope

1.1 This standard is the compilation of terminology developed by Committee D02 on Petroleum Products and Lubricants, except that it does not include terms/definitions specific only to the standards in which they appear.

1.1.1 The terminology, mostly definitions, is unique to petroleum, petroleum products, and lubricants. Meanings of the same terms outside of applications to petroleum, petroleum products, and lubricants can be found in other compilations and in dictionaries of general usage.

1.1.2 The terms/definitions exist in two places (1) in the standards in which they appear and (2) in this compilation.

### 2. Terminology

2.1 Alphabetical listing of terms with definitions for each term showing attributions as to source and subcommittee jurisdiction is in bold print following the definition. Those showing no attributes are under the jurisdiction of Subcommittee CS 95. Some abbreviations, acronyms and symbols are included in the list.

**abrasion**,  $n$ —wear by displacement of material caused by hard particles or hard protuberances. [D02.0B] D 4998

**absolute filtration rating**,  $n$ —the diameter of the largest hard spherical particle that will pass through a filter under specified test conditions. This is an indication of the largest opening in the filter element. [D02.0N] D 4174

**absorbance**,  $A$ ,  $n$ —the molecular property of a substance that determines its ability to take up radiant power, expressed by:

$$A = \log_{10} (1/T) = -\log_{10} T \quad (1)$$

where  $T$  is the transmittance as defined in 3.1.3.

DISCUSSION—Absorbance expresses the excess absorption over that of a specified reference or standard. It is implied that compensation has been affected for reflectance losses, solvent absorption losses, and refractive effects, if present, and that attenuation by scattering is small compared with attenuation by absorption. [D02.04] D 2008

**absorptivity**,  $a$ ,  $n$ —the specific property of a substance to

absorb radiant power per unit sample concentration and path length, expressed by:

$$a = Af/bc \quad (2)$$

where:

$A$  = the absorbance defined in 3.1.4,

$f$  = the dilution factor defined in 3.1.5,

$b$  = sample cell path length, and

$c$  = the quantity of absorbing substance contained in a volume of solvent.

[D02.04] D 2008

**acceptance limit (AL)**,  $n$ —a numerical value that defines the point between acceptable and unacceptable quality.

DISCUSSION—The AL is not necessarily the specification limit. It is the value that takes into account the specification value, the test method precision, and the confidence level desired for defining minimum acceptable quality relative to the specification value.

[D02.94] D 3244

**accepted reference value**,  $n$ —a value that serves as an agreed-upon reference for comparison and that is derived as (1) a theoretical or established value, based on scientific principles, (2) an assigned value, based on experimental work of some national or international organization, such as the U.S. National Institute of Standards and Technology (NIST), or (3) a consensus value, based on collaborative experimental work under the auspices of a scientific or engineering group.

[D02.94] D 6299

[E11] E 456, E 177

**accuracy**,  $n$ —the closeness of agreement between an observed value and an accepted reference value. [D02.94] D 6299

[E11] E 456, E 177

**acidity**,  $n$ —the quality, state or degree of being acid.

DISCUSSION—In this test method, the criterion for acidity is a pink or red color when methyl orange indicator is used.

[D02.06] D 1093

**acute ecotoxicity**,  $n$ —the propensity of a material to produce adverse behavioral, biochemical, or physiological effects in non-human organisms or populations in a short period of time, usually not constituting a substantial portion of the life span of the organism. [D02.0N] D 6046

**acute ecotoxicity**,  $n$ —the propensity of a test material to produce adverse behavioral, biochemical or physiological

<sup>1</sup> This terminology is under the jurisdiction of Committee D02 on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee D02.95 on Terminology.

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