



Standard Terminology Relating to Electrical Insulation¹

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INTRODUCTION

This terminology is used in connection with testing and specifying solid electrical insulating materials. Modifications to this terminology, reflecting common usage, may appear in particular test methods, material specifications, practices, or other standards. Included herein are terms pertinent to general applications, electrical insulating papers, mica, mica processing, processed mica forms, hookup wire insulation, and partial discharge (corona).

1. Scope

1.1 This terminology is a compilation of technical terms used in conjunction with testing and specifying solid electrical and electronic insulating materials in standards under the jurisdiction of Committee D09 on Electrical and Electronic Insulating Materials.

1.2 It is intended that all definitions in this terminology are identical to definitions of the same terms as printed in standards of originating technical subcommittees, with the exceptions of: (1) deletion of any part of the Discussion included in another standard that refers specifically to the use of a term in that standard; (2) figure numbers and corresponding references; and (3) in this terminology, a parenthetical addition of a reference to one or more technical standards in which the term is used and the year in which the term was added to this compilation.

1.3 Symbols may be included as part of the representation of terms, where appropriate.

1.4 It is not intended that this terminology include descriptions of terms or symbols (except as noted in 1.3). Acronyms and abbreviations referring directly to defined terms may be included.

1.5 Revisions and additions to the definitions in this terminology are to be made as a product of a collaborative effort between Subcommittee D09.94 and the various technical subcommittees of Committee D09, with Subcommittee D09.94 providing editorial advice to the technical subcommittees. New definitions and revisions of existing definitions must first be approved by the cognizant technical subcommittee (or subcommittees) before inclusion in this terminology.

2. Referenced Documents

2.1 *ASTM Standards:*

D 149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Electrical Insulating Materials at Commercial Power Frequencies²

D 150 Test Methods for AC Loss Characteristics and Permittivity Dielectric Constant of Solid Electrical Insulation²

D 3426 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials Using Impulse Waves³

D 3636 Practice for Sampling and Judging Quality of Solid Electrical Insulating Materials³

2.2 *Other Standards:*

ANSI/ASQC A2-1987⁴

3. Terminology

acceptable quality level (AQL), *n*—the maximum percent nonconforming which, for purposes of sampling inspection, is considered satisfactory as a process average.

acceptance number, *n*—the maximum allowable number of nonconformities for a given AQL and sample size (lot-sample size).

air chain, *n*—in mica, a series of air inclusions in the form of a chain or streak.

arc propagation, *n*—the movement of an electric arc from its point of inception to another location. (1996) **D 3032**

arc tracking, *n*—the process producing tracks when arcs occur on or close to the insulation surface.

Arrhenius plot, *n*—a graph of the logarithm of thermal life as a function of the reciprocal of absolute temperature.

¹ This terminology is under the jurisdiction of ASTM Committee D09 on Electrical and Electronic Insulating Materials and is the direct responsibility of Subcommittee D09.94 on Editorial.

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² *Annual Book of ASTM Standards*, Vol 10.01.

³ *Annual Book of ASTM Standards*, Vol 10.02.

⁴ Available from American National Standards Association, 11 W. 42nd St., 13th Floor, New York, NY 10036.