



Designation: D5538 – 13 (Reapproved 2023)

# Standard Practice for Thermoplastic Elastomers—Terminology and Abbreviations<sup>1</sup>

This standard is issued under the fixed designation D5538; 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.

## INTRODUCTION

During the past two decades the use of special rubber-like polymers, designated as thermoplastic elastomers, has increased both in volume and in commercial importance. The number of unique polymers classified as thermoplastic elastomers that have been brought to commercial acceptance has also grown. (As explained below, these types of rubber-like polymers cannot be accommodated by the systematic nomenclature approach of the existing Practice D1418.)

Practice D1418 was initially published in 1956 with a systematic nomenclature procedure based on the chemical structure of the polymer. An attempt to incorporate the new thermoplastic elastomers into the nomenclature scheme of Practice D1418 produces two serious problems: (1) the abbreviations and acronyms are not the same as the well established abbreviations and acronyms used for the new thermoplastic elastomers by the various producers of these polymers, and (2) the attempt generates a very cumbersome terminology system. Therefore it is necessary to depart from the systematic approach of Practice D1418.

To avoid the confusion of attempting to revise Practice D1418 and have conflicting nomenclature and abbreviation designation procedures in the same practice, this new practice devoted exclusively to thermoplastic elastomers is being published.

## 1. Scope

1.1 This practice covers a uniform, consensus nomenclature approach for thermoplastic elastomers. This compilation is intended to accommodate and supplement any existing trade names and trademarks.

1.2 No attempt is made to develop an exclusively systematic process for nomenclature and abbreviations.

1.3 In technical papers and other technical or trade literature the full name of the thermoplastic elastomer should be given at its first appearance in the document along with its abbreviation in parentheses. In all subsequent references to the thermoplastic elastomer, the abbreviation may be given.

1.4 *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.*

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee D11 on Rubber and Rubber-like Materials and is the direct responsibility of Subcommittee D11.08 on Terminology.

Current edition approved May 1, 2023. Published June 2023. Originally approved in 1994. Last previous edition approved in 2018 as D5538 – 13 (2018). DOI: 10.1520/D5538-13R23.

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

D1418 Practice for Rubber and Rubber Latices—Nomenclature

D1566 Terminology Relating to Rubber

2.2 *ISO Standards:*<sup>3</sup>

ISO 1382 Rubber—Vocabulary

ISO 18064 Thermoplastic Elastomers—Nomenclature and Abbreviated Terms

2.3 *Other standards not specifically referenced in this document are important for a full appreciation of the use of thermoplastic elastomer abbreviations and terminology. They are listed in an appendix to this practice.*

## PART A—TERMINOLOGY

## 3. Terminology Definitions

3.1 *Definitions:*

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from International Organization for Standardization (ISO), 1 rue de Varembe, Case postale 56, CH-1211, Geneva 20, Switzerland, <http://www.iso.ch>.