



Designation: D5675 – 13 (Reapproved 2023)

Standard Classification for Low Molecular Weight PTFE and FEP Micronized Powders¹

This standard is issued under the fixed designation D5675; 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 classification system provides a method of adequately identifying low molecular weight polytetrafluoroethylene (PTFE) and fluorinated ethylene propylene (FEP) micronized powders using a system consistent with that of Classification System **D4000**. It further provides a means for specifying these materials by the use of a simple line callout designation. This classification covers fluoropolymer micronized powders that are used as lubricants and as additives to other materials in order to improve lubricity or to control other characteristics of the base material.

1.2 These powders are sometimes known as lubricant powders. The powders usually have a much smaller particle size than those used for molding or extrusion, and they generally are not processed alone. The test methods and properties included are those required to identify and specify the various types of fluoropolymer micronized powders. Recycled fluoropolymer materials meeting the detailed requirements of this classification are included (see Guide **D7209**).

1.3 These fluoropolymer micronized powders and the materials designated as filler powders (F) in ISO 12086-1 and ISO 12086-2 are equivalent.²

1.4 The values stated in SI units as detailed in **IEEE/ASTM SI-10** are to be regarded as the standard.

1.5 *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.* Specific precautionary statements are given in **7.1.2**.

1.6 *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 Recom-*

mendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 ASTM Standards:³

D854 Test Methods for Specific Gravity of Soil Solids by Water Pycnometer (Withdrawn 2023)⁴

D883 Terminology Relating to Plastics

D1238 Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer

D1600 Terminology for Abbreviated Terms Relating to Plastics

D3892 Practice for Packaging/Packing of Plastics

D4000 Classification System for Specifying Plastic Materials

D4464 Test Method for Particle Size Distribution of Catalytic Materials by Laser Light Scattering

D4567 Test Method for Single-Point Determination of Specific Surface Area of Catalysts and Catalyst Carriers Using Nitrogen Adsorption by Continuous Flow Method

D4591 Test Method for Determining Temperatures and Heats of Transitions of Fluoropolymers by Differential Scanning Calorimetry

D4895 Specification for Polytetrafluoroethylene (PTFE) Resin Produced From Dispersion

D5740 Guide for Writing Material Standards in the Classification D4000 Format

D7209 Guide for Waste Reduction, Resource Recovery, and Use of Recycled Polymeric Materials and Products (Withdrawn 2015)⁴

IEEE/ASTM SI-10 Standard for Use of the International System of Units (SI): The Modern Metric System

2.2 ISO Standards:⁵

ISO 12086-1 Plastics-Fluoropolymer Dispersions and Moulding and Extrusion Materials Part 1: Designation and System and Basis for Specification

¹ This classification is under the jurisdiction of ASTM Committee **D20** on Plastics and is the direct responsibility of Subcommittee **D20.15** on Thermoplastic Materials.

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² Designations, specifications, and test methods are included in ISO 12086-1 and 12086-2.

³ 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.

⁴ The last approved version of this historical standard is referenced on www.astm.org.

⁵ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.