



Designation: D 5998 – 96

Standard Specification for Molded Polyethylene Shipping and Storage Drums¹

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1. Scope

1.1 This specification covers self supporting, molded polyethylene, tight head drums designed for surface and air shipment, ranging in size from 5 gal (19 L) to and including 55 gal (208 L).

1.2 The polyethylene plastics to be used may be virgin plastics or recycled plastics.²

NOTE 1—There is no similar or equivalent ISO standard.

NOTE 2—This standard is intended to replace MIL-D-43703C and PS 34 – 95.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.4 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- D 883 Terminology Relating to Plastics³
- D 1972 Practice for Generic Marking of Plastic Products³
- D 3951 Practice for Commercial Packaging⁴
- D 4504 Specification for Molded Polyethylene Open-Head-Pails for Industrial Shipping of Nonhazardous Goods⁴
- D 4919 Specification for Testing of Hazardous Materials Packagings⁴
- D 5033 Guide for the Development of Standards Relating to the Proper Use of Recycled Plastics⁵
- PS 34 – 95 Provisional Standard for Specification for Molded Polyethylene Shipping and Storage Drums⁵
- PS 35 – 95 Practice for Sampling Plans and Tables for Inspection by Attributes⁵

2.2 Government Documents:

2.3 Federal Regulations:⁶

- 21 CFR 121 Federal Food, Drug, and Cosmetic Act and Regulations Promulgated Thereunder
 - 21 CFR 177
 - 49 CFR 173 Shippers—General Requirements for Shipments and Packagings
 - 49 CFR 178 Specifications for Packaging
- #### 2.4 Other:
- National Motor Freight Classification (NMFC-100) Uniform Freight Classification (UFC)
 - 2.5 *National Sanitation Foundation International:*⁷
 - NSF Standard No. 2 Food Service Equipment
 - NSF Standard No. 51 Plastics Materials and Components Used in Food Service Equipment

3. Terminology

3.1 For definitions or terms, see Terminology D 883 or Guide D 5033.

4. Requirements

4.1 *Materials*—Drums shall conform to 49 CFR 173.24 and 178.509 Type 1H1. The drum material and components shall conform to the Federal Food, Drug and Cosmetic Act, Food Additive Amendment 21 CFR 177, 1520 and NSF International Standard No. 2 and 51 when used for food products. Recycled plastic may be used when practical as long as the finished product meets the requirements of this specification.

4.2 *Design and Construction*—Drums shall conform to 49 CFR 173.24 and 178.509, Type 1H1. Drums shall be molded of materials specified in 4.1. Five gallon (19 L) drums shall be furnished with one or two carrying handles. Fifteen gallon (57 L) drums shall be furnished with one or two handles on the top or without handles. Drums greater than 20 gal shall be fabricated so that they may be individually handled by customary handling devices. Handling devices shall withstand the combined lifted weight of the drum and contents. Rolling rings on drums are optional, and when specified, a minimum of two are required.

4.2.1 *Openings*—The 5-gal (19-L) drum shall have one opening on the top except when specified (see 7.2) an air vent

¹ This specification is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D20.20 on Plastic Products. Current edition approved July 10, 1996. Published November 1996.

² As defined in Guide D 5033.

³ *Annual Book of ASTM Standards*, Vol 08.01.

⁴ *Annual Book of ASTM Standards*, Vol 15.09.

⁵ *Annual Book of ASTM Standards*, Vol 08.03.

⁶ Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

⁷ Available from NSF International, P.O. Box 130140, Ann Arbor, MI 48113-0140.