



Standard Specification for Dibutyl Phthalate¹

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1. Scope

- 1.1 This specification covers dibutyl phthalate (99 % grade).
- 1.2 For specific hazard information and guidance, see the supplier's Material Safety Data Sheet for materials listed in this specification.

2. Referenced Documents

2.1 ASTM Standards:

- D 268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Materials²
- D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)²
- D 1296 Test Method for Odor of Volatile Solvents and Diluents²
- D 1364 Test Method for Water in Volatile Solvents (Fischer Reagent Titration Method)²
- D 1476 Test Method for Heptane Miscibility of Lacquer Solvents²
- D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products²
- D 1617 Test Method for Ester Value of Lacquer Solvents and Thinners²
- D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter³
- E 300 Practice for Sampling Industrial Chemicals⁴
- 2.2 U.S. Federal Specification:
 - PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of⁵

3. Properties

- 3.1 Dibutyl phthalate (99 % grade) shall conform to the following requirements:

Apparent specific gravity:	
20/20°C	1.046 to 1.050
25/25°C	1.043 to 1.047
Color, Pt-Co scale, max	20
Odor	nonresidual
Water, max, weight %	0.2 ^A
Acidity (free acid as phthalic acid), max, weight %	0.01 ^B
Ester value, max, weight %	not less than 99.0

^A This quantitative limit ensures that the material is miscible without turbidity with 19 volumes of 99 % heptane at 20°C.

^B Equivalent to 0.067 mg of KOH per gram of sample.

4. Sampling

- 4.1 The material shall be sampled in accordance with Practice E 300.

5. Test Methods

- 5.1 The properties enumerated in this specification shall be determined in accordance with the following ASTM methods:
 - 5.1.1 *Apparent Specific Gravity*—Determine the apparent specific gravity at 20 or 25°C by a convenient method that is accurate to the third decimal place. See Guide D 268 or Test Method D 4052.

5.1.2 *Color*—Test Method D 1209.

5.1.3 *Odor*—Test Method D 1296.

5.1.4 *Water*—Test Methods D 1364 and D 1476.

5.1.5 *Acidity*—Test Method D 1613.

5.1.6 *Ester Value*—Test Method D 1617.

6. Packaging and Package Marking

- 6.1 Package size shall be agreed upon between the purchaser and the supplier.
- 6.2 Packaging shall conform to applicable carrier rules and regulations or when specified shall conform to Fed. Spec. PPP-C-2020.

7. Keywords

- 7.1 dibutyl phthalate

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² *Annual Book of ASTM Standards*, Vol 06.04.

³ *Annual Book of ASTM Standards*, Vol 05.02.

⁴ *Annual Book of ASTM Standards*, Vol 15.05.

⁵ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

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