



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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