



Designation: D 835 – 85

W-73-70

Standard Specialization for REFINED BENZENE-485^{1,2}

This standard is issued under the fixed designation D 835; 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 specification covers a nitration grade of benzene known as refined benzene 485.

NOTE—Consult current OSHA regulation for all materials utilized in this specification.³

2. Applicable Documents

2.1 ASTM Standards:

D 847 Test Method for Acidity of Benzene, Toluene, Xylenes, Solvent Naphthas, and Similar Industrial Aromatic Hydrocarbons⁴

D 848 Test Method for Acid Wash Color of Industrial Aromatic Hydrocarbons⁴

D 849 Test Method for Copper Corrosion of Industrial Aromatic Hydrocarbons⁴

D 850 Method for Distillation of Industrial Aromatic Hydrocarbons and Related Materials⁴

D 852 Test Method for Solidification Point of Benzene⁴

D 853 Test Method for Hydrogen Sulfide and Sulfur Dioxide Content (Qualitative) of Industrial Aromatic Hydrocarbons⁴

D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)⁴

D 3437 Practice for Sampling and Handling Cyclic Products⁴

D 3505 Test Method for Density or Relative Density of Pure Liquid Chemicals⁴

2.2 Federal Specification:

PPP-C-2020 Packaging of Chemicals, Liquid, Dry, and Paste⁵

3. Properties

3.1 Refined benzene 485 shall conform to the following requirements when tested in accordance with the methods listed in Section 4.

Appearance	clear liquid free of sediment or haze at 65 to 78°F (18.3 to 25.6°C)
Relative density, 15.56/15.56°C	0.8820 to 0.8860
Density, 20°C	0.8780 to 0.8820 g/cm ³
Color	20 max (platinum-cobalt scale)
Total distillation range at 760 mm Hg pressure	1.0°C max, including the temperature of 80.1°C
Solidification point	not lower than 4.85°C (anhydrous basis)
Acid wash color	2 max
Acidity	none detected
Hydrogen sulfide and sulfur dioxide (H ₂ S, SO ₂)	none detected
Copper corrosion	pass

4. Test Methods

4.1 The material shall be sampled and the properties enumerated in this specification shall be determined in accordance with the following ASTM methods:

4.1.2 *Sampling*—Practice D 3437.

4.1.2 *Appearance*—Visual inspection.

4.1.3 *Relative Density and Density*—Test Method D 3505.

4.1.4 *Color*—Test Method D 1209.

¹ This specification is under the jurisdiction of ASTM Committee D-16 on Aromatic Hydrocarbons and Related Chemicals and is the direct responsibility of Subcommittee D 16.0A on BTX, Cyclohexane, and Their Derivatives.

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² This material was formerly known as “nitration grade benzene.”

³ Available from Occupational Safety and Health Review Commission, 1825 K St., NW, Washington, DC 20006.

⁴ *Annual Book of ASTM Standards*, Vol 06.03.

⁵ Single copies of Federal specifications are available from Naval Publications and Forms Center, 5801 Tabor Ave., Philadelphia, PA 19120.