



Standard Specification for VM&P Naphthas¹

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^{ε1} NOTE—Paragraph 1.1 corrected editorially to “four types” in May 2001.

1. Scope

1.1 This specification covers four types of moderately volatile hydrocarbon solvents, mainly aliphatic in composition and normally petroleum distillates. These solvents are used primarily by the coatings industry and are commonly referred to as VM&P naphthas.

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 56 Test Method for Flash Point by Tag Closed Tester²
- D 86 Test Method for Distillation of Petroleum Products²
- D 130 Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test²
- D 156 Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)²
- D 268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Materials³
- D 1133 Test Method for Kauri-Butanol Value of Hydrocarbon Solvents³
- D 1159 Test Method for Bromine Number of Petroleum Distillates and Commercial Aliphatic Olefins by Electro-metric Titration²
- D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)³
- D 1296 Test Method for Odor of Volatile Solvents and Diluents³
- D 1319 Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption²
- D 3257 Test Methods for Aromatics in Mineral Spirits by Gas Chromatography³
- D 3278 Test Methods for Flash Point of Liquids by Small

- Scale Closed-Cup Apparatus⁴
- D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter⁵
- E 300 Practice for Sampling Industrial Chemicals⁶
- 2.2 U.S. Federal Specification:
PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of⁷

3. Classification

3.1 VM&P naphthas shall be of the following types, as specified:

- 3.1.1 Type I—Regular.
- 3.1.2 Type II—High flash.
- 3.1.3 Type III—Odorless.
- 3.1.4 Type IV—Low aromatics.

4. Properties

4.1 The physical and chemical properties of VM & P naphthas shall conform to the requirements specified in Table 1.

5. Sampling

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

6. Test Method

6.1 The properties enumerated in this specification shall be determined in accordance with the following ASTM test methods:

- 6.1.1 Aromatics—Test Method D 1319 may be used to measure total aromatics content. Test Methods D 3257 should be used to measure accurately total aromatics content and ethyl benzene content.
- 6.1.2 Bromine Number—Test Method D 1159.
- 6.1.3 Color—Test Method D 156 (Saybolt color) and Test Method D 1209 (platinum-cobalt color). In case of dispute, the Saybolt color limit is controlling.
- 6.1.4 Corrosion—Test Method D 130.

¹ This specification is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.35 on Solvents, Plasticizers, and Chemical Intermediates.

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² Annual Book of ASTM Standards, Vol 05.01.

³ Annual Book of ASTM Standards, Vol 06.04.

⁴ Annual Book of ASTM Standards, Vol 06.01.

⁵ Annual Book of ASTM Standards, Vol 05.02.

⁶ Annual Book of ASTM Standards, Vol 15.05.

⁷ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094.