



Designation: D 1835 – 97

An American National Standard

Standard Specification for Liquefied Petroleum (LP) Gases¹

This standard is issued under the fixed designation D 1835; 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 those products commonly referred to as liquefied petroleum gases.

1.2 This specification is applicable to products intended for use as domestic, commercial, industrial, and engine fuels.

1.3 This specification is for use in formulating specifications for required properties of liquefied petroleum gases at the time of delivery in bulk.

2. Referenced Documents

2.1 ASTM Standards:

D 1265 Practice for Sampling Liquefied Petroleum (LP) Gases (Manual Method)²

D 1267 Test Method for Gage Vapor Pressure of Liquefied Petroleum (LP) Gases (LP-Gas Method)²

D 1657 Test Method for Density or Relative Density of Light Hydrocarbons by Pressure Thermohydrometer²

D 1837 Test Method for Volatility of Liquefied Petroleum (LP) Gases²

D 1838 Test Method for Copper Strip Corrosion by Liquefied Petroleum (LP) Gases²

D 2158 Test Method for Residues in Liquefied Petroleum (LP) Gases²

D 2163 Test Method for Analysis of Liquefied Petroleum (LP) Gases and Propene Concentrates by Gas Chromatography²

D 2420 Test Method for Hydrogen Sulfide in Liquefied Petroleum (LP) Gases (Lead Acetate Method)²

D 2598 Practice for Calculation of Certain Physical Properties of Liquefied Petroleum (LP) Gases from Compositional Analysis²

D 2713 Test Method for Dryness of Propane (Valve Freeze Method)²

D 2784 Test Method for Sulfur in Liquefied Petroleum Gases (Oxy-Hydrogen Burner or Lamp)²

D 3700 Practice for Containing Hydrocarbon Fluid Samples Using a Floating Piston Cylinder³

2.2 Other Document:

GPA Standard 2140⁴

3. Types

3.1 Four basic types of liquefied petroleum gases are provided to cover the common use applications, as follows:

3.1.1 *Commercial Propane*—A hydrocarbon product for use where high volatility is required. Commercial propane is suitable for certain low severity internal combustion engine applications.

3.1.2 *Commercial Butane*—A hydrocarbon product for use where low volatility is required.

3.1.3 *Commercial PB Mixtures*—Mixtures of propane and butane for use where intermediate volatility is required.

3.1.4 *Special-Duty Propane*—A high-quality product composed chiefly of propane, which exhibits superior antiknock characteristics when used as an internal combustion engine fuel.

4. Detail Requirements

4.1 The four types of liquefied petroleum gases shall conform to the requirements prescribed in Table 1.

5. Sampling

5.1 Proper sampling of liquefied gases is extremely important if the tests are to be significant. Obtain samples for compositional analysis in accordance with Practice D 3700. Samples for other required tests should be obtained in accordance with Practice D 1265.

6. Keywords

6.1 butane; liquefied petroleum (LP) gases specifications; propane

¹ This specification is under the jurisdiction of ASTM Committee D-2 on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee D02.H on Liquefied Petroleum Gas.

Current edition approved Nov. 10, 1997. Published June 1998. Originally published as D1835 – 61 T. Last previous edition D1835 – 91.

² *Annual Book of ASTM Standards*, Vol 05.01.

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

⁴ Available from Gas Processors Assn., 6526 E. 60th St., Tulsa, OK 74145.