NPGA Liquefied Petroleum Gas Definitions and Specifications

DATA IS 'TYPICAL ONLY' AND NOT INTENDED FOR ENGINEERING PURPOSES

From NPGA Publication 2140-62: "Specifications and Test Methods for LP-Gas."

COMMERCIAL PROPANE

Commercial Propane shall be a hydrocarbon product composed predominantly of propane and/or propylene and shall conform to the following specifications:

VAPOR PRESSURE

The vapor pressure at 100°F as determined by NPGA LPG Vapor Pressure Test shall not be more than 200 pounds per square inch gage pressure.

95% BOILING POINT

The temperature at which 95% of volume of the product has evaporated shall be –37°F or lower when corrected to a barometric pressure of 760mm Hg., as determined by the NPGA Weathering Test for Liquefied Petroleum Gases.

RESIDUE

The product shall pass the non-volatile residue test and shall pass the oil ring test - each as determined by the NPGA Method for Determining Residues in Liquefied Petroleum Gases.

VOLATILE SULFER

The unstenched product shall not contain volatile sulfur in excess of 15 grains per hundred cubic feet as determined by NPGA Volatile Sulfur Test.

CORROSIVE COMPOUNDS

The product shall cause no more discoloration to a polished copper test strip when such product is subjected to the NPGA LPG Corrosion Test than the discoloration of Standard copper strip Classification 1, as described in ASTM Method D 130-56, Table I, Copper Strip Corrosion by Petroleum Products.

DRYNESS

The product shall be dry as determined by the NPGA Propane Dryness Test (Cobalt Bromide Test).

COMMERCIAL BUTANE

Commercial Butane shall be a hydrocarbon product composed predominantly of butanes and/or butylenes and shall conform to the following specifications:

VAPOR PRESSURE

The vapor pressure at 100°F as determined by NPGA LPG Vapor Pressure Test shall not be more than 70 pounds per square inch gage pressure.

95% BOILING POINT

The temperature at which 95% of volume of the product has evaporated shall be 36°F or lower when corrected to a barometric pressure of 760mm Hg., as determined by the NPGA Weathering Test for Liquefied Petroleum Gases.

VOLATILE SULFUR

The unstenched product shall not contain volatile sulfur in excess of 15 grains per hundred cubic feet as determined by NPGA Volatile Sulfur Test.

CORROSIVE COMPOUNDS

The product shall cause no more discoloration to a polished copper test strip when such product is subjected to the NPGA LPG Corrosion Test than the discoloration of Standard copper strip Classification 1, as described in ASTM Method D 130-56, Table I, Copper Strip Corrosion by Petroleum Products.

DRYNESS

The product shall not contain free, entrained water.

BUTANE-PROPANE MIXTURES

Butane-Propane mixtures shall be hydrocarbon products composed predominantly of mixtures of butanes and/or butylenes with propane and/or propylene and shall conform to the following specifications:

VAPOR PRESSURES

The vapor pressure at 100°F as determined by NPGA LPG Vapor Pressure Test shall not be more than 200 pounds per square inch gage pressure.

95% BOILING POINT

The temperature at which 95% of volume of the product has evaporated shall be 36°F or lower when corrected to a barometric pressure of 760mm Hg., as determined by the NPGA Weathering Test for Liquefied Petroleum Gases.

VOLATILE SULFUR

The unstenched product shall not contain volatile sulfur in excess of 15 grains per hundred cubic feet as determined by NPGA Volatile Sulfur Test.

CORROSIVE COMPOUNDS

The product shall cause no more discoloration to a polished copper test strip when such product is subjected to the NPGA LPG Corrosion Test than the discoloration of Standard copper strip Classification 1, as described in ASTM Method D 130-56, Table I, Copper Strip Corrosion by Petroleum Products.

DRYNESS

The product shall not contain free, entrained water.

PRODUCT DESIGNATION

Butane-Propane mixtures shall be designated by the vapor pressure at 100°F in pounds per square inch gage. To comply with the designation the vapor pressure of mixtures shall be within + 0 lbs. – 5 lbs. Of the vapor pressure specified. For example: A product specified as 95 pound LPG shall have a vapor pressure of at least 90 lbs. But no more than 95 lbs., at 100°F.

PROPANE HD 5

Propane HD 5 shall be a special propane for motor fuel and other uses requiring more restrictive specifications than Commercial Propane and shall conform to the following specifications:

VAPOR PRESSURES

The vapor pressure at 100°F as determined by NPGA LPG Vapor Pressure Test shall not be more than 200 pounds per square inch gage pressure.

95% BOILING POINT

The temperature at which 95% of volume of the product has evaporated shall be -37°F or lower when corrected to a barometric pressure of 760mm Hg., as determined by the NPGA Weathering Test for Liquefied Petroleum Gases.

RESIDUE

The product shall pass the non-volatile residue test and shall pass the oil ring test - each as determined by the NPGA Method for Determining Residues in Liquefied Petroleum Gases.

VOLATILE SULFUR

The unstenched product shall not contain volatile sulfur in excess of 10 grains per hundred cubic feet as determined by NPGA Volatile Sulfur Test.

CORROSIVE COMPOUNDS

The product shall cause no more discoloration to a polished copper test strip when such product is subjected to the NPGA LPG Corrosion Test than the discoloration of Standard copper strip Classification 1, as described in ASTM Method D 130-56, Table I, Copper Strip Corrosion by Petroleum Products.

DRYNESS

The product shall not contain free, entrained water.

COMPOSITION

The propylene content of the product shall not exceed 5 liquid volume percent and the product shall contain a minimum of 90 liquid percent of propane.

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