



Certificate of Analysis

Vessel / Object: GAS FLAWLESS
Location: Geismar, LA / Enlink (United States)
Job Type: Load
Product Grade: LPG / HD5 Propane
Client Reference: Carib LPG Trading Ltd. / Gas Flawless

Job No: 190-24-00541
Date Sampled: 02/26/24
Date Tested: 02/27/24
Version: 1 / 27 Feb 2024 02:27

Sample
190-24-00541-001

Sample ID, Type & Description
Gas Flawless Cylinder During Load

<u>Method</u>	<u>Test</u>	<u>Min</u>	<u>Max</u>	<u>Result</u>	<u>Units</u>
ASTM D2598!!	LP-Gas Vapor Pressure @100°F		208	199	psig
ASTM D2598!!	Specific Gravity at 60/60°F			0.49880	
ASTM D2163!!	LPG Composition by GC				
	Methane			0.01	%vol
	Ethane			5.90	%vol
	Ethylene			< 0.01	%vol
	Propane	90		93.17	%vol
	Propylene			0.07	%vol
	Cyclopropane			< 0.01	%vol
	Isobutane			0.78	%vol
	n-Butane			0.07	%vol
	Trans-2-Butene			< 0.01	%vol
	1-Butene			< 0.01	%vol
	Isobutylene			< 0.01	%vol
	Neopentane			< 0.01	%vol
	cis-2-Butene			< 0.01	%vol
	Isopentane			< 0.01	%vol
	n-Pentane			< 0.01	%vol
	1,3-Butadiene			< 0.01	%vol
	Butadienes			< 0.01	%vol
	Other C5's			< 0.01	%vol
	C6+			< 0.01	%vol
	Butanes and Heavier		2.5	0.85	%vol
ASTM D1837	Volatility of LPG's				
	Temperature @ 95% Evaporation		-37	-41.1	°F
	Temperature @ 95% Evaporation		-38.3	-40.6	°C
ASTM D2158!!	Residues in LPG, (Oil Stain) (Weathering Test)				
	Oil Stain	Pass		Pass	
	Solvent-Residue Mixture			1.5	mL
	Residue on Evaporation			< 0.05	mL
ASTM D1838!!	Copper Corrosion Rating (1 hour @ 100°F)		1	1	
ASTM D6667!!	Sulfur		123	2.6	mg/kg
ASTM D2713	Dryness of Propane			Pass	

Notes: !!Test Method performed and reported within scope of ISO 17025 accreditation. A2LA Cert # 4139.13



Redacted under Sec 23 (1) FOI Act (2021 Revision)

Laboratory Technician