



Certificate of Analysis

Vessel / Object: HAFNIA ANDREA (9688415)
Location: Port Arthur, TX / GT Gulfway (United States)
Job Type: Load
Product Grade: 95 Ron Gasoline
Client Reference: Atlantic Trading & Marketing Inc. / HV50997

Job No: 160-24-01083
Date Sampled: 03/07/24
Date Tested: 03/07/24
Version: 1 / 11 Mar 2024 09:28

<u>Sample</u>	<u>Sample ID, Type & Description</u>					
160-24-01083-037	4P-5S Volumetric Composite After Load					
<u>Method</u>	<u>Test</u>	<u>Min</u>	<u>Max</u>	<u>Result</u>	<u>Units</u>	<u>Remarks</u>
ASTM D4052	Gravity by Digital Density Meter					
	API Gravity @60°F			57.6	°	
	Density @15°C	720.0	775.0	748.0	kg/m ³	
ASTM D5191	DVPE @ 100F° (ASTM CALC AVG)		8.7	8.38	psi	
Visual	Visual Appearance at 20°C	Clear & Bright		Clear and Bright		
ASTM D130	Copper Strip Corrosion Rating @50°C/122°F for 3 Hours		1	1A		
ASTM D86	Distillation Evaporated					
	IBP	30		37.7	°C	
	10%	40	70	51.3	°C	
	50%	80	115	84.1	°C	
	90%		180	154.2	°C	
	FBP		215	196.2	°C	
	Residue		2.0	1.1	%vol	
	% Evaporated @70°C			35.8	%vol	
ASTM D381	Existent Gum Content		4.0	< 1	mg/100ml	
ASTM D2699	Research Octane Number	95.0		95.2		
ASTM D2700	Motor Octane Number	85.0		85.0		
ASTM D4814	Antiknock Index (R+M)/2			90.1		
ASTM D3606-20e1	Benzene		1.00	0.64	%vol	
ASTM D1319	Hydrocarbon types by FIA (Aromatics, Olefins & Saturates)					
	Aromatics		35	34.3	%vol	
	Olefins		18.0	8.2	%vol	
	Aromatics and Olefins		45.0	42.5	%vol	
ASTM D6304A	Water Concentration			< 10	ppmw	
ASTM D525	Oxidation Stability @100°C	360		361	mins	
ASTM D4815	Oxygenates in Gasoline					
	Total Oxygen Content		2.70	2.59	%wt	
	Oxygenates			> 5.00	%wt	
	Methanol		3.0	< 0.20	%vol	
ASTM D2622-16	Total Sulfur Content (Origin)		30	14.7	mg/kg	
ASTM D4952	Doctor Test	Negative		Negative		
ASTM D3227	Mercaptan Sulfur		0.0015	0.0007	%wt	
ASTM D3231	Phosphorus		1	< 0.20	mg/L	
ASTM D3831	Manganese Content of Gasoline		0	< 0.2	mg/L Mn	
ASTM D3237	Lead		5	< 2.5	mg/L	
ASTM D5708A**	Silicon Content			< 1.0	mg/kg	



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Sample 160-24-01083-037 **Sample ID, Type & Description** 4P-5S Volumetric Composite After Load

<u>Method</u>	<u>Test</u>	<u>Min</u>	<u>Max</u>	<u>Result</u>	<u>Units</u>	<u>Remarks</u>
ASTM D7536	Total Chloride Concentration			< 0.2	mg/kg	

Notes: RESULTS ARE VALID "AS AT" DATE AND LOCATION LISTED
All samples were obtained per ASTM D4057, 40 CFR1090.1335 and are retained in compliance with 40 CFR 1090.1345