

Certificate of Analysis

Client:	Atlantic Trading and Marketing, Inc.	Client Reference Number:	
Job Location:	Citgo Petroleum Corporation		HV50574
Our Reference Number:	US250-0023496		
Lab Reference Number:	2024-LACH-000176		

Sample ID:	2024-LACH-000176-020	Date Taken:	16-Feb-2024
Sample Designated As:	EN590 French Winter	Date Submitted:	09-Feb-2024
Vessel/Location:	SEA TIGER	Date Tested:	16-Feb-2024
Representing:	Sea Tiger EN590 French Winter Composite After Load		

Method	Test	Result	Unit	Specs	Pass / Fail
ASTM D93	Corrected Flash Point	65.0	°C	Min 60	Pass
ASTM D2709	Sediment and Water	<0.01	Vol %	Max 0.05	Pass
ASTM D86	10% Recovery	194.9	°C	Report	
ASTM D86	50% Recovery	245.2	°C	Max 292	Pass
ASTM D86	90% Recovery	310.3	°C	282 - 340	Pass
ASTM D86	Final Boiling Point	335.6	°C	Report	
ASTM D6217	Particulate Contamination	1.0	g/m ³	Report	
ASTM D445	Kinematic Viscosity at 104 °F/40 °C	2.114	cSt	1.9 - 4.1	Pass
ASTM D482	Ash	<0.010	mass %	Max 0.01	Pass
ASTM D2622	Sulfur Content	3.6	ppm	Max 15	Pass
ASTM D130	Copper Corrosion @ 50°C (122°F)/3 hr	1a		Max 1	Pass
(2) ASTM D613	Cetane Number	51.3		Min 40	Pass
ASTM D976	Cetane Index	49.3		Min 45	Pass
ASTM D1319	Aromatics	21.3	Vol %	Max 35	Pass
ASTM D97	Pour Point	-21	°C	Max 0	Pass
ASTM D4530	Average Micro Method Carbon Residue	< 0.10	mass %	Max 0.1	Pass
(2) ASTM D6079	Wear Scar Diameter	390	µm	Max 460	Pass
(2) ASTM D2624	Electrical Conductivity	246	pS/m	Min 50	Pass
ASTM D4052	API Gravity @ 60°F	39.3	°API	30 - 41	Pass
ASTM D1298	Density @ 15°C	828.5	kg/m ³	820 - 876	Pass
ASTM D1500	ASTM Color	<0.5		Max 2	Pass
ASTM D4868	Lower Heating Value	127,641	BTU/gal	Min 127,000	Pass
ASTM D1296	Odor	Marketable		Marketable	Pass
ITM 5005	Visual Color	Undyed		Undyed	Pass
ASTM D4176	Clear and Bright	Clear & Bright		Clear & Bright	Pass
ASTM D4176	Free Water and/or Particulates	No Water or Particle		Visually Free from Solid Matter	Pass
ASTM D7963	FAME	N/D	Vol%	Report	

The analysis results denoted by (2) were performed by an outside laboratory. Intertek cannot accept liability for the accuracy of any results not performed by its own laboratories.



Date: 2/16/24

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