



## CERTIFICATE OF ANALYSIS N° PAR-88599

**VESSEL** : Seafrontier  
**LOCATION** : ExxonMobil - Beaumont, TX  
**PRODUCT** : ULSD

**MOVEMENT** : Load  
**REF. NO.** : HV50977

Volumetric Composite		After Load	Sample N° :	32 <sup>(2)</sup>	20-MAY-2024 Sampled at 11:18
			<i>Minimum</i>	<i>Maximum</i>	<i>Remarks</i>
ASTM D4052	API Gravity @ 60°F	39.1 °API	32		Pass
ASTM D4052	Density @ 15°C	829.0 Kg/m3			
ASTM D4176 (1A)	Appearance	Clear & Bright	<i>Clear &amp; Bright</i>		Pass
ASTM D1500	ASTM Color	L0.5		2.5	Pass
ASTM D93(A)	Flash Point	141 °F	140		Pass
ASTM D93(A)	Flash Point	60.5 °C	60		Pass
ASTM D2500	Cloud Point	-7 °C			
ASTM D97	Pour Point	-22 °C		0	Pass
ASTM D445	Viscosity @ 40 °C	2.441 cSt	1.9	4.1	Pass
ASTM D86	Distillation of Petroleum Products (Recovered)				
	Initial Boiling Point	166.3 °C			
	10%	192.0 °C	<i>Report</i>		
	50%	251.4 °C		288	Pass
	90%	334.8 °C	282	338	Pass
	Final Boiling Point (End Point)	364.8 °C		<i>Report</i>	
	Recovery	97.5 Vol. %			
	Residue	1.5 Vol. %		2.0	Pass
	Loss	1.1 Vol. %		2.0	Pass
ASTM D976	Cetane Index	50.7	46		Pass
ASTM D613	Cetane Number	52.2	46		Pass
ASTM D5453	Sulfur	7.7 ppm wt.		400	Pass
ASTM D482	Ash	ND Mass %		0.01	Pass
ASTM D189	Carbon Residue, Conradson	<0.01 Wt. %			
ASTM D2709	Sediment & Water	ND Vol. %		0.02	Pass
ASTM D130	Copper Corrosion @ 50 °C (3 hrs)	1a		2	Pass
ASTM D664 (A)	Total Acid Number	ND mg KOH/g			
ASTM D7536	Chlorides Total	<0.2 ppm wt.			
ASTM D2624	Electrical Conductivity	105 pS/m	25		Pass
ASTM D5186	Polycyclic Aromatics	2.2 Mass %		8	Pass
ASTM D5186	Total Aromatics (correlated to D1319)	20.0 Vol. %		35	Pass
ASTM D6079	Lubricity by HFRR				
	Wear Scar Diameter @ 60° C	370 microns		460	Pass
ASTM D2274	Oxidation Stability @95 °C Total Insolubles	<0.1 mg/100mL			
EN 12662	Total Contaminants	ND mg/kg		24	Pass
ASTM D7111	Metals in Distillates by ICP				
	Silicon	<0.10 mg/kg(ppm)			
EN 16576	Metals by ICP-OES (Scope: FE, MN)				
	Manganese	ND mg/L			



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		<i>Minimum</i>	<i>Maximum</i>	<i>Remarks</i>

<sup>(2)</sup> Samples taken as per Standard Practice for Manual Sampling of Petroleum and Petroleum Products (ASTM D4057 / API MPMS Chapter 8.1) via a Closed System Sampler. Customer is advised that, due to its limitations, the samples may not fully represent the entire cargo.

All testing is performed on premises by Camin Cargo Control and in accordance to the latest referenced test method unless specifically stated otherwise.

The results apply to the samples as received and specifically to the items listed on this certificate.

Data contained in this report is confidential to the addressee and shall not be disclosed to any other party without their approval. This report may not be reproduced except in full without the written consent of the Camin Cargo Control.

N.D.- None Detected: Below Lower Reporting Limit and/or Lower Detection Limit as per applicable test method and/or instrument capability.

The statement of conformity (i.e. Pass/Fail) within this document does not consider measurement uncertainty and applies the decision rules of Pass if the values are equal or are within limits and Fail if outside of limits. Limits are defined by the product’s recognized specification or as determined by written client contract and/or individual job request.

William Shaver / Laboratory Technician -  
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