



CERTIFICATE OF ANALYSIS N° BAY-5433

VESSEL : Hafnia Andrea
LOCATION : ExxonMobil - Baytown, TX
PRODUCT : ULTRA LOW SULFUR DIESEL (ULSD)

MOVEMENT : Load
REF. NO. : 231226-
 MRAMOS-191459
 - SSOHU442165

Volumetric Composite		After Load	Sample N° :	35 (2)	02-JAN-2024 Sampled at 07:31
Description : Curoil					
			Minimum	Maximum	Remarks
ASTM D4052	API Gravity @ 60°F	37.1 °API	32		Pass
ASTM D4052	Density @ 15°C	839.9 Kg/m3	820.0	845.00	Pass
ASTM D4176 (1A)	Appearance	Clear & Bright	Clear & Bright		Pass
ASTM D1500	ASTM Color	1.5		2.5	Pass
ASTM D93(A)	Flash Point	144 °F	140		Pass
ASTM D93(A)	Flash Point	62.5 °C	60		Pass
ASTM D2500	Cloud Point	-10 °C		Report	
ASTM D97	Pour Point	-24 °C		0.0	Pass
ASTM D445	Viscosity @ 40 °C	2.802 cSt	2.0	4.1	Pass
ASTM D86	Distillation of Petroleum Products (Recovered)				
	Initial Boiling Point	159.6 °C			
	10%	209.2 °C	Report		
	50%	271.0 °C		288	Pass
	90%	330.4 °C	282	338	Pass
	Final Boiling Point (End Point)	356.8 °C		Report	
	Recovery	98.4 Vol. %			
	Residue	1.4 Vol. %		2.0	Pass
	Loss	0.2 Vol. %		2.0	Pass
ASTM D976	Cetane Index	51.6	46.0		Pass
ASTM D613	Cetane Number	51.7	46.0		Pass
ASTM D1319	Hydrocarbon Types by FIA	(Dye Lot# <975 or >980)			
	Aromatics	23.3 Vol. %		35.0	Pass
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ASTM D5453	Sulfur	5.8 ppm wt.		15.00	Pass
ASTM D482	Ash	<0.001 Mass %		0.01	Pass
ASTM D4530	Carbon Residue, Micro Carbon on 10% Bott.	<0.10 Mass %		0.30	Pass
ASTM D2709	Sediment & Water	<0.010 Vol. %		0.02	Pass
ASTM D130	Copper Corrosion @ 50 °C (3 hrs)	1a		3	Pass
ASTM D664 (A)	Total Acid Number	<0.100 mg KOH/g		0.50	Pass
ASTM D7359	Chloride Content	<0.50 mg/kg		Report	
ASTM D2624	Electrical Conductivity	315 pS/m	25.0		Pass
EN 12916	Aromatic Hydrocarbons by HPLC				
	Polycyclic Aromatic Hydrocarbons	5.2 Mass %		8.0	Pass
ASTM D6079	Lubricity by HFRR				
	Wear Scar Diameter @ 60° C	230 microns		460.0	Pass



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Volumetric Composite		After Load	Sample N° :	35 ⁽²⁾	02-JAN-2024 Sampled at 07:31
Description : Curoil					
			Minimum	Maximum	Remarks
ASTM D2274	Oxidation Stability @ 95 °C Total Insolubles	0.7 g/m3		25.0	Pass
EN 12662	Total Contaminants	<12.0 mg/kg		24.0	Pass
ASTM D7111	Metals in Distillates by ICP				
	Silicon	<0.10 mg/kg(ppm)		Report	
EN 16576	Metals by ICP-OES (Scope: FE, MN)				
	Manganese	<1.0 mg/L		Report	

⁽²⁾ 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.

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.

Kiasha Simmons / Laboratory Supervisor