



# CERTIFICATE OF ANALYSIS N° NOR-19987

**VESSEL** : Castor  
**LOCATION** : PBF - Chalmette, LA  
**PRODUCT** : ULSD

**MOVEMENT** : Load  
**REF. NO.** : HV51112

Volumetric Composite		After Load	Sample N° :	52 (1)	23-FEB-2024 Sampled at 02:20
			Minimum	Maximum	Remarks
ASTM D4052	API Gravity @ 60°F	40.6 °API	32		Pass
ASTM D4052	Density @ 15°C	0.8219 kg/L			
Visual	Color	Undyed			
ASTM D4176 (1A)	Appearance	Clear & Bright		Clear & Bright	Pass
ASTM D1500	ASTM Color	L1.0		2.5	Pass
ASTM D93(A)	Flash Point	62.0 °C	60.0		Pass
ASTM D5773	Cloud Point	-18.7 °C	Report	Report	
ASTM D97	Pour Point	<-24 °C		0.0	Pass
ASTM D6371	CFPP	-23 °C		12	Pass
ASTM D445	Viscosity @ 40 °C	2.040 cSt	2.0	4.1	Pass
ASTM D86	Distillation of Petroleum Products (Recovered)				
	Initial Boiling Point	171.0 °C			
	10%	192.7 °C	Report		
	50%	241.9 °C		288	Pass
	85%	301.4 °C			
	90%	314.2 °C	282	338	Pass
	95%	333.1 °C		370.0	Pass
	Final Boiling Point (End Point)	346.6 °C		Report	
	Recovery	98.1 Vol. %			
	Residue	1.0 Vol. %		2.0	Pass
	Loss	0.9 Vol. %		2.0	Pass
ASTM D4737 (A)	Cetane Index	51.1	46		Pass
ASTM D613	Cetane Number	50.5	46.0		Pass
ASTM D1319	Hydrocarbon Types by FIA (Dye Lot# <975 or >980)				
	Aromatics	15.4 Vol. %		35.0	Pass
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	Aromatics	16.5 Wt. %			
ASTM D2622	Sulfur	6.8 ppm wt.		15	Pass
ASTM D482	Ash	<0.001 Mass %		0.01	Pass
ASTM D524	Carbon Residue, Ramsbottom on 10% Bott.	<0.10 Mass %		0.30	Pass
ASTM D6304 (A)	Water by Karl Fischer in Products (Coulometric)	63 ppm		200	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		0.5	Pass
ASTM D7359	Chloride Content	<0.50 mg/kg			
ASTM D2624	Electrical Conductivity	260 pS/m	25.0		Pass
ASTM D2624	Electrical Conductivity Temp.	22 °C			



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			<i>Minimum</i>	<i>Maximum</i>	<i>Remarks</i>
ASTM D5186	PolyNuclear Aromatics (HAPS)	0.9 Mass %		11	Pass
EN 12916	Aromatic Hydrocarbons by HPLC				
	Polycyclic Aromatic Hydrocarbons	2.0 Mass %		8.0	Pass
ASTM D6079	Lubricity by HFRR				
	Wear Scar Diameter @ 60° C	440 microns		460.0	Pass
ASTM D2274	Oxidation Stability @ 95 °C Total Insolubles	<1.0 g/m3		25	Pass
EN 12662	Total Contaminants	<12.0 mg/kg		24	Pass
ASTM D7111	Metals in Distillates by ICP				
	Silicon	<0.10 mg/kg(ppm)	Report	Report	
EN 16576	Metals by ICP-OES (Scope: FE, MN)				
	Manganese	<1.0 mg/L	Report		

<sup>(1)</sup> Samples taken as per Standard Practice for Manual Sampling of Petroleum and Petroleum Products (ASTM D4057 / API MPMS Chapter 8.1).

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.

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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.

Todd Picou / Laboratory Manager - Assistant