



Certificate of Analysis

Vessel / Object: STI MARVEL (9829473)
Location: Pascagoula, MS / Chevron Products Company (United States)
Job Type: Load
Product Grade: ULS EXPORT DF2
Client Reference: Chevron Products Int'l L & T / 31942

Job No: 146-20-00799
Date Sampled: 10/05/20
Date Tested: 10/06/20
Version: 1 / 06 Oct 2020 10:06

Sample 146-20-00799-007 **Sample ID, Type & Description** STI Marvel Volumetric Composite After Load

<u>Method</u>	<u>Test</u>	<u>Min</u>	<u>Max</u>	<u>Result</u>	<u>Units</u>
ASTM D4052	Gravity by Digital Density Meter				
	API Gravity @60°F			38.8	°
	Density @15°C	0.83	0.85	0.8305	g/cm ³
ASTM D2622	Total Sulfur Content		15	8.1	mg/kg
ASTM D524	Ramsbottom Carbon Residue on 10% Distillation Residue		0.35	< 0.10	%wt
ASTM D2274	Oxidation Stability Total Insolubles		1	< 0.1	mg/100ml
ASTM D482*	Ash Content				
	Ash Content		0.01	< 0.010	mass%
	Test Specimen Mass			100.12	g
ASTM D130	Copper Strip Corrosion Rating @50°C/122°F for 3 Hours		3	1A	
ASTM D86	Distillation Recovered				
	IBP			174.0	°C
	5%			198.5	°C
	10%			206.5	°C
	20%			217.3	°C
	30%			227.9	°C
	40%			239.7	°C
	50%			252.1	°C
	60%			265.8	°C
	70%			280.0	°C
	80%			296.1	°C
	90%	282	360	317.3	°C
	95%			333.8	°C
	FBP			346.6	°C
	Recovery			98.2	%vol
	Residue			1.4	%vol
	Loss			0.4	%vol
ASTM D976	Calculated Cetane Index	40		50.2	
ASTM D613	Ignition Quality Cetane Number	45		49.5	
ASTM D97	Pour Point		4	-27	°C
ASTM D93A	Flash Point	60		67.0	°C
ASTM D6371	CFPP		-8	-20	°C
ASTM D445	Kinematic Viscosity @104°F/40°C	2.1	4.1	2.380	cSt
ASTM D2709	Water and Sediment		0.05	< 0.01	%vol
ASTM D1319	Aromatics			15.5	%vol
ASTM D4176A proc. 1	Appearance Distillate Fuels				
	Appearance			Clear & Bright	
	Test Temperature			20	°C
ASTM D1500	ASTM Color		1.5	L0.5	
ASTM D6079	Lubricity of Diesel Fuels by HFRR				
	Lubricity Minor Axis			280	µm



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Table with 5 columns: Method, Test, Min, Max, Result, Units. Rows include ASTM D6079 (Lubricity of Diesel Fuels by HFRR), ASTM D2624 (Electrical Conductivity of Aviation and Distillate Fuels), ASTM D6217 (Particulate Contamination), and ASTM D2500 (Cloud Point).

Notes: ASTM D2274, D613, D6371, D1319, and D1500 subcontracted to alternative AmSpec laboratory facility

Reported by: Lorna Jackson
Title: Laboratory Manager