

Vessel / Object:

Maersk Katalin

Location:

Buckeye - South Portland, ME

Job Type: Product Grade: Client Reference: Discharge RBOB 6.0 IM10010 Job No:

42-15-00473

Date Sampled: Date Tested: 8/17/2015 8/17/2015

Date Reported:

8/17/2015

Sample Number:	421500473-007	Sample ID & Desc: Sample Type:	Vessel, 10% Ethanol Before Discharge Composite		
Method	Test	<u>Min</u>	Max	<u>Result</u>	<u>Units</u>
ASTM D4052	API Gravity			55.2	•
ASTM D3606	Benzene		1.30	0.48	Vol%
ASTM D5599	Ethanol	9	10	9.91	Vol%
ASTM D5599	MTBE		0.25	<0.1	Vol%
ASTM D5599	TAME			<0.1	Vol%
ASTM D5599	ETBE			<0.1	Vol%
ASTM D5599	Methanol			<0.1	Vol%
ASTM D5599	t-Butanol			<0.1	Vol%
STM D5599	Oxygenates			9.91	Vol%
STM D5599	Oxygen Content	1.6	4.0	3.60	Wt%
STM D5191	DVPE @ 100°F, EPA			6.83	psi
STM D2622	Sulfur		80	38	ppm
STM D86	Distillation: IBP Evaporated			109.4	°F
STM D86	Distillation: 10% Evaporated		158	136.0	°F
STM D86	Distillation: 50% Evaporated	150	250	209.4	°F
STM D86	Distillation: 90% Evaporated		374	341.8	°F
STM D86	Distillation: FBP Evaporated		430	419.6	°F
STM D86	Distillation: Recovery	r.		97.3	mL
STM D86	Distillation: Residue			1.1	mL
STM D86	Distillation: Loss			1.6	mL
STM D86	Distillation: E200	30	70	46.4	°F
STM D86	Distillation: E300	70	100	78.6	°F
STM D1319(Correlated)	Aromatics		50	24.0	Vol%
STM D1319	Olefins		25	16.8	Vol%
STM D2699	Research Octane Number			93.6	
STM D2700	Motor Octane Number			82.0	
STM D4814-04b	Octane (R+M)/2			87.8	
PA Calculation	VOC - Reduction	23.4		27.1	%
PA Calculation	TOX - Reduction			29.3	%
PA Calculation	NOx - Reduction			8.1	%
ACE TM-0172	NACE Corrosion (Neat)	В+		Α	

Reported By: Michael Holland Title: Laboratory Manager

Will Holber



Vessel / Object: Location: Job Type: Product Grade: Client Reference:	Maersk Katalin Buckeye - South Portland, ME Discharge RBOB 6.0 IM10010				Job No: Date Sampled: Date Tested: Date Reported:	42-15-00473 8/17/2015 8/17/2015 8/18/2015
Sample Number:	421500473-009	Sample ID & D Sample Type:	esc:	1P Before Running	Discharge	
Method ASTM D4052 ASTM D3606 ASTM D5191 ASTM D2622 ASTM D86 ASTM D86	Test API Gravity Benzene DVPE @ 100°F, EPA Sulfur Distillation: E200 Distillation: E300		<u>Min</u>	<u>Max</u>	Result 56.0 0.57 5.71 40 39.0 78.2	Units  Vol% psi ppm °F °F
Sample Number:	421500473-010	Sample ID & De Sample Type:	esc:	1S Before Discharge Running		
Method ASTM D4052 ASTM D3606 ASTM D5191 ASTM D2622 ASTM D86 ASTM D86	Test API Gravity Benzene DVPE @ 100°F, EPA Sulfur Distillation: E200 Distillation: E300		<u>Min</u>	<u>Max</u>	Result 55.9 0.57 5.67 41 38.8 78.3	Units  Vol% psi ppm *F *F
Sample Number:	421500473-011	Sample ID & De Sample Type:	esc:	2P Before [ Running	Discharge	
Method ASTM D4052 ASTM D3606 ASTM D5191 ASTM D2622 ASTM D86 ASTM D86	Test API Gravity Benzene DVPE @ 100°F, EPA Sulfur Distillation: E200 Distillation: E300		<u>Min</u>	<u>Max</u>	Result 55.8 0.57 5.63 41 38.4 78.4	Units  Vol% psi ppm °F °F
Sample Number:	421500473-012	Sample ID & Desc: Sample Type:		2S Before Discharge Running		
Method ASTM D4052 ASTM D3606 ASTM D5191 ASTM D2622 ASTM D86 ASTM D86	Test API Gravity Benzene DVPE @ 100°F, EPA Sulfur Distillation: E200 Distillation: E300		<u>Min</u>	<u>Max</u>	Result 56.0 0.57 5.59 41 38.8 78.5	Units  Vol% psi ppm  °F



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Maersk Katalin

Location:

Buckeye - South Portland, ME

Job Type:

Discharge RBOB 6.0

Product Grade: Client Reference:

IM10010

Job No:

42-15-00473

Date Sampled: Date Tested: 8/17/2015 8/17/2015

Date Reported:

8/18/2015

Sample Number:	421500473-013	Sample ID & Desc: Sample Type:	Slop P Befo Running	ore Discharge	
Method	<u>Test</u>	<u>Min</u>	Max	<u>Result</u>	<u>Units</u>
ASTM D4052	API Gravity			55.9	•
ASTM D3606	Benzene			0.57	Vol%
ASTM D5191	DVPE @ 100°F, EPA			5.60	psi
ASTM D2622	Sulfur			40	ppm
ASTM D86	Distillation: E200			38.8	°F
ASTM D86	Distillation: E300			78.4	°F

Sample Number:

421500473-014

Sample ID & Desc: Sample Type: Slop S Before Discharge

Running

Max

Method	Test
ASTM D4052	API Gravity
ASTM D3606	Benzene
ASTM D5191	DVPE @ 100°F, EPA
ASTM D2622	Sulfur
ASTM D86	Distillation: E200
ASTM D86	Distillation: E300

Min

0.57 5.59 / 40 38.1

77.9

Result

55.8

Vol% psi ppm °F °F

<u>Units</u>

Reported By: Michael Holland Title: Laboratory Manager Mill Holber



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Maersk Katalin

Location:

Buckeye - South Portland, ME

Job Type: Product Grade: Discharge RBOB 6.0

Client Reference:

IM10010

Job No:

42-15-00473

Date Sampled: Date Tested: 8/17/2015 8/17/2015

Date Reported: 8/17/2015

Sample Number:	421500473-008	Sample ID & Desc Sample Type:	:	Vessel, Neat Composite	Before Discharge	
<u>Method</u>	<u>Test</u>		<u>Min</u>	<u>Max</u>	Result	<u>Units</u>
ASTM D4052	API Gravity				55.9	•
ASTM D3606	Benzene				0.57	Vol%
ASTM D5599	Ethanol				<0.1	Vol%
ASTM D5599	MTBE			0.25	<0.1	Vol%
ASTM D5599	TAME				<0.1	Vol%
ASTM D5599	ETBE				<0.1	Vol%
ASTM D5599	Methanol				<0.1	Vol%
ASTM D5599	t-Butanol				<0.1	Vol%
ASTM D5599	Oxygenates				<0.1	Vol%
ASTM D5599	Oxygen Content				<0.1	Wt%
ASTM D5191	DVPE @ 100°F, EPA (Weighted Avera	ge)			5.63	psi
ASTM D2622	Sulfur				40	ppm
ASTM D86	Distillation: IBP Evaporated				107.7	°F
ASTM D86	Distillation: 10% Evaporated				150.1	°F
ASTM D86	Distillation: 50% Evaporated		170		227.4	°F
ASTM D86	Distillation: 90% Evaporated				344.8	°F
ASTM D86	Distillation: FBP Evaporated				423.4	°F
ASTM D86	Distillation: Recovery				98.7	mL
ASTM D86	Distillation: Residue				1.1	mL
ASTM D86	Distillation: Loss				0.2	mL
ASTM D86	Distillation: E200				37.7	°F
ASTM D86	Distillation: E300				77.8	°F
ASTM D1319(Correlated)	Aromatics				26.4	Vol%
ASTM D1319	Olefins				18.6	Vol%

Reported By: Michael Holland Title: Laboratory Manager