



haltermannsolutions

*fueling the world, one solution at a time*

Product Information

Telephone: (800) 969-2542

FAX: (281) 457-1469

Johann Haltermann Ltd.

PRODUCT: Sequence VI-E  
WDCA  
PRODUCT CODE: HF2003

Batch No.: CJ1021NX10  
TMO No.: 907177  
Tank No.: NX TRAILER  
Analysis Date: 10/9/2014  
Shipment Date: 10/13/2014

TEST	METHOD	UNITS	HALTERMANN Specs			RESULTS
			MIN	TARGET	MAX	
Distillation - IBP	ASTM D86	°C	23.9		35.0	30.6
5%		°C				43.6
10%		°C	48.9		57.2	51.5
20%		°C				62.9
30%		°C				75.9
40%		°C				92.1
50%		°C	93.3		110.0	104.2
60%		°C				111.2
70%		°C				117.4
80%		°C				128.4
90%		°C	151.7		162.8	159.3
95%		°C				171.1
Distillation - EP		°C			212.8	196.7
Recovery		vol %		Report		97.1
Residue		vol %		Report		1.1
Loss		vol %		Report		1.8
Gravity @ 60°F/60°F	ASTM D4052	°API	58.7		61.2	59.2
Density @ 15° C	ASTM D4052	kg/l	0.734		0.744	0.742
Reid Vapor Pressure	ASTM D5191	kPa	60.1		63.4	62.5
Carbon	ASTM D3343	wt fraction		Report		0.8646
Carbon	ASTM D5291	wt fraction		Report		0.8644
Hydrogen	ASTM D5291	wt fraction		Report		0.1355
Hydrogen/Carbon ratio	ASTM D5291	mole/mole		Report		1.868
Oxygen	ASTM D4815	wt %			0.05	<0.01
Sulfur	ASTM D5453	mg/kg	3		15	6
Lead	ASTM D3237	mg/l			2.6	<1
Phosphorous	ASTM D3231	mg/l			1.3	<0.05
Composition, aromatics	ASTM D1319	vol %	26.0		32.5	27.6
Composition, olefins	ASTM D1319	vol %			10.0	0.7
Composition, saturates	ASTM D1319	vol %		Report		71.7
Particulate matter	ASTM D5452	mg/l			1	1.4
Oxidation Stability	ASTM D525	minutes	1000			1000+
Copper Corrosion	ASTM D130				1	1a
Gum content, washed	ASTM D381	mg/100mls			5.0	<0.5
Fuel Economy Numerator/C Density	ASTM D5291		2401		2441	2423
C Factor	ASTM D5291			Report		1.0071
Research Octane Number	ASTM D2699		96.0			97.2
Motor Octane Number	ASTM D2700			Report		88.7
Sensitivity			7.5			8.5
Net Heating Value, btu/lb	ASTM D3338	btu/lb		Report		18492
Net Heating Value, btu/lb	ASTM D240	btu/lb		Report		18279
Color	VISUAL	1.75 ptb		Red		Red
Top Tier Additive		69.3 ptb		Report		Added at Top Tier Rate

APPROVED BY:

*[Signature]*