

**Gage Products Company**  
**Certificate of Analysis / QC Results**

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Date: 02/24/14 at 7:24 AM

Customer PO # :

<b>Packaged Product:</b> 41164 CSC 2014 Endurance Gasoline				
Property	Test Method	UOM	Specification	Value
SPECIFIC GRAVITY @ 60F	ASTM D4052		REPORT	0.7193
DISTILLATION, IBP	ASTM D86	DEG F	REPORT	77.5
DISTILLATION, 10%	ASTM D86	DEG F	REPORT	109.6
DISTILLATION, 50%	ASTM D86	DEG F	REPORT	201.8
DISTILLATION, 90%	ASTM D86	DEG F	REPORT	294.8
DISTILLATION, DP	ASTM D86	DEG F	REPORT	417.9
RECOVERY	ASTM D86	VOL. %	REPORT	96.1
RESIDUE	ASTM D86	VOL. %	REPORT	1.1
LOSS	ASTM D86	VOL. %	REPORT	2.8
ISOBUTANOL CONTENT	Gas Chromatography	VOL. %	15.5 - 16.5	16.1
RVP @ 100 DEG. F	ASTM D5191	PSI (KPA)	13.00 - 14.00(89.57 - 96.46)	13.40(92.33)
CARBON CONTENT	ASTM D5291	WT. %	REPORT	81.11
HYDROGEN CONTENT	ASTM D5291	WT. %	REPORT	15.00
OXYGEN CONTENT	ASTM D5622	WT. %	REPORT	3.89
H/C RATIO	Calculated	MOLE/MOLE	REPORT	2.204
C/H RATIO	Calculated	WT/WT	REPORT	5.407
O/C RATIO	CALCULATED	MOLE/MOLE	REPORT	0.038
<b>Lot #</b> 6449400 <b>Made</b> 02/10/14				
In sealed unopened containers this product is good until 01/28/15				
<b>Approved By:</b> <u>Robert Pitts</u>				

**Gage Products Company**  
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Date: 02/24/14 at 7:26 AM

Customer PO # :

<b>Packaged Product:</b> 41165				
CSC 2014 Emissions Gasoline				
Property	Test Method	UOM	Specification	Value
SPECIFIC GRAVITY @ 60F	ASTM D4052		REPORT	0.7614
DISTILLATION, IBP	ASTM D86	DEG F	REPORT	85.8
DISTILLATION, 10%	ASTM D86	DEG F	REPORT	127.3
DISTILLATION, 50%	ASTM D86	DEG F	REPORT	208.7
DISTILLATION, 90%	ASTM D86	DEG F	REPORT	306.8
DISTILLATION, DP	ASTM D86	DEG F	REPORT	394.2
RECOVERY	ASTM D86	VOL. %	REPORT	97.1
RESIDUE	ASTM D86	VOL. %	REPORT	1.1
LOSS	ASTM D86	VOL. %	REPORT	1.8
ISOBUTANOL CONTENT	Gas Chromatography	VOL. %	15.5 - 16.5	15.7
RVP @ 100 DEG. F	ASTM D5191	PSI (KPA)	9.00 - 10.00(62.01 - 68.90)	9.19(63.32)
CARBON CONTENT	ASTM D5291	WT. %	REPORT	82.62
HYDROGEN CONTENT	ASTM D5291	WT. %	REPORT	13.78
OXYGEN CONTENT	ASTM D5622	WT. %	REPORT	3.6
H/C RATIO	Calculated	MOLE/MOLE	REPORT	1.988
C/H RATIO	Calculated	WT/WT	REPORT	5.994
O/C RATIO	CALCULATED	MOLE/MOLE	REPORT	0.033
<b>Lot #</b> 6449700 <b>Made</b> 02/05/14				
In sealed unopened containers this product is good until 01/28/15				
<b>Approved By:</b> <u>Robert Patzelt</u>				



GAGE PRODUCTS CO.  
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FERNDALE, MI 48220  
(248) 541-3824

Gage Products Company  
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Date: 02/24/14 at 7:49 AM

Customer PO # :

Packaged Product: <u>41166</u>				
Ultra Low Sulfur Cert Diesel				
Property	Test Method	UOM	Specification	Value
SPECIFIC GRAVITY @ 60 DEG. F	ASTM D4052		0.8400 - 0.8650	0.8517
API GRAVITY	ASTM D4052		32.0 - 37.0	34.6
TOTAL SULFUR	ASTM D5453	PPM	7.0 - 15.0	8.3
PMCC FLASHPOINT	ASTM D93	DEG F.	130, MIN.	180
KIN. VISCOSITY @ 40C	ASTM D445	CST	2.0, MIN.	2.68
CARBON CONTENT	ASTM D5291	WT. %	REPORT	86.89
HYDROGEN CONTENT	ASTM D5291	WT. %	REPORT	13.11
NET HEAT OF COMB.	ASTM D240	BTU/LB.	REPORT	18447.2
CETANE INDEX	ASTM D976	CETANE INDEX	40.0 - 50.0	47.1
CETANE NUMBER	ASTM D613	CETANE NO.	40.0 - 50.0	43.3
HFRR LUBRICITY	ASTM D6079	MICRONS	0 - 460	369
DISTILLATION, IBP	ASTM D86	DEG F (DEG C)	340.0 - 400.0(171.1 - 204.4)	380.9(193.8)
DISTILLATION, 10%	ASTM D86	DEG F (DEG C)	400.0 - 460.0(204.4 - 237.8)	428.6(220.3)
DISTILLATION, 50%	ASTM D86	DEG F (DEG C)	470.0 - 540.0(243.3 - 282.2)	513.9(267.7)
DISTILLATION, 90%	ASTM D86	DEG F (DEG C)	560.0 - 630.0(293.3 - 332.2)	596.6(313.7)
DISTILLATION, DRY POINT	ASTM D86	DEG F (DEG C)	610.0 - 690.0(321.1 - 365.6)	635.5(335.3)
AROMATICS	ASTM D1319	VOL. %	27, MIN.	30.6
OLEFINS	ASTM D1319	VOL. %	REPORT	4.7
SATURATES	ASTM D1319	VOL. %	REPORT	64.7
CLOUD POINT	ASTM D2500	DEG C	REPORT	-34
POUR POINT	ASTM D97	DEG C	REPORT	-36
<p>Lot # <u>6450000</u> Made <u>2/13/14</u></p> <p>In sealed unopened containers this product is good until <u>3/13/14</u></p> <p>Approved By: <u>Robert Pettitt</u></p>				