

**Sub-Octane Unleaded Gasoline Specifications**  
**Grades: V1, VMS 80.5 Sub-Octane Unleaded Gasoline**

(Conventional Gasoline - This product does not meet the requirements for reformulated gasoline and may not be used in any reformulated gasoline covered area.)

**The following parameter applies before blending with 10% denatured fuel ethanol.**

<u>Product Property</u>	<u>Test Method</u>	<u>Origin</u>		<u>Deliveries</u> <sup>1/</sup>
		<u>Minimum</u>	<u>Maximum</u>	
Gravity, °API	D287		Report	
Color			Undyed	
Distillation <sup>2/</sup>	D86			
RVP <sup>2/</sup>	D5191			
Vapor to Liquid Ratio <sup>2/</sup>	D5188			
Drivability Index <sup>2/</sup>	D4814			
Benzene, vol %	D3606		4.9	
Mercaptan Sulfur, wt % <sup>3/</sup>	D3227		0.002	
Copper Corrosion	D130		1	
Silver Corrosion	D7667, D7671		1	
Gum, Existent, mg/100 ml	D381		4	5
Oxidation Stability, minutes	D525	240		
Phosphorus, g/gal	D3231		0.003	0.005
Lead, g/gal	D3237		0.010	0.05
Sulfur, ppm	D2622		80	
Oxygenates, vol %	D4815, D5599		0.05	
Haze Rating <sup>4/</sup>	D4176		2	3
NACE Corrosion	TM0172, D7548	B+		
Odor <sup>5/</sup>			Nonoffensive	

**The following parameters apply either before or before and after blending with denatured fuel ethanol at 10%**

Octane	<u>Method</u>	<u>Base Gasoline</u>	
RON, min	D2699	Report	
MON, min	D2700	Report	
(R+M)/2, min		82.0	
Octane		<u>Base Gasoline</u>	and <u>Blended with 10% Ethanol</u>
RON, min	D2699	Report	Report
MON, min	D2700	Report	Report
(R+M)/2, min		80.5	85.0

**The following parameters apply after blending with denatured fuel ethanol at 10%**

<u>Product Property</u>	<u>Method</u>	<u>Origin</u>			
Distillation,	D86				
10% Evap (T10), °F		Report			
50% Evap (T50), °F, min		150			
RVP <sup>6/</sup>	D5191	Report			
Vapor to Liquid Ratio	<u>Class 1</u>	<u>Class 2</u>	<u>Class 3</u>	<u>Class 4</u>	<u>Class 5</u>
D5188, min <sup>2/</sup>	<b>129</b>	<b>122</b>	<b>116</b>	<b>107</b>	<b>102</b>

- 1/ Delivered products meets all applicable requirements at time and place of delivery.
- 2/ Refer to Magellan’s Seasonal Gasoline Volatility Classes and Schedule of Origin Volatility requirements.
- 3/ Mercaptan Sulfur determination is waived if the result of the Doctor Test ASTM D4952 is negative.
- 4/ Compliance with ASTM D4176 will be determined using Procedure 2 at the following temperatures, adjusted seasonally:
 

February 16 – September 30	55 °F max
October 1– February 15	45 °F max
- 5/ Any gasoline exhibiting an offensive odor and/or containing more than 0.30 wt % dicyclopentadiene will not be accepted for shipment.
- 6/ RVP limits on ethanol blended gasoline are controlled by various federal and state regulations and waivers, which are generally greater than the limits for base gasoline.