

NR Grade Regular Gasoline Blendstock (RBOB)

For Blending With 10.0% Denatured Fuel Ethanol (92% Purity) As Defined In ASTM D4806
VOC-Controlled Region 1 Complex Model Phase II

Product Property	Test Method	Origin		Deliveries ^{1/}		
		Minimum	Maximum			
Gravity, ° API ^{8/}	D287	Report				
Color		Undyed				
Volatility ^{2/ 8/ 9/}						
Distillation	D86					
	<u>Class AA</u>	<u>Class A</u>	<u>Class B</u>	<u>Class C</u>	<u>Class D</u>	<u>Class E</u>
10% Evaporated °F, max	158	158	149	140	131	122
50% Evaporated °F, min	150	150	150	150	150	150
50% Evaporated °F, max	250	250	245	240	235	230
90% Evaporated °F, max	374	374	374	365	365	365
Final Boiling Point °F, max	430	430	430	430	430	430
Residue, vol% max	2	2	2	2	2	2
Drivability Index, max	D4814					
	1250	1250	1240	1230	1220	1200
Vapor/Liquid Ratio = 20:1; °F min ^{4/}	D5188					
	<u>Class 1</u>	<u>Class 2</u>	<u>Class 3</u>	<u>Class 4</u>	<u>Class 5</u>	
	129	122	116	107	102	
E200 (vol%)	D86			30	70	
E300 (vol%)	D86			70	100	
Emission Performance Reduction (%)				-27		
Mercaptan Sulfur, wt % ^{3/}	D3227				0.003	
Copper Corrosion	D130				1	
Silver Corrosion	D7667,7671				1	
Gum, Existent, mg/100 ml	D381				4	5
Oxidation Stability, minutes	D525			240		
Octane						
RON	D2699				Report	
MON	D2700			82		
(R+M)/2				87		
Phosphorus, g/gal	D3231				0.003	0.005
Benzene, vol %	D3606				1.3	
Aromatics (vol %) ^{4/}					50	
Olefins (vol %)	D1319				25	
Sulfur, ppm	D2622				80	
Oxygen Content wt % ^{5/}	D5599			1.5	4	
Oxygenates, (vol %) ^{8/}	D4815				0.05	
Haze Rating ^{6/ 8/}	D4176				2	3
NACE Corrosion ^{8/}	TM0172, D7548			B+		
Odor ^{7/ 8/}					Nonoffensive	

NR Grade Regular Gasoline Blendstock (RBOB) (continued)

- 1/ Delivered products meets all applicable requirements at time and place of delivery.
- 2/ Refer to Seasonal Gasoline Volatility Schedule.
- 3/ Mercaptan Sulfur determination is waived if the result of the Doctor Test ASTM D4952 is negative.
- 4/ Refer to test methods in 40 CFR Chapter 1, Part 80.46.
- 5/ Oxygen content must meet a minimum of 1.5 wt. % and a maximum of 4.0 wt. % after blending of denatured fuel ethanol.
- 6/ 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
- 7/ Any gasoline exhibiting an offensive odor and/or containing more than 0.30 wt % dicyclopentadiene will not be accepted for shipment.
- 8/ Specifications must be met before blending of denatured fuel ethanol except for vapor pressure during the VOC compliance period, March 20th through September 15th, will be reported on the blended fuel.
- 9/ For products blended to meet EPA or state imposed summer VOC requirements, test must be performed for RVP in accordance with procedure described in 40 CFR, PART 80, Appendix E, Method 3.

****NOTE: This RBOB may not be combined with any other RBOB except RBOB having the same requirement for oxygenate type and amount. “Base Gasoline” Not for sale to the ultimate consumer.**

****NOTE: Heavy metals are not allowed to be present.**

****NOTE: All parameters must be met after blending with denatured fuel ethanol unless noted.**