

AZ6 Grade Arizona Winter Cleaner Burning Gasoline (AZRBOB)

(This AZRBOB gasoline is intended for blending with 10% Denatured Fuel Ethanol (DFE) by volume)

Gravity °API @ 60°F $^{4'}$ D 287 Report Octane NON D 2699 Report MON D 27000 Report Report MON D 27000 Report Report (R+M)/2 91.0 0.05 Oxygen Content, wt% $^{1/4'}$ D 4815 0.05 RVP, psi $^{4'}$ D 5191 8.00 RVP, psi $^{4'}$ D 5191 9.00 Distillation, °F D86 0.05 E200, vol % 30 70 E300, vol % 0.06 220 90% 30.0 70 Eadon, vol % 330 70 End Point 430 330 Benzene, vol% D 3606 4.9 Aromatics, vol% D 5769, D5580 30.0 Olefins, vol% D 1319, or correlated D6550 10.0 Corrosion (Cu) 3 hrs @ 122°F(50°C) D 3607,7671 1 Mercaptan sulfur, wt.% $^{2'}$ D 3227 0.002 Existent Gum, mg/100 ml D 381 40 Oxidation stability, minutes D 5059 0.01	Product Property	Method	Minimum	Maximum
RON D 2699 Report	Gravity °API @ 60°F ^{4/}	D 287	Report	
MON D 2700 Report $(R+M)/2$ 91.0 Oxygen Content, wt% ^{1/4/} D 4815 0.05 RVP, psi ^{4/} D 5191 8.00 RVP, psi ^{4/} D 5191 9.00 Distillation, °F D86 9.00 E200, vol % 30 70 E300, vol % 70 100 50% 70 100 90% 330 70 Eal Point 430 330 Benzene, vol% D 3606 4.9 Aromatics, vol% D 5769, D5580 30.0 Olefins, vol% D 1319, or correlated D6550 10.0 Corrosion (Cu) 3 hrs @ 122°F(50°C) D 7667,7671 1 Mercaptan sulfur, wt.% ² D 3227 0.002 Existent Gum, mg/100 ml D 381 4 Oxidation stability, minutes D 525 240 Phosphorous, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+	Octane			
$(R+M)/2$ 91.0 Oxygen Content, wt% $^{1/4'}$ D 4815 0.05 RVP, psi $^{4'}$ D 5191 8.00 RVP, psi D 5191 9.00 Distillation, $^{\circ}F$ D86 70 E200, vol % 30 70 E300, vol % 70 100 50% 220 30 90% 330 220 90% 330 30 End Point 430 30 Benzene, vol% D 3606 4.9 Aromatics, vol% D 5769, D5580 30.0 Olefins, vol% D 1319, or correlated D6550 10.0 Corrosion (Cu)3 hrs @ 122°F(50°C) D 7667,7671 1 Mercaptan sulfur, wt.% $^{2'}$ D 3227 0.002 Existent Gum, mg/100 ml D 381 4 Oxidation stability, minutes D 525 240 Phosphorous, gms/gal D 3215 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze $^{3'}$ D 4176 2 Cokard Fredictive Mod	RON	D 2699	Report	
Oxygen Content, wt% $^{1/4'}$ D 4815 0.05 RVP, psi $^{4'}$ D 5191 8.00 RVP, psi $^{4'}$ D 5191 9.00 Distillation, $^{\circ}F$ D86 30 70 E200, vol % 30 70 100 50% 220 300 600 220 90% 220 330 200 End Point 430 330 430 Benzene, vol% D 3606 4.9 430 Aromatics, vol% D 5769, D5580 30.0 10.0 Corrosion (Cu)3 hrs @ 122°F(50°C) D 130, or correlated D6550 10.0 Corrosion (Ag) 3 hrs @122°F(50°C) D 7667,7671 1 Mercaptan sulfur, wt.% $^{2'}$ D 3227 0.002 Existent Gum, mg/100 ml D 381 4 Oxidation stability, minutes D 525 240 Phosphorous, gms/gal D 3231 0.003 Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze $^{3'}$ D 4176 2	MON	D 2700	Report	
RVP, psi D 5191 8.00 RVP, psi D 5191 9.00 Distillation, °F D86 30 70 E200, vol % 30 70 100 50% 220 90% 330 End Point 430 Benzene, vol% D 5769, D5580 30.0 Olefins, vol% D 1319, or correlated D6550 10.0 Corrosion (Cu)3 hrs @ 122°F(50°C) D 7667,7671 1 Mercaptan sulfur, wt.% ^{2/} D 3227 0.002 Existent Gum, mg/100 ml D 3227 0.002 Existent Gum, mg/100 ml D 3231 0.003 Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze ^{3/} D 4176 2 CARB Predictive Model Pass Color	(R+M)/2		91.0	
RVP, psi D 5191 9.00 Distillation, °F D86 30 70 E200, vol % 30 70 100 50% 220 90% 330 Ed Point 430 30 70 Benzene, vol% D 3606 4.9 430 Aromatics, vol% D 5769, D5580 30.0 00 Olefins, vol% D 1319, or correlated D6550 10.0 10 Corrosion (Cu)3 hrs @ 122°F(50°C) D 7667,7671 1 1 Mercaptan sulfur, wt.% $^{2'}$ D 3227 0.002 240 Phosphorous, gms/gal D 3231 0.003 240 Phosphorous, gms/gal D 5059 0.01 30 Sulfur, ppm D 5453, D2622 80 80 NACE TM0172, D7548 B+ 2 Haze $^{3'}$ D 4176 2 2 Color Undyed 1 9	Oxygen Content, wt% ^{1/4/}	D 4815		0.05
Distillation, °F D86 E200, vol % 30 70 E300, vol % 70 100 50% 220 90% 330 End Point 430 Benzene, vol % D 3606 4.9 Aromatics, vol % D 5769, D5580 30.0 Olefins, vol % D 1319, or correlated D6550 10.0 Corrosion (Cu) 3 hrs @ 122°F(50°C) D 130 1 Corrosion (Ag) 3 hrs @122°F(50°C) D 7667,7671 1 Mercaptan sulfur, wt, % ^{2/} D 3227 0.002 Existent Gum, mg/100 ml D 381 4 Oxidation stability, minutes D 525 240 Phosphorous, gms/gal D 3231 0.003 Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze ^{3/} D 4176 2 Color Undyed 1	RVP, psi ^{4/}	D 5191		8.00
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Distillation, °F	D86		
50% 220 90% 330 End Point 430 Benzene, vol% D 3606 4.9 Aromatics, vol% D 5769, D5580 30.0 Olefins, vol% D 1319, or correlated D6550 10.0 Corrosion (Cu)3 hrs @ 122°F(50°C) D 130 1 Corrosion (Ag) 3 hrs @ 122°F(50°C) D 7667,7671 1 Mercaptan sulfur, wt.% ^{2/} D 3227 0.002 Existent Gum, mg/100 ml D 381 4 Oxidation stability, minutes D 525 240 Phosphorous, gms/gal D 30231 0.003 Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze ^{3/} D 4176 2 CARB Predictive Model Fass Color Undyed	E200, vol %		30	70
$\begin{array}{cccccccc} 90\% & & & & & & & & & & & & & & & & & & &$	E300, vol %		70	100
End Point 430 Benzene, vol% D 3606 4.9 Aromatics, vol% D 5769, D5580 30.0 Olefins, vol% D 1319, or correlated D6550 10.0 Corrosion (Cu)3 hrs @ 122°F(50°C) D 130 1 Corrosion (Ag) 3 hrs @ 122°F(50°C) D 7667,7671 1 Mercaptan sulfur, wt.% ^{2/} D 3227 0.002 Existent Gum, mg/100 ml D 381 4 Oxidation stability, minutes D 525 240 Phosphorous, gms/gal D 3231 0.003 Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze ^{3/} D 4176 2 CARB Predictive Model Pass Color Undyed	50%			220
Benzene, vol% D 3606 4.9 Aromatics, vol% D 5769, D5580 30.0 Olefins, vol% D 1319, or correlated D6550 10.0 Corrosion (Cu)3 hrs @ 122°F(50°C) D 130 1 Corrosion (Ag) 3 hrs @ 122°F(50°C) D 7667,7671 1 Mercaptan sulfur, wt.% $2^{1/2}$ D 3227 0.002 Existent Gum, mg/100 ml D 381 4 Oxidation stability, minutes D 525 240 Phosphorous, gms/gal D 3231 0.003 Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze $3^{1/2}$ D 4176 2 CARB Predictive Model Pass Color Undyed	90%			330
Aromatics, vol%D 5769, D5580 30.0 Olefins, vol%D 1319, or correlated D6550 10.0 Corrosion (Cu)3 hrs @ 122°F(50°C)D 1301Corrosion (Ag) 3 hrs @ 122°F (50°C)D 7667,76711Mercaptan sulfur, wt.% $2^{1/}$ D 3227 0.002 Existent Gum, mg/100 mlD 3814Oxidation stability, minutesD 525240Phosphorous, gms/galD 3231 0.003 Lead, gms/galD 5059 0.01 Sulfur, ppmD 5453, D262280NACETM0172, D7548B+Haze $3^{1/}$ D 41762CARB Predictive ModelFass Undyed	End Point			430
Olefins, vol%D 1319, or correlated D655010.0Corrosion (Cu)3 hrs @ 122°F(50°C)D 1301Corrosion (Ag) 3 hrs @ 122°F (50°C)D 7667,76711Mercaptan sulfur, wt.% $2^{1/}$ D 32270.002Existent Gum, mg/100 mlD 3814Oxidation stability, minutesD 525240Phosphorous, gms/galD 32310.003Lead, gms/galD 50590.01Sulfur, ppmD 5453, D262280NACETM0172, D7548B+Haze $3^{1/}$ D 41762CARB Predictive ModelPassColorUndyed	Benzene, vol%	D 3606		4.9
Corrosion (Cu)3 hrs @ 122°F(50°C)D 1301Corrosion (Ag) 3 hrs @122°F (50°C)D 7667,76711Mercaptan sulfur, wt.% $2'$ D 32270.002Existent Gum, mg/100 mlD 3814Oxidation stability, minutesD 525240Phosphorous, gms/galD 32310.003Lead, gms/galD 50590.01Sulfur, ppmD 5453, D262280NACETM0172, D7548B+Haze $3'$ D 41762ColorYassUndyed	Aromatics, vol%	D 5769, D5580		30.0
Corrosion (Ag) 3 hrs @122°F (50°C) D 7667,7671 1 Mercaptan sulfur, wt.% $2^{1/}$ D 3227 0.002 Existent Gum, mg/100 ml D 381 4 Oxidation stability, minutes D 525 240 Phosphorous, gms/gal D 3231 0.003 Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze $3^{1/}$ D 4176 2 CARB Predictive Model Pass Color Undyed	Olefins, vol%	D 1319, or correlated D6550		10.0
Mercaptan sulfur, wt.% 2^{2} D 3227 0.002 Existent Gum, mg/100 ml D 381 4 Oxidation stability, minutes D 525 240 Phosphorous, gms/gal D 3231 0.003 Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze 3^{7} D 4176 2 CARB Predictive Model Pass Color Undyed	Corrosion (Cu)3 hrs @ 122°F(50°C)	D 130		1
Existent Gum, mg/100 mlD 3814Oxidation stability, minutesD 525240Phosphorous, gms/galD 3231 0.003 Lead, gms/galD 5059 0.01 Sulfur, ppmD 5453, D2622 80 NACETM0172, D7548B+Haze $^{3/}$ D 41762CARB Predictive ModelPass Undyed	Corrosion (Ag) 3 hrs @122°F (50°C)	D 7667,7671		1
Oxidation stability, minutesD 525240Phosphorous, gms/galD 3231 0.003 Lead, gms/galD 5059 0.01 Sulfur, ppmD 5453, D2622 80 NACETM0172, D7548B+Haze $^{3/}$ D 41762CARB Predictive ModelPassColorUndyed	Mercaptan sulfur, wt.% ^{2/}	D 3227		0.002
Phosphorous, gms/gal D 3231 0.003 Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze $^{3/}$ D 4176 2 CARB Predictive Model Pass Color Undyed	Existent Gum, mg/100 ml	D 381		4
Lead, gms/gal D 5059 0.01 Sulfur, ppm D 5453, D2622 80 NACE TM0172, D7548 B+ Haze $^{3/}$ D 4176 2 CARB Predictive Model Pass Color Undyed	Oxidation stability, minutes	D 525	240	
Sulfur, ppmD 5453, D262280NACETM0172, D7548B+Haze $^{3/}$ D 41762CARB Predictive ModelPassColorUndyed	Phosphorous, gms/gal	D 3231		0.003
NACETM0172, D7548B+Haze 3/D 41762CARB Predictive ModelPassColorUndyed	Lead, gms/gal	D 5059		0.01
Haze 3/D 41762CARB Predictive ModelPassColorUndyed	Sulfur, ppm	D 5453, D2622		80
CARB Predictive ModelPassColorUndyed		TM0172, D7548	B+	
Color Undyed	Haze ^{3/}	D 4176		2
	CARB Predictive Model		Pass	
Odor Olfactory Non-Offensive	Color		Undyed	
	Odor	Olfactory	Non-Offensive	



AZ6 Grade Arizona Winter Cleaner Burning Gasoline (AZRBOB) (continued)

Foot Notes:

- 1/ Total oxygen levels shall not exceed de minimums levels. The use of non-hydrocarbon blending components such as MTBE is prohibited.
- 2/ Mercaptan Sulfur determination is waived if the result of the Doctor Test ASTM D4952 is negative.
- 3/ Product must be tested at 55°F or tank temperature whichever is lower.
- 4/ Property reported on the E0 not blended fuel.

Notes:

- Product must be certified according to current Arizona AZRBOB regulations from a state of Arizona registered supplier.
- All properties other than those noted will be reported on the ethanol 10% hand blend.
- All gasoline must meet latest revision of ASTM D4814.
- Corrosion inhibitors, gum inhibitors and metal deactivators must be approved by Magellan Pipeline
- No additives or corrosion inhibitors containing phosphorus may be used in this gasoline.
- The shipment of fuels containing Port Fuel Injector (PFI) and intake valve detergent additives is prohibited. This is a base gasoline, not for sale to the ultimate consumer
- Any gasoline exhibiting an offensive and/or containing more than 0.50wt % dicyclopentadiene will not be accepted for shipment.
- AZRBOB does not comply with the standards for Arizona CBG without the addition of oxygenate.
- This AZRBOB is intended for blending with 10% volume ethanol and may not be combined with AZRBOB's requiring oxygenate blending with any other type or amount of oxygenate.



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AZ6 Grade Arizona Winter Cleaner Burning Gasoline (AZRBOB) (continued)

Non-additized detergent gasoline, not for sale to the ultimate consumer. AZRBOB does not comply with the standards for Arizona CBG without the addition of fuel ethanol. To be blended with 10 vol % ethanol. This AZRBOB may not be combined with any other AZRBOB that does not have the same requirements for fuel ethanol blended. Base gasoline - must be blended to a minimum 91 road octane (AKI) before sale to the ultimate consumer. Magellan makes no representation as to the ethanol blend state fuel volatility compliance, may require additional downstream blending.