

# 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 <sup>4/</sup>	D 287	Report	
MON     D 2700     Report $(R+M)/2$ 91.0       Oxygen Content, wt% <sup>1/4/</sup> D 4815     0.05       RVP, psi <sup>4/</sup> D 5191     8.00       RVP, psi <sup>4/</sup> 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.% <sup>2</sup> 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.% <sup>2/</sup> 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 <sup>3/</sup> 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% <sup>1/4/</sup>	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, % <sup>2/</sup> 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 <sup>3/</sup> D 4176   2     Color   Undyed   1	RVP, psi <sup>4/</sup>	D 5191		8.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	RVP, psi	D 5191		9.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	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.% <sup>2/</sup> 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 <sup>3/</sup> 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.% <sup>2/</sup> 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 <sup>3/</sup> 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.% <sup>2/</sup>	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 <sup>3/</sup>	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.