

BUCKEYE PIPE LINE COMPANY, L.P.
BUCKEYE PIPE LINE TRANSPORTATION LLC
LAUREL PIPE LINE COMPANY, L.P.
NORCO PIPE LINE COMPANY, LLC
WOOD RIVER PIPE LINES LLC

SEGREGATED

PRODUCT GRADE SPECIFICATIONS
FOR
REFORMULATED GASOLINE

(PLEASE NOTE: Buckeye's ability to handle segregated grades may be limited by facilities.)

6.3 SEGREGATED PRODUCT GRADE SPECIFICATIONS

This section contains specifications for select segregated products which are handled regularly on the Jet Lines pipeline system. A "segregated batch" is defined as a batch of petroleum product which may not be commingled with other batches of petroleum product.

(PLEASE NOTE: Buckeye's ability to handle segregated grades may be limited by facilities.)

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BUCKEYE PIPE LINE COMPANY, L.P.
(CONNECTICUT, MASSACHUSETTS AND LONG ISLAND SYSTEM ONLY)
SPECIFICATIONS FOR SEGREGATED VOC CONTROLLED REGION 2
REFORMULATED REGULAR GASOLINE BLENDSTOCK (RBOB) FOR BLENDING
WITH 10% DENATURED FUEL ETHANOL AS DEFINED IN ASTM D4806

GRADE 432

(Page 1 of 2)

<u>PRODUCT PROPERTY</u>	<u>ASTM TEST METHODS</u>	<u>TEST RESULTS</u>		<u>NOTE</u>
		<u>MINIMUM</u>	<u>MAXIMUM</u>	
Color			Undyed	
Gravity, API @ 60°F	D287, D1298, D4052	Report		
Corrosion, 3 hrs. @ 122°F	D130		1	1
Octane Rating				
Research Number	D2699, D2885	Report		
Motor Number	D2700, D2885	80.0		
Index, (R+M)/2		83.7		
Index, (R+M)/2 when additized with 10% Denatured Fuel Ethanol		87.0		
Oxygen, wt. %	D5599, GC-OFID	Report		2,3, 9
RVP, psi	D5191		Report	3
Benzene, vol. %	D3606		1.30	
Doctor Test	D4952		Negative	4
OR				
Mercaptan Sulfur, wt. %	D3227		0.002	
Lead Content, gms/gal	D3237 or equiv.		0.01	
Phosphorous, gms/gal	D3231		0.004	
Gum, mg/100ml (after washing)	D381		4	
Oxidation Stability, minutes	D525	240		
Aromatics, vol. %	GCMS, D5769		50.0	3
Emissions Performance Reductions				
VOC Region 2, %	EPA	25.4		
Olefins, vol. %	D1319		25.0	
Sulfur, wt. %	D2622, D5453		.0080	
Odor		Nonoffensive		5
Port Fuel Injector and Intake Valve Detergent Additives				6
Corrosion Inhibitors, Gum Inhibitors and Metal Deactivators - Refer to Table 1				
Volatility and Distillation - Refer to Table 2				
E200, vol. %	D86	30.0	70.0	
E300, vol. %	D86	70.0	100.0	
MMT				7
Driveability Index	D4814			8
Refer to Table 2				
Silver Strip Corrosion	D4814		1	
NACE	TM0172-2001	B+		10

Note: This RBOB may not be combined with any other RBOB except RBOB having the same requirement for oxygenate type and amount.

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

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WITH 10% DENATURED FUEL ETHANOL AS DEFINED IN ASTM D4806
GRADE 432**

(Page 2 of 2)

NOTES:

1. No additives or corrosion inhibitors containing phosphorus may be used in this gasoline.
2. This product may not contain oxygenates such as ethers or alcohols. The use of non-hydrocarbon blending components is prohibited. The de minimis limit of MTBE, ETBE and TAME allowed is 0.3 vol.% maximum for each compound at origin.
3. Refer to test methods published in 40 CFR Chapter 1, Part 80.46.
4. Mercaptan Sulfur waived if fuel is negative by Doctor test.
5. Any gasoline exhibiting an offensive odor and/ or poses a personal health hazard will not be accepted for shipment. Any gasoline containing more than 0.50 wt. % of dicyclopentadiene will not be accepted for shipment. The referee method will be based on a gas chromatograph test.
6. The use of Port Fuel Injector (PFI) and intake valve detergent additives is prohibited.
7. The use of MMT octane enhancing additive is prohibited.
8. The Driveability Index (DI) specification limits are applicable at the refinery or import facility as defined by 40 CFR Part 80.2 and will apply after blending with 10% Denatured Fuel Ethanol.
9. Oxygen content must meet a minimum of 1.5 wt. % and a maximum of 4.0 wt. % after blending with Denatured Fuel Ethanol.
10. All products (except aviation grades 152, 153, 155 and 182) must meet a minimum level of corrosion protection, indicated by a minimum rating of B+ as determined by NACE Standard Test Method TM0172-2001 (Determining Corrosive Properties of Cargoes in Petroleum Product Pipelines)..

BUCKEYE PIPE LINE COMPANY, L.P.
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REFORMULATED PREMIUM GASOLINE BLENDSTOCK (RBOB) FOR BLENDING WITH
10% DENATURED FUEL ETHANOL (92% PURITY) AS DEFINED IN ASTM D4806
GRADE 435

(Page 1 of 2)

<u>PRODUCT PROPERTY</u>	<u>ASTM TEST METHODS</u>	<u>TEST RESULTS</u>		<u>NOTE</u>
		<u>MINIMUM</u>	<u>MAXIMUM</u>	
Color			Undyed	
Gravity, API @ 60°F	D287, D1298, D4052	Report		
Corrosion, 3 hrs. @ 122°F	D130		1	1
Octane Rating				
Research Number	D2699, D2885	Report		
Motor Number	D2700, D2885	Report		
Index, (R+M)/2		91.3		
Index, (R+M)/2 when additized with 10% Denatured Fuel Ethanol		93.0		
Oxygen, wt. %	D5599, GC-OFID	Report		2,3, 9
RVP, psi	D5191		Report	3
Benzene, vol. %	D3606		1.30	
Doctor Test	D4952		Negative	4
OR				
Mercaptan Sulfur, wt. %	D3227		0.002	
Lead Content, gms/gal	D3237 or equiv.		0.01	
Phosphorous, gms/gal	D3231		0.004	
Gum, mg/100ml (after washing)	D381		4	
Oxidation Stability, minutes	D525	240		
Aromatics, vol. %	GCMS, D5769		50.0	3
Emissions Performance Reductions				
VOC Region 2, %	EPA	25.4		
Olefins, vol. %	D1319		25.0	
Sulfur, wt. %	D2622, D5453		.0080	10
Odor		Nonoffensive		5
Port Fuel Injector and Intake Valve Detergent Additives				6
Corrosion Inhibitors, Gum Inhibitors and Metal Deactivators - Refer to Table 1				
Volatility and Distillation - Refer to Table 2				
E200, vol. %	D86	30.0	70.0	
E300, vol. %	D86	70.0	100.0	
MMT				7
Driveability Index	D4814			8
Refer to Table 2				
Silver Strip Corrosion	D4814		1	
NACE	TM0172-2001	B+		10

Note: This RBOB may not be combined with any other RBOB except RBOB having the same requirement for oxygenate type and amount.

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

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10% DENATURED FUEL ETHANOL (92% PURITY) AS DEFINED IN ASTM D4806
GRADE 435**

(Page 2 of 2)

NOTES:

1. No additives or corrosion inhibitors containing phosphorus may be used in this gasoline.
2. This product may not contain oxygenates such as ethers or alcohols. The use of non-hydrocarbon blending components is prohibited. The de minimis limit of MTBE, ETBE and TAME allowed is 0.3 vol.% maximum for each compound at origin.
3. Refer to test methods published in 40 CFR Chapter 1, Part 80.46.
4. Mercaptan Sulfur waived if fuel is negative by Doctor test.
5. Any gasoline exhibiting an offensive odor and/ or poses a personal health hazard will not be accepted for shipment. Any gasoline containing more than 0.50 wt. % of dicyclopentadiene will not be accepted for shipment. The referee method will be based on a gas chromatograph test.
6. The use of Port Fuel Injector (PFI) and intake valve detergent additives is prohibited.
7. The use of MMT octane enhancing additive is prohibited.
8. The Driveability Index (DI) specification limits are applicable at the refinery or import facility as defined by 40 CFR Part 80.2 and will apply after blending with 10% Denatured Fuel Ethanol.
9. Oxygen content must meet a minimum of 1.5 wt. % and a maximum of 4.0 wt. % after blending with Denatured Fuel Ethanol.
10. All products (except aviation grades 152, 153, 155 and 182) must meet a minimum level of corrosion protection, indicated by a minimum rating of B+ as determined by NACE Standard Test Method TM0172-2001 (Determining Corrosive Properties of Cargoes in Petroleum Product Pipelines)..

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SPECIFICATIONS FOR SEGREGATED NON-VOC CONTROLLED REGION 2
REFORMULATED REGULAR GASOLINE BLENDSTOCK (RBOB) FOR BLENDING WITH
10% DENATURED FUEL ETHANOL (92% PURITY) AS DEFINED IN ASTM D4806
GRADE 442

(Page 1 of 2)

<u>PRODUCT PROPERTY</u>	<u>ASTM TEST METHODS</u>	<u>TEST RESULTS</u>		<u>NOTE</u>
		<u>MINIMUM</u>	<u>MAXIMUM</u>	
Color			Undyed	
Gravity, API @ 60°F	D287, D1298, D4052	Report		
Corrosion, 3 hrs. @ 122°F	D130		1	1
Octane Rating				
Research Number	D2699, D2885	Report		
Motor Number	D2700, D2885	80.0		
Index, (R+M)/2		83.7		
Index, (R+M)/2 when additized with 10% Denatured Fuel Ethanol		87.0		
Oxygen, wt. %	D5599, GC-OFID	Report		2,3, 9
Benzene, vol. %	D3606		1.30	
Doctor Test	D4952		Negative	4
OR				
Mercaptan Sulfur, wt. %	D3227		0.002	
Lead Content, gms/gal	D3237 or equiv.		0.01	
Phosphorous, gms/gal	D3231		0.004	
Gum, mg/100ml (after washing)	D381		4	
Oxidation Stability, minutes	D525	240		
Aromatics, vol. %	GCMS, D5769		50.0	3
Olefins, vol. %	D1319		25.0	
Sulfur, wt. %	D2622, D5453		.0080	10
Odor		Nonoffensive		5
Port Fuel Injector and Intake Valve Detergent Additives				6
Corrosion Inhibitors, Gum Inhibitors and Metal Deactivators - Refer to Table 1				
Volatility and Distillation - Refer to Table 2				
E200, vol. %	D86	30.0	70.0	
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MMT				7
Driveability Index (DI)	D4814			8
Refer to Table 2				
Silver Strip Corrosion	D4814		1	
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Note: This RBOB may not be combined with any other RBOB except RBOB having the same requirement for oxygenate type and amount.

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GRADE 445

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