SECTION 3 – FUNGIBLE PRODUCT SPECIFICATIONS

The following are instructions governing the quality of products offered for shipment as Fungible Products.

3.0 INTRODUCTION

The American Society for Test Materials (ASTM) latest test methods will apply for all testing of products unless otherwise indicated in the specifications or required by federal, state or local regulations.

3.1 GENERAL

3.1.1 The finished product shall be free of undissolved water, sediment or other foreign materials in suspension and shall be clear and bright in origin shipping tanks. Top, middle, and bottom samples may not vary more than 1.0° API from the gravity of the composite. The product temperature of shipping tanks must not exceed 100° F.

3.1.2 Two hours prior to lifting, Shipper will be required to furnish to Explorer a Certificate of Analysis warranting to Explorer that all the product scheduled for transportation as a Fungible product meets the required specifications established by Explorer. Explorer may sample and test shipments of Fungible products prior to acceptance, and in the event of variance between Shipper's certificate and Explorer's test, the latter shall prevail.

Acceptance of Fungible products into Explorer prior to receipt of the Certificate of Analysis or testing of products by Explorer during receipt of shipment does not constitute a waiver of product specification requirements, nor relieve the shipper of the responsibility for furnishing a Certificate of Analysis to Explorer.

3.1.3 All product shipped must be an EPA certified fuel unless it is specifically designated as a Blend Stock, Specialty Grade or Transmix.

3.1.4 Explorer may sample and have tested each batch of fungible products for specifications tests. The expense of sampling and testing any off-specification product will be for the Shippers account.

3.1.5 Any tests performed by Explorer are for Explorer's information and shall in no way relieve Shipper of the necessity for compliance with specifications.

3.1.6 If any of the test data obtained in the examination of scheduled shipments are questionable, a recheck will be made.

3.1.7 Explorer reserves the right to reject any products into their fungible stream when a sample obtained from any tank level or line sample at origins is found to deviate from the Shipper's Certificate of Analysis. Products not meeting fungible specifications may be moved as segregated batches and the Shipper will be so advised.

3.1.8 Explorer reserves the right to sample and check the water level below any product in tankage, including tank lines, scheduled for shipment. Water in tank lines is to be drained prior to pumping.

3.1.9 Explorer reserves the right to reject gasolines, jet fuels, fuel oils and any other products scheduled for shipment that contain water or other impurities in accordance with Item 10 of current FERC tariff. This includes undissolved water, haze, or cloudy conditions present in samples from origin tankage or at points of custody transfer at origin locations. Fuel oils will be considered acceptable if they pass a maximum #2 haze (ASTM D4176) rating in origin tankage or at points of custody transfer at origin locations. Distillates may not exceed 250 ppm of water as measured by D-6304. Gasoline may not exceed 250 ppm of water as measured by D-6304. Jet Fuel may not exceed 150 ppm of water as measured by D-6304. Explorer may require the shipper to remove the water received, and/or invoice the shipper for water disposal and associated costs.

3.1.10 Heavy metals are not allowed to be present.

3.1.11 Shipper will perform quarterly oversight testing to ensure that levels of phosphorous do not exceed allowable limits. Phosphorous, grams /gal ASTM D3231 max. 0.004. (1ppm)

3.1.12 Gasoline grades may not contain oxygenates, such as ethers and alcohols. The use of any non-hydrocarbon blending component is prohibited. Origin maximum for MTBE is .25 vol % before blending.

3.1.13 Biodiesel is not allowed to be present at origin.

3.1.14 Upon reasonable request by Shipper in writing, delivery test results may be obtained by Explorer, and following receipt of such test results Explorer will evaluate following ASTM D3244 to determine conformance with Explorer specifications. Such determination will be at the discretion of Explorer.

3.2 FUNGIBLE SPECIFICATIONS

CODE 1B

DILUENT

This product does not meet the requirements for gasoline.

PRODUCT PROPERTY	ASTM TEST METHOD	SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
Gravity, API @ 60°F	D287, D1298, D4052	51	90	(1) (4)
DensityKg/m3	D4052	640	755	(1) (4)
Color			UNDYED	(1) (4)
BS&W Vol%	D95		0.5	(1) (4)
Total Suspended Solids mg/l	D4807		10	(1) (4)
Corrosion (Cu) 3 Hrs. @ 122°F	D130	1a	1	(1) (4)
Corrosion (Ag) 3 Hrs. @ 122°F	D4814	0	1	(1) (4)
H2S Liquid wt.ppm	D5623		10	(1) (4)
Doctor or:	D4952	Negative		(1) (4)
Mercaptan Sulfur wt.ppm	D5623		175	(1) (2) (4)
C1, C2, C3				(1) (4)
Sulfur, (wt.ppm)	D2622, D5453, D7039		350	(1) (4)
Gum, mg/100ml after washing	D381		4	(1) (4)
Gum, mg/100ml unwashed	D381	Report		(1) (4)
Benzene, vol. %	D3606, D4053		1.6	(1) (4)
Oxidation Stability - Minutes	D525	240		(1) (4)
Appearance @ 70°F				(1) (3) (4)
Odor Nonoffensive				(1) (4) (5)
Reid Vapor Pressure psi	D5191		14.94	(1) (4)
Saybolt Color	D156	+20		(1) (4)
Olefins Vol %	D5443		.51	(1) (4)
Oxygenates wt.ppm	D6729 D4815		100	(1) (4)
Paraffins Vol %	D5443		90	(1) (4)
Naphthenes Vol %	D5443	Report		(1) (4)
Aromatics Vol %	D5443	2		(1) (4)
Organic Chlorides wt.ppm	D4929		<1.0	(1) (4)
Isobutane Vol %	D6730		0.70	(1) (4)
n-Butane Vol %	D6730		03.0	(1) (4)
Extract water pH	D2110	Report		(1) (4)
RON:	D2699	Report		(1) (4)
MON:	D2700	Report		(1) (4)
(R+M)/2 (AKI):	Octane	60		(1) (4)
[N] NACE	**[N]** TMO172 or D7548	**[N]** B+		**[N]** (1) (4)

ADDITIONAL SPECIFICATIONS:

(1) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version or the version specified by federal, state, or local government.

(2) Mercaptan Sulfur waived if fuel is negative by doctor test.

(3) This product shall be free from undissolved water, sediment or other foreign materials in suspension. See paragraph 3.1.9.

(4) This product must be oxygenate free. Non-hydrocarbon blending components are not allowed.

(5) Any Gasoline exhibiting an offensive odor and/or poses a personal health hazard and/or contains more than 0.30 wt. % dicyclopentadiene will not be accepted for shipment.

NOTES:

- 1B shipments may not contain any additives.

PREMIUM CONVENTIONAL REGULAR GASOLINE BLENDSTOCK (PCBOB) INTENDED FOR OXYGENTATE BLENDING WITH BETWEEN 9 & 10% ETHANOL (92% PURITY) AS DEFINED IN ASTM D4806
SUMMER CODES: 30, 31, 32[N][7]
WINTER CODES: 33, 34, 35, 36[8]

The following parameters apply before blending with denatured fuel ethanol unless noted:

PRODUCT PROPERTY	ASTM TEST METHOD	SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
Gravity, API @ 60°F	D287, D1298, D4052		Report	(1)
Color			Undyed	(1)
Corrosion (Cu) 3 Hrs. @ 122°F	D130		1	(1)
Corrosion (Ag) 3 Hrs. @ 122°F	D7671		1	(1)
Benzene, vol. %	D3606		3.8	(1)
Gum, mg/100ml after washing	D381		4	(1)
Gum, mg/100ml unwashed	D381		Report	(1)
[C] ~~Distillation~~	**[C]** ~~D86~~		**[C]** ~~Report~~	**[C]** ~~(1)~~
Doctor	D4952		Negative	(1) (2)
or: Mercaptan Sulfur wt. %	D3227		0.002	(1)
Sulfur wt. (ppm wt.)	D2622, D5453, D7039		80	(1)
Oxidation Stability - Minutes	D525	240		(1)
Appearance @ 70°F				(1) (3)
Oxygen Content, wt. %	D4815, D5599		0.05	(1) (4)
Odor	Nonoffensive			(1) (5)

The following parameters apply after blending with denatured fuel ethanol:

PRODUCT PROPERTY	ASTM TEST METHOD	SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
Sulfur wt. (ppm wt.)	D2622, D5453, D7039		80	(1)
RON:	D2699	Report		(1)
MON:	D2700	Report		(1)
(R+M)/2 (AKI):	Octane	93.0		(1)

	Page # or Doc Name
Volatility - Refer to Section 3	3-13 (6)
Distillation - Refer to Section 3	3-13 (6)
Drivability Index (Origin) – See "Documents & Forms" on Carrier's website: https://www.expl.com/Pipeline/Shipping	*RVP – Drive Index* (6)
Reid Vapor Pressure – See "Documents & Forms" on Carrier's website: https://www.expl.com/Pipeline/Shipping	*RVP – Vapor Pressure Schedule* (6)
Additives: Gum Inhibitors, Metal Deactivators	3-15

ADDITIONAL SPECIFICATIONS:

(1) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version or the version specified by federal, state, or local government.

(2) Mercaptan Sulfur waived if fuel is negative by doctor test.

(3) This product shall be free from undissolved water, sediment or other foreign material in suspension. See paragraph 3.1.9.

(4) This product must be oxygenate free. Non-hydrocarbon blending components are not allowed.

(5) Any Gasoline exhibiting an offensive odor and/or poses a personal health hazard and/or contains more than 0.30 wt. % dicyclopentadiene will not be accepted for shipment.

(6) For product blended to meet state or EPA imposed summer RVP requirements, tests must be performed in accordance with the procedures described in 40 CFR, Part 80. Product must meet state, local or EPA specifications at destination.

Vapor pressure requirements at destination are based on ASTM Standard D4814 EPA and/or State standards. Due to in-transit times for destinations, Explorer will publish Reid Vapor Pressure schedules by cycle number for origin locations. The Reid Vapor Pressure Schedule can be found at Carrier's website www.expl.com/pipeline/shipping.

The Reid Vapor Pressures published by cycle number are estimations based on Explorer in-transit time and federal and state volatility laws applicable within the designated distribution areas.

Shipper terminals should monitor inventories to ensure that motor gasolines comply with federal and state volatility requirements

(7) Summer CBOB - Any product with an RVP of 7.8 psi or 9.0 psi CBOB does not meet the requirements for summer reformulated or conventional gasoline.

(8) Winter CBOB - This product does not meet the requirements for summer reformulated or conventional gasoline

NOTES:

- In accordance with 40 CFR 1090.1010(a), gasoline will be accepted when designated as E0 or E10 for oxygenate with ethanol as described by 40 CFR 1090.1110(c)(2). In accordance with 40 CFR 1090.1110(a), gasoline will be designated upon receipt as Winter CBOB or Summer CBOB (7.8 psi, 9.0 psi, or SIP-controlled) based on the RVP of the base gasoline.

- All gasoline distributed will be designated as E10 described by 40 CFR 1090.1110(c)(2).

- This product is non-additized gasoline.

PREMIUM REFORMULATED GASOLINE BLENDSTOCK (PRBOB)
INTENDED FOR OXYGENTATE BLENDING
WITH BETWEEN 9 & 10% ETHANOL
(92% PURITY) AS DEFINED IN ASTM D4806
SUMMER CODES: 3A, 3C[N][9] [C]~~3D*~~
WINTER CODES: 3B, [N]3D, 3S, 3T, 3U, 3X[10]

The following parameters apply before blending with denatured fuel ethanol:

PRODUCT PROPERTY	ASTM TEST METHOD	SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
Gravity, API @ 60°F	D287, D1298, D4052		Report	(1)
Color			Undyed	(1)
Corrosion (Cu) 3 Hrs. @ 122°F	D130		1	(1)
Corrosion (Ag) 3 Hrs. @ 122°F	D7671		1	(1)
Gum, mg/100ml after washing	D381		4	(1)
Gum, mg/100ml unwashed	D381		Report	(1)
Doctor	D4952		Negative	(1) (2)
or: Mercaptan Sulfur wt. %	D3227		0.002	(1)
Sulfur wt. (ppm wt.)	D2622, D5453, D7039		80	(1)
Oxidation Stability - Minutes	D525	240		(1)
Appearance @ 70°F				(1) (3)
Oxygen Content, wt. %	D4815, D5599		0.05	(1) (4)
Odor	Nonoffensive			(1) (5)

The following parameters apply after blending with denatured fuel ethanol:

PRODUCT PROPERTY	ASTM TEST METHOD	SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
Sulfur wt. (ppm wt.)	D2622, D5453, D7039		80	(1)
Benzene, vol. %	D3606		3.8	(1)
RON:	D2699	Report		(1)
MON:	D2700	Report		(1)
(R+M)/2 (AKI):	Octane	93.0		(1) (8)

	Page # or Doc Name
Volatility - Refer to Section 3	3-13
Distillation - Refer to Section 3	3-13
Drivability Index (Origin) – See "Documents & Forms" on Carrier's website: https://www.expl.com/Pipeline/Shipping	*RVP – Drive Index*
Reid Vapor Pressure – See "Documents & Forms" on Carrier's website: https://www.expl.com/Pipeline/Shipping	*RVP – Vapor Pressure Schedule*
Additives: Gum Inhibitors, Metal Deactivators	3-15

NOTE: This PBOB may not be combined with any other PBOB except PBOB having the same requirement for oxygenate type and amount. "Base Gasoline" not for sale to the ultimate consumer.

ADDITIONAL SPECIFICATIONS:

(1) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version or the version specified by federal, state, or local government.

(2) Mercaptan Sulfur waived if fuel is negative by doctor test.

(3) This product shall be free from undissolved water, sediment or other foreign materials in suspension. See paragraph 3.1.9.

(4) This product must be oxygenate free. Non hydrocarbon blending components are not allowed

(5) Any Gasoline exhibiting an offensive odor and/or poses a personal health hazard and/or contains more than 0.30 wt. % dicyclopentadiene will not be accepted for shipment

(6) Reserved.

(7) Reserved.

(8) This product must be blended with 10% by volume Denatured Fuel Grade Ethanol.

Federal RFG maximum and minimum testing requirement will apply to the final blends of this product.

This product, when blended with 10% volume percent of Denatured Fuel Grade Ethanol and must have a Benzene level of 3.8 volume % or lower.

(9) Summer RBOB - Any RBOB with an RVP of 7.4 psi with 10% ethanol does meet the requirements for summer reformulated gasoline or as permitted under EPA waivers.

(10) Winter RBOB - This product does not meet the requirements for summer reformulated or conventional gasoline

NOTES:

- In accordance with 40 CFR 1090.1010(a), gasoline will be accepted when designated as E0 or E10 for oxygenate with ethanol as described by 40 CFR 1090.1110(c)(2). In accordance with 40 CFR 1090.1010(a), gasoline will be designated upon receipt as Winter RBOB or Summer RBOB based on the RVP of the base gasoline.

- All gasoline distributed will be designated as E10 described by 40 CFR 1090.1110(c)(2).

- Product shall meet the Reformulated Gasoline (RFG) standard of 1090.220.

- This product is non-additized gasoline.

- **[C]** ~~*Product Code 3D may be used to designate shipments of Summer RBOB according to EPA waivers issued starting March 25, 2026 and while subsequent waivers are in effect.~~

CONVENTIONAL REGULAR GASOLINE BLENDSTOCK (CBOB)
INTENDED FOR OXYGENTATE BLENDING WITH BETWEEN 9 & 10% ETHANOL
(92% PURITY) AS DEFINED IN ASTM D4806
SUMMER CODES: 40, 41, 42[N][7]
WINTER CODES: 43, 44, 45, 46[8]

The following parameters apply before blending with denatured fuel ethanol unless noted:

PRODUCT PROPERTY	ASTM TEST METHOD	SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
Gravity, API @ 60°F	D287, D1298, D4052		Report	(1)
Color			Undyed	(1)
Corrosion (Cu) 3 Hrs. @ 122°F	D130		1	(1)
Corrosion (Ag) 3 Hrs. @ 122°F	D7671		1	(1)
Benzene, vol. %	D3606		3.8	(1)
Gum, mg/100ml after washing	D381		4	(1)
Gum, mg/100ml unwashed	D381		Report	(1)
Doctor	D4952		Negative	(1) (2)
or: Mercaptan Sulfur wt. %	D3227		0.002	(1)
Sulfur wt. (ppm wt.)	D2622, D5453, D7039		80	(1)
Oxidation Stability - Minutes	D525	240		(1)
Appearance @ 70°F				(1) (3)
Oxygen Content, wt. %	D4815, D5599		0.05	(1) (4)
Odor	Nonoffensive			(1) (5)

The following parameters apply after blending with denatured fuel ethanol:

PRODUCT PROPERTY	ASTM TEST METHOD	SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
Sulfur wt. (ppm wt.)	D2622, D5453, D7039		80	(1)
RON:	D2699	Report		(1)
MON:	D2700	Report		(1)
(R+M)/2 (AKI):	Octane	87.0		(1)

	Page # or Doc Name
Volatility - Refer to Section 3	3-13 (6)
Distillation - Refer to Section 3	3-13 (6)
Drivability Index (Origin) – See "Documents & Forms" on Carrier's website: https://www.expl.com/Pipeline/Shipping	*RVP – Drive Index* (6)
Reid Vapor Pressure – See "Documents & Forms" on Carrier's website: https://www.expl.com/Pipeline/Shipping	*RVP – Vapor Pressure Schedule* (6)
Additives: Gum Inhibitors, Metal Deactivators	3-15

ADDITIONAL SPECIFICATIONS:

(1) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version or the version specified by federal, state, or local government.

(2) Mercaptan Sulfur waived if fuel is negative by doctor test.

(3) This product shall be free from undissolved water, sediment or other foreign material in suspension. See paragraph 3.1.9.

(4) This product must be oxygenate free. Non hydrocarbon blending components are not allowed.

(5) Any Gasoline exhibiting an offensive odor and/or poses a personal health hazard and/or contains more than 0.30 wt. % dicyclopentadiene will not be accepted for shipment.

(6) For product blended to meet state or EPA imposed summer RVP requirements, tests must be performed in accordance with the procedures described in 40 CFR, Part 80. Product must meet state, local or EPA specifications at destination.

Vapor pressure requirements at destination are based on ASTM Standard D4814 EPA and/or State standards. Due to in-transit times for destinations, Explorer will publish Reid Vapor Pressure schedules by cycle number for origin locations. The Reid Vapor Pressure Schedule can be found at Carrier's website www.expl.com/pipeline/shipping.

The Reid Vapor Pressures published by cycle number are estimations based on Explorer in-transit time and federal and state volatility laws applicable within the designated distribution areas.

Shipper terminals should monitor inventories to ensure that motor gasolines comply with federal and state volatility requirements

(7) Summer CBOB - Any product with an RVP of 7.8 psi or 9.0 psi CBOB does not meet the requirements for summer reformulated or conventional gasoline.

(8) Winter CBOB - This product does not meet the requirements for summer reformulated or conventional gasoline

NOTES:

- In accordance with 40 CFR 1090.1010(a), gasoline will be accepted when designated as E0 or E10 for oxygenate with ethanol as described by 40 CFR 1090.1110(c)(2). In accordance with 40 CFR 1090.1110(a), gasoline will be designated upon receipt as Winter CBOB or Summer CBOB (7.8 psi, 9.0 psi, or SIP-controlled) based on the RVP of the base gasoline.

- All gasoline distributed will be designated as E10 described by 40 CFR 1090.1110(c)(2).

- This product is non-additized gasoline.

REFORMULATED REGULAR GASOLINE BLENDSTOCK (RBOB)
INTENDED FOR OXYGENTATE BLENDING WITH BETWEEN 9 & 10% ETHANOL
(92% PURITY) AS DEFINED IN ASTM D4806
SUMMER CODES: 4A, 4C [C]~~, 4D*, 4S, 4U~~[9]
WINTER CODES: 4B, [N]4D, 4S, 4T, 4U, 4X[10]

The following parameters apply before blending with denatured fuel ethanol:

PRODUCT PROPERTY	ASTM TEST METHOD	SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
Gravity, API @ 60°F	D287, D1298, D4052		Report	(1)
Color			Undyed	(1)
Corrosion (Cu) 3 Hrs. @ 122°F	D130		1	(1)
Corrosion (Ag) 3 Hrs. @ 122°F	D7671		1	(1)
Gum, mg/100ml after washing	D381		4	(1)
Gum, mg/100ml unwashed	D381		Report	(1)
Doctor	D4952		Negative	(1) (2)
or: Mercaptan Sulfur wt. %	D3227		0.002	(1)
Oxidation Stability - Minutes	D525	240		(1)
Appearance @ 70°F				(1) (3)
Oxygen Content, wt. %	D4815, D5599		0.05	(1) (4)
Odor	Nonoffensive			(1) (5)

The following parameters apply after blending with denatured fuel ethanol:

PRODUCT PROPERTY	ASTM TEST METHOD	SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
Sulfur wt. (ppm wt.)	D2622, D5453, D7039		80	(1)
Benzene, vol. %	D3606		3.8	(1)
RON:	D2699	Report		(1)
MON:	D2700	82.0		(1)
(R+M)/2 (AKI):	Octane	87.0		(1) (8)

	Page # or Doc Name
Volatility - Refer to Section 3	3-13
Distillation - Refer to Section 3	3-13
Drivability Index (Origin) – See "Documents & Forms" on Carrier's website: https://www.expl.com/Pipeline/Shipping	*RVP – Drive Index*
Reid Vapor Pressure – See "Documents & Forms" on Carrier's website: https://www.expl.com/Pipeline/Shipping	*RVP – Vapor Pressure Schedule*
Additives: Gum Inhibitors, Metal Deactivators	3-15

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.

ADDITIONAL SPECIFICATIONS:

(1) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version or the version specified by federal, state, or local government.

(2) Mercaptan Sulfur waived if fuel is negative by doctor test.

(3) This product shall be free from undissolved water, sediment or other foreign materials in suspension. See paragraph 3.1.9.

(4) This product must be oxygenate free. Non-hydrocarbon blending components are not allowed

(5) Any Gasoline exhibiting an offensive odor and/or poses a personal health hazard and/or contains more than 0.30 wt. % dicyclopentadiene will not be accepted for shipment

(6) Reserved.

(7) Reserved.

(8) This product must be blended with 10% by volume Denatured Fuel Grade Ethanol.

Federal RFG maximum and minimum testing requirement will apply to the final blends of this product.

This product, when blended with 10% volume percent of Denatured Fuel Grade Ethanol and must have a Benzene level of 3.8 volume % or lower.

(9) Summer RBOB - Any RBOB with an RVP of 7.4 psi with 10% ethanol does meet the requirements for summer reformulated gasoline or as permitted under EPA waivers..

(10) Winter RBOB - This product does not meet the requirements for summer reformulated or conventional gasoline

NOTES:

- In accordance with 40 CFR 1090.1010(a), gasoline will be accepted when designated as E0 or E10 for oxygenate with ethanol as described by 40 CFR 1090.1110(c)(2). In accordance with 40 CFR 1090.1010(a), gasoline will be designated upon receipt as Winter RBOB or Summer RBOB based on the RVP of the gasoline.

- All gasoline distributed will be designated as E10 described by 40 CFR 1090.1110(c)(2).

- Product shall meet the Reformulated Gasoline (RFG) standard of 1090.220.

- This product is non-additized gasoline.

- **[C]** ~~*Product Code 4D may be used to designate shipments of Summer RBOB according to EPA waivers issued starting March 25, 2026 and while subsequent waivers are in effect.~~

3.3 DISTILLATION AND VOLATILITY REQUIREMENTS AFTER BLENDING WITH 10% ETHANOL

	CLASS						
Distillation: ASTM D86, [N] D7345	**AA**	**A**	**A**	**B**	**C**	**D**	**E**
10% Evap. °F Max	158	158	158	149	140	131	122
50% Evap. °F Min	150	150	150	150	150	145	145
50% Evap. °F Max	250	250	250	245	240	235	230
90% Evap. °F Max	374	374	374	374	365	365	365
End Point, °F Max	430	430	430	430	430	430	430
Residue, % Max	2	2	2	2	2	2	2
*Vapor Pressure (VP) Neat **[N]** D5191, **[N]** D6378***	7.8	REPORT	9.0	10.0	11.5	13.5	15.0
*Vapor Pressure **[N]** D5191, D6378***	8.8	7.4	10.0	11.0	12.5	14.5	15.5
Drivability Index, °F Max	1250	1250	1250	1240	1230	1220	1200

****V/L @ 20, Min. Temp °F ASTM D5188**					
Blended:					
Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
129	122	116	107	102	95

* For products blended to meet EPA or state-imposed volatility requirements, Reid Vapor Pressure (RVP) tests must be performed in accordance with methods published in 40 CFR Part 80 1476-14490 Vol. 58 No. 50

** D5188 is the referee test method.

[N] *** D6378 not permitted during the summer EPA control period.

3.4 For products blended to meet EPA or state-imposed summer requirements, test must be performed for RVP in accordance with procedure described in 40 CFR, PART 80, Appendix E, Method 3.

Vapor pressure requirements at destination are based on ASTM Standard D4814 EPA and/or State standards. Due to in-transit times for destinations, Explorer will publish Reid Vapor Pressure schedules by cycle number for origin locations. The Reid Vapor Pressure Schedule can be found at Carrier's website www.expl.com/pipeline/shipping.

The Reid Vapor Pressures published by cycle number are estimations based on Explorer in-transit time and federal and state volatility laws applicable within the designated distribution areas.

Shipper terminals should monitor inventories to ensure that motor gasolines comply with federal and state volatility requirements.

3.5 ADDITIVES FOR GASOLINE

3.5.1 Gum Inhibitors and Metal Deactivators

Shipments of gasolines may, but are not required to contain the following:

- N,N'di-secondary butyl para-phenylenediamine
- N,N'disalicyldene-1,2 propanediamine
- 2,6-di-tertiary butyl 4 methyl phenol
- N,N'di(l-ethly-2-methylpentyl) para-phenylenediamine
- N,N'di-isopropyl-para-phenylenediamine
- N,N'bis-(I,4-diamthylpenyl)-p-phenylenediamine
- n-Butyl para-aminophenol
- 2,4,6-tritertiary butylphenol
- Ortho-tertiary butylphenol
- 2,4-diamethyl-6-tertiary-butylphenol
- 2,4-di-tertiary butylphenol
- N,secondary butyl,N'phenyl-para-phenylenediamine
- Butylated ethyl, methyl and dimethyl phenols
- Mixed propylated and butylated phenols
- 2,4,6 tri-isopropylphenol
- 2,6-di-tertiary butylphenol

3.5.2 Corrosion Inhibitors

All products shipped on Explorer Pipeline, with the exception of all grades of Aviation Kerosene, are required to meet a minimum level of corrosion protection. The concentration of inhibitor dosage will be controlled to meet a minimum rating of B+ (less than 5% of test surface rusted) before blending with denatured fuel ethanol (where applicable) as determined by NACE Standard TMO172 or D7548, Test Method-Antirust Properties of Petroleum Products Pipeline Cargoes.

Unleaded Gasolines shipped on Explorer Pipeline may contain only the following corrosion inhibitors:

Afton	Hi TEC	Mid	MCC
Aqua	11CH7	Mobil	C-
Corexi	526	Nalco	5403,5405,EC5624A
Ethyl	58	Spec-Aid	8Q22,8Q1018Q123ULS
Innospec	DCI-4A, DCI6A,DCI-11,DCI30	Tola	245, 249, 351, 3232, 3232D
Lubrizol	8014	Uniche	7500, 7501, 751
		UO	Unicor

3.5.3 The use of Port Fuel Injections (PFI) and intake valve detergent additives is prohibited.

3.5.4 No additives or corrosion inhibitors containing phosphorus may be used in the gasoline. Phosphorous, as measured by ASTM D3231 shall not exceed 0.004 gms/gal.

3.5.5 All Explorer Fungible Gasolines are "Bases-Gasoline and are not for sale to the ultimate consumer."

FUNGIBLE AVIATION TURBINE FUEL
JET A

		EXPLORER ORIGIN SPECIFICATIONS		
PRODUCT PROPERTY	**ASTM TEST METHOD**	**MINIMUM**	**MAXIMUM**	**ADDL SPECS**
General Properties				
Gravity, °API @ 60°F	D287, D1298, D4052	37	51	(1)
Net Heat of Combustion, BTU/Pound	D3338, D4529, D4809	18,400		(1) (2)
Corrosion, Copper Strip, 2 Hrs. @ 212°F	D130		No. 1	(1)
MSEP (WSIM) Origin	D3948, D7224	85		(1)
Destination		75		(1)
Electrical Conductivity	D2624		10	(1)
Particulate contaminant Mg/Gal	D2276, D5452		Report	(1)
Interface Rating			1b	(1)
Color, Saybolt (Origin)	D156, D6045	20		(1)
Color, Saybolt (Destination)	D156, D6045	18		(1)
Appearance				(1) (3)
Additives				(1) (4) (5)
Low Temperature Properties				
Freezing Point, °C	D2386, D5972		-40.0	(1)
Viscosity, cSt 104°F (40°C)	D445 D7042	1.0	1.9	(1) (10)
Viscosity, cSt -4°F (-20°C)	D445 D7042		8.0	(1) (10)
Volatility				
Flash Point, °F Origin	D56, D3828	108		(1) (6)
Destination		100		(1)
Distillation, Temp., C °(F)	D86			(1) (9)
10% Recovered			205 (400)	(1)
50% Recovered			Report	(1)
90% Recovered			288 (550)	(1)
Final Boiling Point, °F			300 (572)	(1)
Distillation Residue, Vol. %			1.5	(1)
Distillation Loss, Vol. %			1.5	(1)

		EXPLORER ORIGIN SPECIFICATIONS		
PRODUCT PROPERTY	**ASTM TEST METHOD**	**MINIMUM**	**MAXIMUM**	**ADDL SPECS**
Stability				
Existent Gum, mg/100 ml	D381		7.0	(1)
Thermal Stability at 275 origin	D3241			(1) (7)
Filter Pressure Drop. mm Hg			25	(1)
Tube Deposit	VTR		<3	(1)
	ITR or ETR rating		85	(1)
No Peacock or Abnormal Color Deposits				
Composition Properties				
Sulfur, Total wt.%	D5453 D2622 or D4294		0.150	(1)
Doctor Test	D4952		Negative	(1)
Sulfur, Mercaptan	D3227		0.003	(1) (8)
Aromatics, Vol. %	D1319, **[N]** D8267 / D6379		25/26.5	(1)
Acidity, Total Max, mg KOH/g	D3242		0.1	(1)
Nitrogen ppm (m/m)	D4629		Report	(1)
Combustion Properties One of the following requirements shall be met:				
(1) Luminometer No.	D1740	45		(1)
(2) Smoke Point, mm	D1322	25.0		(1)
(3) Smoke Point, mm	D1322	18.0		(1)
AND				(1)
Naphthalenes, Vol. %	D1840		3.0	(1)

ADDITIONAL SPECIFICATIONS:

(1) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version, or the version specified by federal, state, or local government.

(2) For all grades use either Eq. 1 or Table 1 in test method D 4529 or Eq. 2 in Test Method D 3338. Test Method D 4809 may be used as an alternative. In case of dispute, Test Method D4809 shall be used.

(3) Product shall be clear and bright and free of suspended water and sediment. See paragraph 3.1.9.

(4) No additives other than antioxidants and metal deactivators as set forth in ASTM D1655 (latest edition) Section 6.2 shall be permitted. The use of these additives requires advance approval from Explorer Pipeline prior to delivery into the pipeline. The use of these additives must be clearly stated on the C of A. Explorer Pipeline reserves the right to refuse shipment of product containing these additives. The use of any other additives is prohibited.

(5) No rust inhibitor shall be injected into this product unless approved by all shippers.

(6) Method D56 is the preferred method. In case of a dispute D56 will apply.

(7) At origin, Thermal Stability test (JFTOT) shall be conducted for 2.5 hours at a control temperature of 275° C. At destination, test shall be conducted for 2.5 hours at a control temperature of 260°C. Tube deposits shall always be reported by Visual Method. Annex A2 ITR or Annex nm average over an area of 2.5mm2. Refer to ASTM D1655 note M for referee method.

(8) The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the doctor test described in ASTM D4952.

(9) Simulated distillation (D2887) can be used but must be correlated to D86.

(10) Viscosity D7042 can be used but must be correlated to D445.

NOTES:

- In accordance with 40 CFR 1090.1015(a) this fuel is designated as Jet fuel and may not be redesignated as ULSD without recertification.

- Jet Fuel (max 1500 ppm sulfur). Not for use in highway vehicles or engines or off road, locomotive or marine engines.

- 5R product code may contain Synthesized Hydrocarbons as defined and meeting the most recent version of ASTM D7566 Standard Specification for Aviation Turbine Fuels Containing Synthesized Hydrocarbons. Fuels containing synthetic components shall comply with ASTM D7566, and the approval for such fuels is currently limited to only those containing Annex A1 (Fischer-Tropsch) or Annex A2 (HEFA) blend components.

FUNGIBLE AVIATION TURBINE FUEL
JET A

		EXPLORER ORIGIN SPECIFICATIONS		
PRODUCT PROPERTY	**ASTM TEST METHOD**	**MINIMUM**	**MAXIMUM**	**ADDL SPECS**
General Properties				
Gravity, °API @ 60°F	D287, D1298, D4052	37	51	(1)
Net Heat of Combustion, BTU/Pound	D3338, D4529, D4809	18,400		(1) (2)
Corrosion, Copper Strip, 2 Hrs. @ 212°F	D130		No. 1	(1)
MSEP (WSIM) Origin	D3948, D7224	85		(1)
Destination		75		(1)
Electrical Conductivity	D2624		10	(1)
Particulate contaminant Mg/Gal	D2276		Report	(1)
Interface Rating			1b	(1)
Color, Saybolt (Origin)	D156, D6045	20		(1)
Color, Saybolt (Destination)	D156, D6045	18		(1)
Appearance				(1) (3)
Additives				(1) (4) (5)
Low Temperature Properties				
Freezing Point, °C	D2386, D5972		-40.0	(1)
Viscosity, cSt 104°F (40°C)	D445 D7042	1.0	1.9	(1) (10)
Viscosity, cSt -4°F (-20°C)	D445 D7042		8.0	(1) (10)
Volatility				
Flash Point, °F Origin	D56, D3828	108		(1) (6)
Destination		100		(1)
Distillation, Temp., C °(F)	D86			(1) (9)
10% Recovered			205 (400)	(1)
50% Recovered			Report	(1)
90% Recovered			288 (550)	(1)
Final Boiling Point, °F			300 (572)	(1)
Distillation Residue, Vol. %			1.5	(1)
Distillation Loss, Vol. %			1.5	(1)

		EXPLORER ORIGIN SPECIFICATIONS		
PRODUCT PROPERTY	**ASTM TEST METHOD**	**MINIMUM**	**MAXIMUM**	**ADDL SPECS**
Stability				
Existent Gum, mg/100 ml	D381		7.0	(1)
Thermal Stability at 275 origin	D3241			(1) (7)
Filter Pressure Drop. mm Hg			25	(1)
Tube Deposit	VTR		<3	(1)
	ITR or ETR rating		85	(1)
No Peacock or Abnormal Color Deposits				
Composition Properties				
Sulfur, Total wt.%	D5453 D2622 or D4294		0.0011	(1)
Doctor Test	D4952		Negative	(1)
Sulfur, Mercaptan	D3227		0.003	(1) (8)
Aromatics, Vol. %	D1319, **[N]** D8267 / D6379		25/26.5	(1)
Acidity, Total Max, mg KOH/g	D3242		0.1	(1)
Nitrogen ppm (m/m)	D4629		Report	(1)
Combustion Properties One of the following requirements shall be met:				
(1) Luminometer No.	D1740	45		(1)
(2) Smoke Point, mm	D1322	25.0		(1)
(3) Smoke Point, mm	D1322	18.0		(1)
AND				(1)
Naphthalenes, Vol. %	D1840		3.0	(1)

ADDITIONAL SPECIFICATIONS:

(1) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version, or the version specified by federal, state, or local government.

(2) For all grades use either Eq 1 or Table 1 in test method D 4529 or Eq 2 in Test Method D 3338. Test Method D 4809 may be used as an alternative. In case of dispute, Test Method D4809 shall be used.

(3) Product shall be clear and bright and free of suspended water and sediment. See paragraph 3.1.9.

(4) No additives other than antioxidants and metal deactivators as set forth in ASTM D1655 (latest edition) Section 6.2 shall be permitted. The use of these additives requires advance approval from Explorer Pipeline prior to delivery into the pipeline. The use of these additives must be clearly stated on the C of A. Explorer Pipeline reserves the right to refuse shipment of product containing these additives. The use of any other additives is prohibited.

(5) No rust inhibitor shall be injected into this product unless approved by all shippers.

(6) Method D56 is the preferred method. In case of a dispute D56 will apply.

(7) At origin, Thermal Stability test (JFTOT) shall be conducted for 2.5 hours at a control temperature of 275° C. At destination, test shall be conducted for 2.5 hours at a control temperature of 260°C. Tube deposits shall always be reported by Visual Method: a rating by the Tube Deposit Rating (TDR) optical density method is desirable, but not mandatory.

(8) The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the doctor test described in ASTM D4952.

(9) Simulated distillation (D2887) can be used but must be correlated to D86.

(10) Viscosity D7042 can be used but must be correlated to D445.

NOTES:

- In accordance with 40 CFR 1090.1015(a) this fuel is designated as Jet fuel and may not be redesignated as ULSD without recertification.

- Jet Fuel (max 15 ppm sulfur). Not for use in highway vehicles or engines or off road, locomotive or marine engines.

ULTRA LOW SULFUR DIESEL
FUNGIBLE ULTRA LOW SULFUR DIESEL

		EXPLORER ORIGIN SPECIFICATIONS		
PRODUCT PROPERTY	**ASTM TEST METHOD**	**MINIMUM**	**MAXIMUM**	**ADDL SPECS**
General Properties				
Gravity, °API	D287, D4052	30		(1) (6)
Flash Point, °F Pensky-Marten	 D93	 135		(1) (6)
Distillation C (F)	D86			(1) (6) (7)
50%		Report		(1) (6)
90%		282 (540)	338 (640)	(1) (6)
End Point			**[W]** ~~366~~ 371 (**[W]** ~~690~~ 700)	(1) (6)
Color, ASTM	D1500, D6045		2.5	(1) (6)
Color, Visual		Undyed		(1) (6)
Viscosity, cSt @ 104°F (40°C)	D445 D7042	1.9	4.1	(1) (6)
Pour Point, °F	D97, D5949, D5950, D5985		See Page 3-29	(1) (6)
Cloud Point, °F	D2500, D5771, D5772, D5773		See Page 3-29	(1) (6)
Corrosion, 3 Hrs. @ 122 °F	D130		1	(1) (6)
Total Sulfur, % by wt.	D4294, D2622, D5453, D7039			(1) (6)
All Origins			0.0011	(1) (2) (6)
Port Neches			0.0011	(1) (2) (6)
Cetane Number	D613,	40.0		(1) (6)
And one of the following conditions should be met:				
Aromatics (Vol %), OR	D1319	**[C]** ~~40.0~~	**[N]** 40.0	(1) (6)
Cetane Index	D976	40.0		(1) (6)
Ash, % by wt.	D482		0.01	(1) (6)
Carbon Residue: Ramsbottom on 10% Bottom	D524		0.35	(1) (6)
Water & Sediment				(1) (4) (6)
Thermal Stability mg/100ml.	D2274		2.5	(1) (6)
OR 300°F Pad rating, DuPont scale			7	(1) (6)
OR Thermal stability Reflectance	D6468	(W) 75 OR		(1) (6)
Reading Min.		(Y) 82		(1) (6)
Haze Rating @ 77°F (25°C)	D4176 Procedure 2		2	(1) (6)
Additives:	Corrosion Inhibitors: Page 3-30			(1) (6)

ADDITIONAL SPECIFICATIONS:

(1) Ultra Low Sulfur Diesel Fuel to meet EPA Standards.

(2) Per 40 CFR 80.580 (b) (3) any method certified under 80.585 may be used. Explorer will accept any EPA qualified method.

(3) Reserved.

(4) This product shall be free from undissolved water, sediment or other foreign materials in suspension. See paragraph 3.1.9.

(5) Reserved.

(6) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version or the version specified by federal, state, or local government.

(7) Simulated distillation (D2887) can be used but must be correlated to D86.

NOTES:

- 75 complies with the ULSD standards of 40 CFR 1090.305.
- 75 is designated as ULSD in accordance with 40 CFR 1090.1115.
- 75 Undyed ULSD (max 15 ppm sulfur). For use in all diesel vehicles and engines.
- **[N]** 7R deliveries may contain up to 5.0% renewable diesel.
- 7V Undyed Certified Non-Transportation Distillate Fuel (max 15 ppm sulfur).

FUNGIBLE ULTRA LOW SULFUR DIESEL BLENDSTOCK FOR BLENDING TO MEET TEXAS L.E.D. SPECIFICATIONS

		EXPLORER ORIGIN SPECIFICATIONS		
PRODUCT PROPERTY	**ASTM TEST METHOD**	**MINIMUM**	**MAXIMUM**	**ADDL SPECS**
General Properties				
Gravity, °API	D287, D4052, D1298	30		(1) (6)
Flash Point, °F Pensky-Marten	 D93	 135		(1) (6)
Distillation C (F)	D86			(1) (6) (7)
50%		Report		(1) (6)
90%		282 (540)	338 (640)	(1) (6)
End Point			**[W]** ~~366~~ 371 (**[W]** ~~690~~ 700)	(1) (6)
Color, ASTM	D1500, D6045		2.5	(1) (6)
Color, Visual		Undyed		(1) (6)
Viscosity, cSt @ 104°F (40°C)	D445 D7042	1.9	4.1	(1) (6)
Pour Point, °F	D97, D5949, D5950, D5985		See Page 3-29	(1) (6)
Cloud Point, °F	D2500, D5771, D5772, D5773		See Page 3-29	(1) (6)
Corrosion, 3 Hrs. @ 122 °F	D130		1	(1) (6)
Total Sulfur, % by wt.	D4294, D2622, D5453, D7039			(1) (6)
28" Origin			0.0011	(1) (2) (6)
Lake Charles, Port Neches			0.0011	(1) (2) (6)
Cetane Number	D613,	48.0		(1) (6)
And one of the following conditions should be met:				
Aromatics (Vol %), OR	D1319	**[C]** ~~40.0~~	**[N]** 40.0	(1) (6)
Cetane Index	D976	40.0		(1) (6)
Ash, % by wt.	D482		0.01	(1) (6)
Carbon Residue: Ramsbottom on 10% Bottom	D524		0.35	(1) (6)
Water & Sediment				(1) (4) (6)
Thermal Stability mg/100ml.	D2274		2.5	(1) (6)
OR 300°F Pad rating, DuPont scale			7	(1) (6)
OR Thermal stability Reflectance	D6468	(W) 75 OR		(1) (6)
Reading Min.		(Y) 82		(1) (6)
Haze Rating @ 77°F (25°C)	D4176 Procedure 2		2	(1) (6)
Additives:	Corrosion Inhibitors: Page 3-30			(1) (6)

ADDITIONAL SPECIFICATIONS:

(1) Ultra Low Sulfur Diesel Fuel to meet EPA Standards.

(2) Per 40 CFR 80.580 (b) (3) any method certified under 80.585 may be used. Explorer will accept any EPA qualified method.

(3) Reserved.

(4) This product shall be free from undissolved water, sediment or other foreign materials in suspension. See paragraph 3.1.9.

(5) Reserved.

(6) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version or the version specified by federal, state, or local government.

(7) Simulated distillation (D2887) can be used but must be correlated to D86.

NOTES:

- 77 complies with the ULSD standards of 40 CFR 1090.305.
- 77 is designated as ULSD in accordance with 40 CFR 1090.1115.
- 15 ppm sulfur (maximum) Undyed Ultra-Low Sulfur Diesel Fuel. For use in all diesel vehicles and engines. This product is Texas low emission diesel and may be used as fuel for diesel engines in any Texas county requiring the use of low emission diesel fuel.

BIODIESEL

		EXPLORER ORIGIN SPECIFICATIONS		
PRODUCT PROPERTY	**ASTM TEST METHOD**	**MINIMUM**	**MAXIMUM**	**ADDL SPECS**
General Properties				
Gravity, °API	D1298, D4052	Report	Report	(1)
Distillation °C (°F)				(1)
90%	D1160		360 (680)	(1)
Corrosion, 3 Hrs @ 50°C	D130		1B	(1)
Cloud Point, °C (°F)	D2500			(1)
Summer			10 (50)	(1) (2)
Winter			2 (35.6)	(1) (2)
Water & Sediment	D2709		0.05	(1)
Haze Rating @ 77°F (25°C)	D4176			(1)
	Procedure 2		1	(1)
Viscosity, cSt @ 104°F (40°C)	D445, D7042	1.9	6.0	(1)
Carbon Residue, mass %	D4951		0.05	(1)
Phosphorous, mass%	D4951		0.001	(1)
Sulphur, ppm			11	(1)
Cetane number	D613, D6304	47		(1)
Water, mass%	E203		0.035	(1)
Free glycerin, mass%	D6584		0.020	(1)
Monoglyceride content, mass%	D6584			(1)
Summer			0.700	(1) (2)
Winter			0.400	(1) (2)
Total Glycerin, mass%	D6584		0.240	(1)
Acid Number, mg KOH/g	D664		0.5	(1)
Cold Soak Filterability, seconds	D7501			(1)
Summer			360	(1) (2)
Winter			200	(1) (2)
Sulfated Ash, mass%	D874		0.020	(1)
Alcohol Control, one of the following:				(1)
1. Methanol Content, mass%	EN14110	130°C	0.200	(1)
2. Flashpoint, °C (°F)	D93	(266°F) 93°C		(1)
Flashpoint (closed cup), °C (°F)	D93	(199°F)		(1)
Oxidation Stability hrs @ 110°C (230°F)	EN15751	6		(1)
Sodium & Potassium combined ppm (µg/g)	EN14538		5	(1)
Calcium & Magnesium combined ppm (µg/g)	En14538		5	(1)

ADDITIONAL SPECIFICATIONS - BIODIESEL:

(1) Product must pass ASTM D6751 standards.
(Distilled ME from palm oil, UCO and DCO upon approval)

(2) No methyl esters derived from palm oil, brown grease, or yellow grease.

(3) Reserved.

(4) Reserved.

(5) Reserved.

NOTES:

1. This shall be the referenced method. Others as allowable under ASTM D6751.

January	Winter	
February	Winter	
Marc	Summer	Transition month: Product cannot be 100% summer specification
April	Summer	
May	Summer	
June	Summer	
July	Summer	
August	Summer	
September	Summer	
October	Summer	
November	Summer	Transition month: Product cannot be 100% summer specification
December	Winter	

SPECIFICATIONS FOR POUR POINT & CLOUD POINT

MONTH	CYCLE	POUR PT. °F MAX.	CLOUD PT. °F MAX.
Jan.	01 ---- 06	0	+15
Feb.	07----- 12	0	+15
Mar.	13----- 18	0	+15
Apr.	19----- 24	+10	+20
May	25----- 30	+10	+20
Jun.	31----- 36	+10	+20
Jul.	37----- 42	+10	+20
Aug.	43----- 48	+10	+20
Sep.	49----- 54	0	+15
Oct.	55----- 60	0	+15
Nov.	61----- 66	0	+15
Dec.	67----- 72	0	+15

3.6 ADDITIVE REQUIREMENTS FOR FUEL OIL DISTILLATE SPECIFICATIONS

3.6.1 Corrosion Inhibitors

All products shipped on Explorer Pipeline, with the exception of all grades of Aviation Kerosene, are required to meet a minimum level of corrosion protection. The concentration of inhibitor dosage will be controlled to meet a minimum rating of B+ (less than 5% of test surface rusted) as determined be NACE Standards TMO172, Test Method-Antirust Properties of Petroleum Products Pipeline Cargoes.

Fuel Oil Distillate shipped on Explorer Pipeline may contain only the following corrosion inhibitors:

Tolad	4410		Lubrizol	8014		SPEC-AID	8Q110 ULS
Tolad	4415		Lubrizol	8017		SPEC-AID	8Q123 ULS
Corexit	5267		Mobil	C-605		SPEC-AID	8Q22
DuPont	DCI-4A		Nalco	5403		Tolad	245
DuPont	DCI-6		Nalco	5405		Tolad	249
DuPont	DCI-6A		Nalco	5406		Unichem	7500
DuPont	DCI-11		Nalco	5400-A		Unichem	7501
DuPont	DCI-17		Nalco	EC5414A		Unichem	7510
DuPont	AFA-1		Nalco	EC5415A		UOP Unicor	
DuPont	DMA-4		Nalco	EC5416A		UOP Unicor J	
Ethyl HI Tec	580					UOP Unicor PL	
MidContinental Chemical	MCC5001						

3.6.2 Static Dissipater Additives

Fuel Oil shipments may; but are not required to contain static dissipater additive. The only approved SDA for use on Explorer Pipeline is "Innospec Stadis 450". SDA is prohibited from all Kerosene grades. The origin maximum concentration of Stadis 450 is 0.75 mg/l, and the origin maximum conductivity allowed is 250 pS/m at 21 degrees C (70 F) by ASTM D2624.

3.7 TRANSMIX

CODE 92

TRANSMIX

PRODUCT PROPERTY	ASTM TEST METHOD	EXPLORER ORIGIN SPECIFICATIONS		ADDL SPECS
		MINIMUM	MAXIMUM	
General Properties				
Particulate Contamination (mg/Gal)(Dry)	D2276, D5452		B6	(1)
Appearance, 1 Foot Bottom Sample	D4176		Clear & Bright	(1)
Distillation	D86		Report	(1)
DVPE (EPA)	D5191		Report	(1)
Total Sulfur, % by wt.	D2622, D5453		Report	(1)
NACE Corrosion	TM0172-01, D7548	B+		(1)
Oxygen Content, wt. %	D4815, D5599		0.05	(1) (2)

ADDITIONAL SPECIFICATIONS:

(1) Deliveries may be higher or lower by normal testing and handling tolerance. All tests should be the most current version or the version specified by federal, state, or local government.

(2) Transmix grades may not contain oxygenates, such as ethers and alcohols. The use of any non-hydrocarbon blending component is prohibited. Origin maximum for MTBE is .25 vol % before blending.

NOTES:

- Transmix Gasoline Product—not for use as gasoline.