

Effective Date: 3/1/2020

Phillips 66 Carrier LLC

**Amarillo-Albuquerque Pipeline (ATA)
Product Specifications**

Current Publication Date: 1/21/2020

Previous Publication Date: 9/1/2019

Revision Notes:

Incorporated southern NM specifications into volatility table.

Changed #2 ULSD cold flow requirements to match NuStar specifications.

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Phillips 66 Carrier LLC

Amarillo-Albuquerque Pipeline (ATA) Product Specifications

Product Index

| Product Name | Destination(s) | Trac66 Product Code(s) |
|---|-------------------------------|---|
| Gasoline, Subgrade, 82.4 octane (86.3 after 10% ETOH addition) | PSX Albuquerque, NM, Terminal | D07 (9.0#), D02 (>9.0#) |
| Gasoline, Conventional, 91 octane (no ethanol) | PSX Albuquerque, NM, Terminal | P1U (9.0#), P64 (>9.0#) |
| Volatility Schedule, Conventional, All Grades | PSX Albuquerque, NM, Terminal | Reg.- D07 (9.0#), D02 (>9.0#) Prem.- P1U (9.0#), P64 (>9.0#) |
| Distillate, Jet A / JAA (Jet A with JP-8 Additives) / #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max) | PSX Albuquerque, NM, Terminal | K32 |
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Phillips 66 Carrier LLC

Destinations:
PSX Albuquerque, NM, Terminal

Trac66 Code(s):

D07 (9.0#), D02 (>9.0#)

**Amarillo-Albuquerque Pipeline (ATA)
Product Specifications**

Gasoline, Subgrade, 82.4 octane (86.3 after 10% ETOH addition)

| Property | Test Method | Units | Min | Max | Specific | Note# |
|---------------------------|----------------------|-----------|------------|-------|----------|-------|
| Additives | General Note | | | | | 1 |
| API Gravity (60 Deg F) | D1298, D4052 | API | Report | | | |
| Appearance | Visual | | Clear & Br | | | 2 |
| Basicity | D1093, mod. see note | | Pass | | | 3 |
| Benzene | D3606 | Vol% | | 4.0 | | |
| Color, Visual | Visual | | Undyed | | | |
| Copper Strip Corrosion | D130 3 Hr @ 122 F | Rating | | 1 | | |
| Ethanol Blends | General Note | | | | | 4 |
| Haze, Colonial | D4176 Proc 2 | Rating | | 2 | | 5 |
| Lead (Pb) | D3237, D5059 | gPb/gal | | 0.01 | | |
| Mercaptan Sulfur | D3227 | Wt% | | 0.002 | | 6 |
| Mercaptan Sulfur | D4952 | Rating | sweet | | | |
| NACE Rust test | NACE Rust TM0172 | Rating | B+ | | | |
| Octane, (R+M)/2- AEA | D2699 & 2700 | | 86.3 | | | 7 |
| Octane, (R+M)/2- CLEAR | D2699 & 2700 | | 82.4 | | | |
| Octane, Motor- AEA | D2700 | | 81.3 | | | 7 |
| Octane, Motor- CLEAR | D2700 | | Report | | | |
| Octane, Research- AEA | D2699 | | Report | | | 7 |
| Octane, Research- CLEAR | D2699 | | Report | | | |
| Odor | Non-offensive odor | | Pass | | | 8 |
| Oxidation Stability | D525 | minutes | 240 | | | |
| Oxygenates | D4815, D5599 | Wt% | | .05 | | 9 |
| Phosphorus | D3231 | g/gal | | 0.003 | | |
| Product Description | See Note | | | | | 10 |
| Referee Methods | See Note | | | | | 11 |
| Silver Strip Corrosion | D7667, D7671 | Rating | | 1 | | |
| Solvent Washed Gum | D381 | mg/100 ml | | 4 | | |
| Sulfur | D2622, D5453, D7039 | ppm | | 80 | | |
| Volatility & Distillation | See D4814 | | see Table | | | |

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Destinations:
PSX Albuquerque, NM, Terminal

Trac66 Code(s):

D07 (9.0#), D02 (>9.0#)

**Amarillo-Albuquerque Pipeline (ATA)
Product Specifications**

Gasoline, Subgrade, 82.4 octane (86.3 after 10% ETOH addition)

Notes:

1. All additives and their concentrations must be previously approved by the pipeline Regional Fuel Quality Director and must be clearly indicated on the Certificate of Analysis. No intentional addition of MMT, phosphorus, lead, or additives containing other heavy metals is allowed.
2. This product must be clear and bright and visually free from undissolved water, sediment, and particulates.
3. ASTM D1093 should be performed to test for basicity according to the instructions in section 9.3 and 9.4 of the ASTM method using a phenolphthalein indicator solution, except as noted below. Combine 50 ml of the sample, 15 ml of water, and 3 drops of phenolphthalein indicator solution in a clean centrifuge tube, shake vigorously for 30 seconds, let stand for 3 minutes and observe against a white background (the centrifugation step in the ASTM method is not required). See the method for additional details. If a slightly pink to red color is observed in the water phase, the sample shows alkalinity and fails the test. The sample tested should be a lower sample as described in ASTM D4057, "...a spot sample of liquid from the middle of the lower one-third of the tank's content..."
4. For summer gasoline with a maximum RVP specification of less than 9.0 psi (as indicated in the Volatility Table) the following language is applicable:
 - (a) Suitable for the special RVP provisions for ethanol blends that contain between 9 and 10 vol% ethanol.
 - (b) The RVP of this blendstock/gasoline does not exceed 9.0 psi.
 - (c) The use of this gasoline to manufacture a gasoline-ethanol blend containing anything other than between 9 and 10 volume percent ethanol may cause a summertime RVP violation.
5. 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 |
6. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
7. After Ethanol Addition. Ethanol should be added at 10 Vol%.
8. Any gasoline exhibiting an offensive odor and/or containing more than 0.30 wt % dicyclopentadiene will not be accepted for shipment.
9. These fuels may not contain oxygenates, such as ethers and alcohols. The use of non-hydrocarbon blending components in these grades is prohibited.
10. This fuel meets or exceeds all the requirements of ASTM D 4814 (Unleaded Gasoline). This product does not meet EPA additive addition requirements for finished gasoline. This product does not meet the requirements for reformulated gasoline (RFG) and may not be used in any reformulated gasoline covered area.
11. Referee Methods for Gasoline are as follows:
Oxygenates, ASTM D5599; Sulfur, ASTM D2622; Vapor Pressure, ASTM D5191; V/L, ASTM D5188.

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Phillips 66 Carrier LLC

Destinations:
PSX Albuquerque, NM, Terminal

Trac66 Code(s):

P1U (9.0#), P64 (>9.0#)

**Amarillo-Albuquerque Pipeline (ATA)
Product Specifications**

Gasoline, Conventional, 91 octane (no ethanol)

| Property | Test Method | Units | Min | Max | Specific | Note# |
|---------------------------|----------------------|-----------|------------|-------|----------|-------|
| Additives | General Note | | | | | 1 |
| API Gravity (60 Deg F) | D1298, D4052 | API | Report | | | |
| Appearance | Visual | | Clear & Br | | | 2 |
| Basicity | D1093, mod. see note | | Pass | | | 3 |
| Benzene | D3606 | Vol% | | 4.0 | | |
| Color, Visual | Visual | | Undyed | | | |
| Copper Strip Corrosion | D130 3 Hr @ 122 F | Rating | | 1 | | |
| Ethanol Blends | General Note | | | | | 4 |
| Haze, Colonial | D4176 Proc 2 | Rating | | 2 | | 5 |
| Lead (Pb) | D3237, D5059 | gPb/gal | | 0.01 | | |
| Mercaptan Sulfur | D3227 | Wt% | | 0.002 | | 6 |
| Mercaptan Sulfur | D4952 | Rating | sweet | | | |
| NACE Rust test | NACE Rust TM0172 | Rating | B+ | | | |
| Octane, (R+M)/2 | D2699 & 2700 | | 91.0 | | | |
| Octane, Motor | D2700 | | 82.0 | | | |
| Octane, Research | D2699 | | Report | | | |
| Odor | Non-offensive odor | | Pass | | | 7 |
| Oxidation Stability | D525 | minutes | 240 | | | |
| Oxygenates | D4815, D5599 | Wt% | | .05 | | 8 |
| Phosphorus | D3231 | g/gal | | 0.003 | | |
| Product Description | See Note | | | | | 9 |
| Referee Methods | See Note | | | | | 10 |
| Silver Strip Corrosion | D7667, D7671 | Rating | | 1 | | |
| Solvent Washed Gum | D381 | mg/100 ml | | 4 | | |
| Sulfur | D2622, D5453, D7039 | ppm | | 80 | | |
| Volatility & Distillation | See D4814 | | see Table | | | |

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Destinations:
PSX Albuquerque, NM, Terminal

Trac66 Code(s):

P1U (9.0#), P64 (>9.0#)

**Amarillo-Albuquerque Pipeline (ATA)
Product Specifications**

Gasoline, Conventional, 91 octane (no ethanol)

Notes:

1. All additives and their concentrations must be previously approved by the pipeline Regional Fuel Quality Director and must be clearly indicated on the Certificate of Analysis. No intentional addition of MMT, phosphorus, lead, or additives containing other heavy metals is allowed.
2. This product must be clear and bright and visually free from undissolved water, sediment, and particulates.
3. ASTM D1093 should be performed to test for basicity according to the instructions in section 9.3 and 9.4 of the ASTM method using a phenolphthalein indicator solution, except as noted below. Combine 50 ml of the sample, 15 ml of water, and 3 drops of phenolphthalein indicator solution in a clean centrifuge tube, shake vigorously for 30 seconds, let stand for 3 minutes and observe against a white background (the centrifugation step in the ASTM method is not required). See the method for additional details. If a slightly pink to red color is observed in the water phase, the sample shows alkalinity and fails the test. The sample tested should be a lower sample as described in ASTM D4057, "...a spot sample of liquid from the middle of the lower one-third of the tank's content..."
4. For summer gasoline with a maximum RVP specification of less than 9.0 psi (as indicated in the Volatility Table) the following language is applicable:
 - (a) Suitable for the special RVP provisions for ethanol blends that contain between 9 and 10 vol% ethanol.
 - (b) The RVP of this blendstock/gasoline does not exceed 9.0 psi.
 - (c) The use of this gasoline to manufacture a gasoline-ethanol blend containing anything other than between 9 and 10 volume percent ethanol may cause a summertime RVP violation.
5. 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 |
6. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
7. Any gasoline exhibiting an offensive odor and/or containing more than 0.30 wt % dicyclopentadiene will not be accepted for shipment.
8. These fuels may not contain oxygenates, such as ethers and alcohols. The use of non-hydrocarbon blending components in these grades is prohibited.
9. This fuel meets or exceeds all the requirements of ASTM D 4814 (Unleaded Gasoline). This product does not meet EPA additive addition requirements for finished gasoline. This product does not meet the requirements for reformulated gasoline (RFG) and may not be used in any reformulated gasoline covered area.
10. Referee Methods for Gasoline are as follows:
Oxygenates, ASTM D5599; Sulfur, ASTM D2622; Vapor Pressure, ASTM D5191; V/L, ASTM D5188.

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Phillips 66 Carrier LLC

Destinations:
PSX Albuquerque, NM, Terminal

Trac66 Code(s):

Reg.- D07 (9.0#), D02 (>9.0#)
Prem.- P1U (9.0#), P64 (>9.0#)

**Amarillo-Albuquerque Pipeline (ATA)
Product Specifications**

Volatility Schedule, Conventional, All Grades

| Month(s) | Class | Pipeline Grade(s) | Clear | E10 | E10 | Clear | Drive Index | Distillation Requirements, °F | | | | | End Pt max | Dist Resid max, % |
|-------------|-------|-------------------|--------------|--------------|-----------------------|-----------------------|-------------|-------------------------------|-------------|---------------|---------|---------|------------|-------------------|
| | | | RVP max, psi | RVP max, psi | V/L Test Temp min, °F | V/L Test Temp min, °F | | 10% max | E10 50% min | Clear 50% min | 50% max | 90% max | | |
| Jan | D-4 | D02, P64 | 13.5* | 14.5 | 107 | 107* | 1200 | 122 | 150 | 170* | 230 | 365 | 430 | 2 |
| Feb | D-4 | D02, P64 | 13.5* | 14.5 | 116 | 116* | 1220 | 131 | 150 | 170* | 235 | 365 | 430 | 2 |
| Mar | C-3 | D02, P64 | 11.5* | 11.5 | 116 | 116* | 1220 | 131 | 150 | 170* | 235 | 365 | 430 | 2 |
| Apr | B-2 | D02, P64 | 10.0* | 11.0 | 122 | 122* | 1230 | 140 | 150 | 170* | 240 | 365 | 430 | 2 |
| May | A-2 | D07, P1U | 9.0* | 10.0 | 122 | 122* | 1250 | 158 | 150 | 170* | 250 | 374 | 430 | 2 |
| Jun | A-1 | D07, P1U | 9.0* | 10.0 | 129 | 129* | 1250 | 158 | 150 | 170* | 250 | 374 | 430 | 2 |
| Jul | A-1 | D07, P1U | 9.0* | 10.0 | 129 | 129* | 1250 | 158 | 150 | 170* | 250 | 374 | 430 | 2 |
| Aug | A-2 | D07, P1U | 9.0* | 10.0 | 129 | 129* | 1250 | 158 | 150 | 170* | 250 | 374 | 430 | 2 |
| Sep 1 - 15 | A-2 | D07, P1U | 9.0* | 10.0 | 129 | 129* | 1250 | 158 | 150 | 170* | 250 | 374 | 430 | 2 |
| Sep 16 - 30 | B-2 | D02, P64 | 10.0* | 11.0 | 122 | 122* | 1240 | 149 | 150 | 170* | 245 | 374 | 430 | 2 |
| Oct | C-3 | D02, P64 | 11.5* | 12.5 | 116 | 116* | 1230 | 140 | 150 | 170* | 240 | 365 | 430 | 2 |
| Nov | D-4 | D02, P64 | 13.5* | 14.5 | 116 | 116* | 1220 | 131 | 150 | 170* | 235 | 365 | 430 | 2 |
| Dec | D-4 | D02, P64 | 13.5* | 14.5 | 116 | 116* | 1220 | 131 | 150 | 170* | 235 | 365 | 430 | 2 |

Vapor pressure and T50 minimum limits marked with an * apply to the fuel without ethanol. Unmarked limits apply to the fuel with 10 vol% ethanol. V/L limits for Classes 4 and 5 are more severe than for many other fuels because Northern New Mexico is in the high altitude area V and is treated as such within ASTM D4814.

Ethanol at 7.7 vol% minimum is mandated in the Albuquerque area during the months of Nov-Feb.

A 1.0 psi higher vapor pressure is allowed for conventional gasoline-ethanol blends that contain greater than 1% vol ethanol, and this allowance is reflected in the table. During the period of May 1 through September 15 this allowance only pertains to blends that contain between 9 and 10 vol % ethanol.

Test Methods: (latest version unless otherwise indicated)

Distillation: ASTM D86, corrected to 760 mm Hg;

Driveability Index: ASTM D4814;

V/L: ASTM D5188, or the estimate method using Appendix X2 of ASTM D4814;

Vapor Pressure: ASTM D5191. For conventional gasoline that meets a summer RVP specification of 9.0 psi or less and which is intended for sale in the summer, EPA requires the use of the EPA equation and also requires that batch reporting of RVP be to 2 decimal places (example; 8.97 psi).

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Phillips 66 Carrier LLC

Destinations:

PSX Albuquerque, NM, Terminal

Trac66 Code(s):

K32

Amarillo-Albuquerque Pipeline (ATA) Product Specifications

Distillate, Jet A / JAA (Jet A with JP-8 Additives) / #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max)

| Property | Test Method | Units | Min | Max | Specific | Note# |
|--------------------------|----------------------------|----------|--------|--------|--------------------|-------|
| Acid Number | D3242 | mg KOH/g | | 0.10 | | |
| Additives | General Note | | | | | 1 |
| API Gravity (60 Deg F) | D1298, D4052 | API | 37.5 | 50.5 | | |
| Appearance | D4176 Proc 1 | | Pass | | | 2 |
| Aromatics | D1319, D6379 | Vol% | | 25 | | |
| Ash | D482 | Wt% | | 0.01 | | |
| Carbon Res 10% Btms | D524 | Wt% | | 0.10 | | |
| Cetane Index by 2-var | D976 | | 40 | | | |
| Cetane Number | D613, D6890, D7170, D7668 | | 40.0 | | | 3 |
| Cloud Pt | D2500, D5771/2/3, D7689 | Deg F | | -12 | | |
| Color, Saybolt | D156, D6045 | | +21 | | | |
| Copper Strip Corrosion | D130 2 Hr @ 212 F | Rating | | 1 | | |
| Dist 10 Vol% Rec | D86, D2887 | Deg F | | 393 | | 4 |
| Dist 50 Vol% Rec | D86, D2887 | Deg F | Report | | | 4 |
| Dist 90 Vol% Rec | D86, D2887 | Deg F | | 550 | | 4 |
| Dist End Pt | D86, D2887 | Deg F | | 560 | | 4 |
| Dist IBP | D86, D2887 | Deg F | Report | | | 4 |
| Dist Loss | D86, D2887 | Vol% | | 1.5 | | 5 |
| Dist Residue | D86, D2887 | Vol% | | 1.5 | | 5 |
| Electrical Conductivity | D2624 | pS/m | 150 | 600 | w/ Stadis 450 | 6 |
| Electrical Conductivity | D2624 | pS/m | Report | | wo/ Stadis 450 | |
| Existent Gum | D381 | mg/100ml | | 4.0 | | |
| Flash Pt | D56, D93, D3828 | Deg F | 108 | | | 7 |
| Freeze Pt | D2386, D5972, D7153, D7154 | Deg F | | - 42.5 | | |
| Fuel Sys Icing Inhibitor | D5006 | Vol% | 0.07 | 0.10 | if FSII is present | 8 |
| Haze, Colonial | D4176 Proc 2 | Rating | | 2 | | |
| JFTOT Press Drop | D3241 @ 275 C | mm Hg | | 25 | | |
| JFTOT Tube Rating | D3241 @ 275 C | Rating | | <3 | | 9 |
| Mercaptan Sulfur | D3227 | Wt% | | 0.003 | | 10 |
| MSEP | D3948 | Rating | 85 | | | |
| MSEP w/ Stadis 450 | D3948 | Rating | 70 | | | 11 |
| Naphthalenes or Smoke Pt | D1322 | mm | 20 | | | 12 |
| Naphthalenes or Smoke Pt | D1840 | Vol% | | 2.9 | | 12 |
| Net Heat of Combustion | D3338, D4529, D4809 | BTU/lb | 18,410 | | | |
| Particulate Matter | D5452 | mg/L | | 1.0 | | |
| Pour Point | D97, D5949 | Deg F | | -25 | | |
| Product Description | See Note | | | | | 13 |
| Referee Methods | See Note | | | | | 14 |

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Phillips 66 Carrier LLC

Destinations:
PSX Albuquerque, NM, Terminal

Trac66 Code(s):
K32

**Amarillo-Albuquerque Pipeline (ATA)
Product Specifications**

Distillate, Jet A / JAA (Jet A with JP-8 Additives) / #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max)

| Property | Test Method | Units | Min | Max | Specific | Note# |
|--------------------------|--------------------|--------------|------------|------------|-----------------|--------------|
| Sulfur | D2622, D5453 | ppm | | 11 | | |
| Test Tolerances | See Note | | | | | 15 |
| Viscosity @ -4 F (-20 C) | D445, D7042, D7945 | cSt | | 8.0 | | 16 |
| Viscosity @ 104F (40C) | D445, 7042 | cSt | 1.3 | 1.9 | | 16 |
| Water and Sediment | D2709 | Vol% | | 0.05 | | |

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Destinations:

PSX Albuquerque, NM, Terminal

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K32

Amarillo-Albuquerque Pipeline (ATA) Product Specifications

Distillate, Jet A / JAA (Jet A with JP-8 Additives) / #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max)

Notes:

1. If the fuel is being sold as Jet A, only those additives specified and within the concentrations noted in the current edition of ASTM D1655 are permitted. Use of additives permitted by ASTM D1655 must be clearly indicated on the Certificate of Analysis. The use of any other additives is prohibited.

If being sold as JAA, this fuel is required by contract to contain fuel system icing inhibitor (FSII), corrosion inhibitor/lubricity improver (CI/LI), and static dissipater additive (SDA) prior to distribution to the Air Force Base. The use of any other additives is prohibited.

FSII shall be added to the fuel and shall be Diethylene Glycol Monomethyl Ether (DiEGME) conforming to the latest revision of ASTM D 4171, Standard Specification for FSII's, Type III or MIL-DTL-85470B, Inhibitor, Icing, Fuel System, High Flash, NATO Code Number S-1745.

The CI/LI additive must conform to the latest revision of MIL-PRF-25017, Inhibitor, Corrosion/Lubricity Improver, Fuel Soluble, found in ASSIST and shall be listed in the electronic Qualified Products List (QPL)-25017 located in the Qualified Products Database (QPD) found at <http://assistdocs.com>.

SDA shall be added to the fuel and the conductivity limits of 50 to 600 picosiemens per meter (pS/m) at ambient temperature or 29.4°C (85°F), whichever is lower, unless directed by the procuring activity, shall apply at the custody transfer point. The following electrical conductivity additive is approved: Stadis R 450 marketed by Innospec Fuel Specialties, Newark DE 19702.

2. The fuel shall be clear and bright and free from visual undissolved water, sediment, and suspended matter.

3. Where Test Method D613 is not available, Test Method D4737 can be used as an approximation.

4. For D86, the distillation of jet fuel is run at Group 4 conditions, except Group 3 condenser temperature is used. If D2887 is used, D2887 results shall be converted to estimated D86 results by application of the correlation in the applicable appendix in test method D2887.

5. Distillation residue and loss limits provide control of the distillation process during the use of D86, and they do not apply to D2887. Distillation residue and loss shall be reported as "not applicable" (N/A) when reporting D2887 results.

6. This specification is applicable after the conductivity improver is added at downstream terminals. The conductivity must be between 150 and 600 pS/m at ambient temperature or 85° F, whichever is lower, unless otherwise directed by the procuring activity.

7. Aviation Turbine Fuel Results obtained by D93 can be up to 1C higher than those obtained by the default method (D56). Results obtained by D3828 can be up to 2C lower than those obtained by D56. In case of dispute, D56 shall apply.

8. This specification only applies after fuel is additized with FSII at downstream terminals. FSII test shall be performed using the DiEGME scale of the refractometer.

9. No peacock or abnormal color deposits.

10. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.

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Phillips 66 Carrier LLC

Destinations:

PSX Albuquerque, NM, Terminal

Trac66 Code(s):

K32

Amarillo-Albuquerque Pipeline (ATA) Product Specifications

Distillate, Jet A / JAA (Jet A with JP-8 Additives) / #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max)

11. ASTM D1655 allows for a 70 min MSEP limit when Stadis 450 (conductivity improver) is present at the point of manufacture. MSEP limits are not intended to be used as a sole reason for rejection of the fuel at downstream facilities, but an investigation shall be conducted prior to releasing the fuel if the values do not meet the applicable limit in Table 1 of ASTM D1655.

12. One of the following requirements shall be met:

Smoke Point 27 mm min by ASTM D1322 OR Smoke Point 20 mm min AND Naphthalenes 2.9 Vol% max by ASTM D1840.

13. This fuel meets or exceeds all the requirements of ASTM D 1655 (Jet A), except that for the JAA grade, additional additives are added as required by contract. This fuel also meets or exceeds all of the requirements of ASTM D 975 (Ultra Low Sulfur Grade No.1-D S15 Diesel Fuel Oil), with the possible exception of the lubricity/conductivity requirements in ASTM D975. Additives or further blending may be utilized at downstream locations to meet these requirements.

14. ASTM Referee Methods for Jet A are as follows:

Aromatics, ASTM D1319; Distillation, ASTM D86; Flash Point, ASTM D56; Existent Gum, ASTM D381; Freeze Point, ASTM D2386; Net Heat of Combustion, D 4809; Viscosity, ASTM D445. (ASTM D1655)

For a product satisfying both ASTM D1655 (Jet A) and ASTM D975 (#1 Diesel Fuel Oil), ASTM D56 is considered the referee Flash Point method.

15. Test results shall not exceed the maximum or be less than the minimum values specified (herein). No allowance shall be made for the precision of the test methods. To determine conformance to the specification requirement, a test result may be rounded to the same number of significant figures as in Table 1 using Practice E 29. Where multiple determinations are made, the average result, rounded in accordance with Practice E 29, shall be used. (ASTM D1655 Table 1 Notes)

16. Results from Test Method D7042 shall be reported as bias-corrected kinematic viscosity results by application of the correction in Test Method D7042.

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Phillips 66 Carrier LLC

Destinations:
PSX Albuquerque, NM, Terminal

Trac66 Code(s):

V95

**Amarillo-Albuquerque Pipeline (ATA)
Product Specifications**

Distillate, #2 Diesel Fuel / Fuel Oil, Ultra-Low Sulfur (15 ppm max)

| Property | Test Method | Units | Min | Max | Specific | Note# |
|------------------------|----------------------------|------------|------------|------|----------|-------|
| Additives | General Note | | | | | 1 |
| API Gravity (60 Deg F) | D1298, D4052 | API | 30.0 | | | |
| Appearance | Visual | | Clear & Br | | | 2 |
| Ash | D482 | Wt% | | 0.01 | | |
| Carbon Res 10% Btms | D524 | Wt% | | 0.30 | | |
| Cetane Index by 2-var | D976 | | 40 | | | |
| Cetane Number | D613, D6890, D7170, D7668 | | 40.0 | | | 3 |
| Cloud Pt 1 | D2500, D5771/2/3, D7689 | Deg F | | +15 | Jan-Mar | |
| Cloud Pt 2 | D2500, D5771/2/3, D7689 | Deg F | | +20 | Apr-Jul | |
| Cloud Pt 3 | D2500, D5771/2/3, D7689 | Deg F | | +15 | Aug-Dec | |
| Color, ASTM | D1500 | | | 2.5 | | |
| Copper Strip Corrosion | D130 3 Hr @ 122 F | Rating | | 1 | | |
| Dist 10 Vol% Rec | D86, D2887, D7345 | Deg F | Report | | | 4 |
| Dist 50 Vol% Rec | D86, D2887, D7345 | Deg F | Report | | | 4 |
| Dist 90 Vol% Rec | D86, D2887, D7345 | Deg F | 540 | 640 | | 4 |
| Dist End Pt | D86, D2887, D7345 | Deg F | Report | | | 4 |
| Dist IBP | D86, D2887, D7345 | Deg F | Report | | | 4 |
| Flash Pt | D56, D93, D3828, D7094 | Deg F | 135 | | | |
| Haze | D4176 Proc 2 | Rating | | 2 | | 5 |
| NACE Rust test | NACE Rust TM0172 | Rating | B+ | | | |
| Pour Point 1 | D97, D5949 | Deg F | | 0 | Jan-Mar | |
| Pour Point 2 | D97, D5949 | Deg F | | +10 | Apr-Jul | |
| Pour Point 4 | D97, D5949 | Deg F | | 0 | Aug-Dec | |
| Product Description | See Note | | | | | 6 |
| Referee Methods | See Note | | | | | 7 |
| Stability | D6468 | Pad Rating | | 5 | | |
| Sulfur | D2622, D3120, D5453, D7039 | ppm | | 11 | | |
| Viscosity @ 104F (40C) | D445, 7042 | cSt | 1.9 | 3.4 | | 8 |
| Water and Sediment | D2709 | Vol% | | 0.05 | | |

Effective Date: 3/1/2020

Phillips 66 Carrier LLC

Destinations:
PSX Albuquerque, NM, Terminal

Trac66 Code(s):

V95

Amarillo-Albuquerque Pipeline (ATA) Product Specifications

Distillate, #2 Diesel Fuel / Fuel Oil, Ultra-Low Sulfur (15 ppm max)

Notes:

1. All additives and their concentrations must be previously approved by the pipeline Regional Fuel Quality Director and must be clearly indicated on the Certificate of Analysis.
2. This product must be clear and bright and visually free from undissolved water, sediment, and particulates.
3. Where Test Method D613 is not available, Test Method D4737 can be used as an approximation.
4. ASTM D2887 or ASTM D7345 results must be converted to "Predicted D86" results using the correlations found in each test method, and reported in the same way.
5. Product haze must be 2 or less at 77 deg F (ASTM D 4176). Product must meet the specification in the refinery tank and leaving any downstream drying systems.
6. This fuel meets or exceeds all the requirements of ASTM D975 (Ultra Low Sulfur Grade No. 2-D S15 Diesel Fuel Oil) and ASTM D396 (Grade No. 2 Low Sulfur Fuel Oil), with the possible exception of the lubricity/conductivity requirements in ASTM D975. Additives or further blending may be utilized at downstream locations to meet these requirements.
7. ASTM Referee Methods for Diesel Fuel are as follows:
Cetane Number, ASTM D613; Cloud Pt, ASTM D2500; Distillation, ASTM D86; Flash Point, ASTM D93; Sulfur, ASTM D5453, Viscosity, ASTM D445. (source ASTM D975)
8. Results from Test Method D7042 shall be reported as bias-corrected kinematic viscosity results by application of the correction in Test Method D7042.