

# Borger-Skellytown Pipeline Product Specifications

<b>WestTex 66 Pipeline Company</b>	<b>Effective Date: December 6, 2012</b>		
<b>Petroleum Products Specifications</b>	<b><i>Borger-Skellytown Pipeline</i></b>		

## NORMAL BUTANE

Specification	Test Method	Value		Notes
		Min	Max	
Normal Butane, liq. vol. %	ASTM D-2163	94.0		
Propylene, Propane & Lighter, liq. vol. %	ASTM D-2163		0.35	
Isobutane, liq. vol. %	ASTM D-2163		6.0	
Pentanes, liq. vol. %	ASTM D-2163		1.5	
Hexanes & Heavier, liq. vol. %	ASTM D-2163		0.05	
Total Olefins, liq. vol. %	ASTM D-2163		0.35	
Butadiene, liq. vol. %	ASTM D-2163		0.01	
Total Oxygenates, wt. ppm	UOP-845		50.0	
Methanol, wt. ppm	UOP-845		50.0	
IPA & Heavier Alcohols, wt. ppm	UOP-845		5.0	
MTBE & other Ethers, wt. ppm	UOP-845		2.0	
Other Oxygenates, wt. ppm	UOP-845		5.0	
Total Sulfur, ppm wt.	ASTM D-4468 or ASTM D-5623 or ASTM D-6667		140	
Corrosion, Copper Strip@ 100 °F	ASTM D-1838		No. 1	
Fluorides, wt. ppm	ASTM D7359 or UOP-619		1.0	
Vapor Pressure @ 100 Deg. F, psig	ASTM D-1267 or ASTM D-2598		50	(3)
Volatile Residue:				
Temp. @ 95% Evaporation, Degrees F	ASTM D-1837		+36	
Free Water Content	Visual		None	

**Notes**

1. This specification defines only a basic purity for this product. This product is to be free of any contamination or impurities that might render the product unusable for its commonly used applications or may be injurious to the pipeline's property or the property of 3<sup>rd</sup> parties, or may interfere with its transmission through the pipeline. Specific contaminants include (but are not limited to) dirt, rust, scale and other types of solid contaminants, gum, gum-producing substances, oil, inhibitors, amine, caustics, chlorides, heavy metals, glycol, oxygenates and inorganic gases or any compound added to enhance the ability to meet these specifications.
2. The referee method will be D-1267.

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		<b>PRODUCT CODES</b>	<b><i>Receipt</i></b>	<b><i>Sales</i></b>
<b>E/P MIX (COMMERCIAL ETHANE)</b>				
<b>Specification</b>	<b>Test Method</b>	<b>Value</b>		<b>Notes</b>
		<b>Min</b>	<b>Max</b>	
Ethane, liq. vol. %	ASTM D-2163	75.0	82.0	
Propane, liq. vol. %	ASTM D-2163	11.5	25.0	
Methane & Lighter, liq. vol. %	ASTM D-2163		1.5	
Ethylene, liq. vol. %	ASTM D-2163		4.0	
Butane & Heavier, liq. vol. %	ASTM D-2163		0.8	
Propylene, liq. vol. %	ASTM D-2163		1.0	
Carbon Dioxide, ppm wt.	ASTM D-2505		1000	
Total Sulfur, ppm wt.	ASTM D-4468 or ASTM D-5623 or ASTM D-6667		30	
Corrosion, Copper Strip@ 100 °F	ASTM D-1838		No. 1	
Free Water Content	Visual		None	
<b>Notes</b>				
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		<b>PRODUCT CODES</b>	<b><i>Receipt</i></b>	<b><i>Sales</i></b>
<b>STANDARD GRADE ISOBUTANE</b>				
<b>Specification</b>	<b>Test Method</b>	<b>Value</b>		<b>Notes</b>
		<b>Min</b>	<b>Max</b>	
Isobutane, liq. vol. %	ASTM D-2163	96.0		
Propane, liq. vol. %	ASTM D-2163		3.0	
Normal Butane & Heavier, liq. vol. %	ASTM D-2163		4.0	
Vapor Pressure @ 100 Deg. F, psig	ASTM D-1267 or ASTM D-2598		70	(2)
Corrosion, Copper Strip@ 100 °F	ASTM D-1838		No. 1	
Total Sulfur, ppm wt.	ASTM D-4468 or ASTM D-5623 or ASTM D-6667		140	
Free Water Content	Visual		None	
<b>Notes</b>				
<p>1. This specification defines only a basic purity for this product. This product is to be free of any contamination or impurities that might render the product unusable for its commonly used applications or may be injurious to the pipeline's property or the property of 3<sup>rd</sup> parties, or may interfere with its transmission through the pipeline. Specific contaminants include (but are not limited to) dirt, rust, scale and other types of solid contaminants, gum, gum-producing substances, oil, inhibitors, amine, caustics, chlorides, heavy metals, glycol, oxygenates and inorganic gases or any compound added to enhance the ability to meet these specifications.</p> <p>2. The referee method will be D-1267.</p>				

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<b>WesTTex 66 Pipeline Company</b>		<b>Effective Date: December 6, 2012</b>		
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		<b>PRODUCT CODES</b>	<b><i>Receipt</i></b>	<b><i>Sales</i></b>
<b>PROPANE</b>				
Specification	Test Method	Value		Notes
		Min	Max	
Propane, liq. vol. %	ASTM D-2163	90.0		
Propylene, liq. vol. %	ASTM D-2163		5.0	
Vapor Pressure @ 100 Deg. F, psig	ASTM D-1267 or ASTM D-2598		205	(2)
Specific Gravity, 60-60 Deg F	ASTM D-1657	0.500	0.510	
<b>Volatile Residue:</b>				
Temp. @ 95% Evaporation, Deg F	ASTM D-1837		-37	
Butane & Heavier, liq. vol. %	ASTM D-2163		2.5	
Fluorides, wt. ppm	ASTM D7359 or UOP-619		1.0	
<b>Residual Matter:</b>				
Residue on Evaporation of 100 ml, ml.	ASTM D-2158		0.05	
Oil Stain Observation	ASTM D-2158		Pass	
Corrosion, Copper Strip@ 100 °F	ASTM D-1838		No. 1	
Total Sulfur, ppm wt.	ASTM D-4468 or ASTM D-5623 or ASTM D-6667		123	
Hydrogen Sulfide	ASTM D-2420		Pass	
Free Water Content	Visual		None	
<b>Notes</b>				
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	<b>PRODUCT CODES</b>	<b><i>Receipt</i></b>	<b><i>Sales</i></b>	
<b>REFINERY GRADE PROPYLENE (P/P MIX)</b>				
<b>Specification</b>	<b>Test Method</b>	<b>Value</b>		<b>Notes</b>
		<b>Min</b>	<b>Max</b>	
Ethane & Lighter, liq. vol. %	ASTM D-2163		2.0	
Propylene, liq. vol. %	ASTM D-2163	65.0		
Butane & Heavier, liq. vol. %	ASTM D-2163		1.0	
Total Sulfur, ppm wt.	ASTM D-4468 ASTM D-5623 ASTM D-6667		50.0	
Corrosion, Copper Strip@ 100 °F	ASTM D-1838		No. 1	
CO, wt. ppm	ASTM D-2504		1.0	
CO <sub>2</sub> , wt. ppm	ASTM D-2505		5.0	
Arsine, wt. ppb	UOP-834-82		200	(2)
Methyl Acetylene, wt ppm	ASTM D-2712		10.0	
Propadiene, wt. ppm	ASTM D-2712		10.0	
Methanol, wt. ppm	UOP-845		5.0	
Free Water Content	Visual		None	
<b>Notes</b>				
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<b>Demethanized NGL Mix (Y-1 Grade)</b>				
Specification	Test Method	Value		Notes
		Min	Max	
<b>1. COMPOSITION (LV%):</b>	GPA-2186			
<b>Carbon Dioxide LV% of Total Ethane Volume</b>	GPA-2186		0.35	
<b>Methane LV% of Total Volume</b>	GPA-2186		0.5	
<b>Methane LV% of Ethane Volume</b>	GPA-2186		1.5	
<b>Ethane</b>	GPA-2186		N/A	
<b>Aromatics LV%</b>	GPA-2186		10.0	
<b>Olefins LV%</b>	GPA-2186		1.0	
<b>2. VAPOR PRESSURE, psig @ 100°F:</b>	ASTM D-1267 OR ASTM D-2598		600	4
<b>3. CORROSION, Copper Strip @ 100°F:</b>	ASTM D-1838		No.1	
<b>4. TOTAL SULFUR, ppm wt.:</b>	ASTM D-2784 or ASTM D-5623		150	
<b>5. HYDROGEN SULFIDE (H<sub>2</sub>S)</b>	ASTM D-2420	Pass		
<b>6. CARBONYL SULFIDE (COS), ppm wt.:</b>	ASTM D-5623		10	
<b>7. DISTILLATION, End Point, °F:</b>	ASTM D-2887		375	
<b>8. COLOR, Saybolt No.:</b>	ASTM D -156	+27		
<b>9. MOISTURE CONTENT:</b>				
<b>Free Water</b>	Inspection		None at 34 F	2
<b>10. FLUORIDES, ppm wt.:</b>	ASTM D-7359 Or UOP-619		1	
<b>11. Oxygenates, ppm wt.:</b>	UOP-845		10	
<b>12. PRODUCT TEMPERATURE:</b>		40	100	
<b>13. OTHER DELETERIOUS SUBSTANCES:</b>	Inspection	See notes below.		1
<b>Notes</b>				
<ol style="list-style-type: none"> <li>1. This specification defines only a basic purity for this product. This product is to be free of any contamination or impurities that might render the product unusable for its commonly used applications or may be injurious to the pipeline's property or the property of 3<sup>rd</sup> parties, or may interfere with its transmission through the pipeline. Specific contaminants include (but are not limited to) dirt, rust, scale and other types of solid contaminants, gum, gum-producing substances, oil, inhibitors, amine, caustics, chlorides, heavy metals, glycol, oxygenates and inorganic gases or any compound added to enhance the ability to meet these specifications.</li> <li>2. No moisture (free water) shall be deemed to be contained within the Y-1 product being inspected if no more than one (1) tablespoon of a second phase liquid comprised of free water, methanol, glycol, amine, or other aqueous solutions is present within the fluid sample drained from the bottom of the meter strainer basket located at the Delivery Point. If more than (1) tablespoon of any such substances is visibly present in the inspection container, then the NGL's so delivered shall be deemed to be OFF Specification.</li> <li>3. For all ASTM methods the most recent year revision for the procedures will be used.</li> <li>4. The referee method will be ASTM D-1267.</li> </ol>				