

22777 Springwoods Village Parkway,  
Spring, TX 77389

**PZFLR15X**

	Whole crude	Butane and Lighter IBP - 60F	Lt. Naphtha C5 - 165F	Hvy Naphtha 165 - 330F	Kerosene 330 - 480F	Diesel 480 - 650F	Vacuum Gas Oil 650 - 1000F	Vacuum Residue 1000F+
Cut volume, %	100.0	0.7	1.9	7.3	12.3	19.6	36.0	22.2
API Gravity,	24.7	125.1	84.3	55.9	38.7	30.0	20.1	8.4
Specific Gravity (60/60F),	0.906	0.551	0.656	0.755	0.831	0.876	0.933	1.011
Carbon, wt %	86.6	82.4	83.9	85.6	86.2	86.8	86.9	86.5
Hydrogen, wt %	12.7	17.6	16.1	14.4	13.7	12.9	12.3	12.2
Pour point, F	(54.4)			(130.8)	(76.2)	(9.5)	82.8	126.7
Neutralization number (TAN), MG/GM	1.631	0.009	0.011	0.070	0.215	1.319	2.988	0.986
Sulfur, wt%	0.403	0.000	0.002	0.015	0.059	0.205	0.474	0.731
Viscosity at 20C/68F, cSt	58.5	0.4	0.5	0.9	2.1	9.2	468.8	158,531,974.8
Viscosity at 40C/104F, cSt	23.8	0.3	0.4	0.7	1.5	4.9	110.6	3,448,563.5
Viscosity at 50C/122F, cSt	16.6	0.3	0.4	0.6	1.3	3.8	62.7	739,374.4
Mercaptan sulfur, ppm	3.0	0.7	2.4	3.8	4.1	1.7	0.3	0.0
Nitrogen, ppm	2,268.1	-	-	0.6	11.1	97.9	1,425.3	6,935.6
CCR, wt%	4.6						0.3	18.1
N-Heptane Insolubles (C7 Asphaltenes), wt%	1.0						-	4.1
Nickel, ppm	20.9							84.2
Vanadium, ppm	8.1							32.6
Calcium, ppm	0.5							
Reid Vapor Pressure (RVP) Whole Crude, psi	3.4							
Hydrogen Sulfide (dissolved), ppm	-							
Salt content, ptb	5.9							
Paraffins, vol %	16.8	100.0	81.8	38.2	28.2	17.9	10.4	2.3
Naphthenes, vol %	40.3	-	18.2	53.6	55.0	54.7	42.4	16.4
Aromatics (FIA), vol %	43.0	-	-	8.2	16.9	27.4	47.2	81.3
Distillation type, TBP								
IBP, F	43.2		60.8	166.4	331.0	481.0	651.5	1,001.4
5 vol%, F	237.4		67.9	178.2	339.6	489.5	665.1	1,014.4
10 vol%, F	332.3		72.7	190.3	348.8	498.8	680.4	1,029.3
20 vol%, F	457.9		82.3	212.0	366.5	516.8	711.2	1,060.5
30 vol%, F	550.8		99.6	231.1	383.2	534.2	742.7	1,094.2
40 vol%, F	634.8		107.0	248.4	398.9	551.2	774.8	1,130.8
50 vol%, F	719.9		123.8	264.2	413.9	567.9	807.8	1,171.1
60 vol%, F	809.8		133.2	278.9	428.2	584.4	842.1	1,216.0
70 vol%, F	909.3		141.9	292.8	441.9	600.8	877.8	1,267.0
80 vol%, F	1,029.2		150.1	305.8	455.1	617.2	915.6	1,326.3
90 vol%, F	1,192.9		157.8	318.2	467.7	633.6	956.1	1,397.7
95 vol%, F	1,310.5		161.4	324.1	473.9	641.8	977.6	1,441.1
EP, F	1,471.3		164.6	329.4	479.4	649.2	997.7	1,507.0
Freeze point, F				(119.3)	(64.8)	3.7		
Smoke point, mm				31.4	22.8	13.5		
Naphthalenes (D1840), vol%					1.6	8.4		
Viscosity at 100C/212F, cSt	4.6	0.2	0.3	0.4	0.7	1.5	9.5	3,814.1
Viscosity at 150C/302F, cSt	2.2	0.2	0.2	0.3	0.5	0.9	3.3	211.1
Cetane Index 1990 (D4737),				34.2	35.7	44.8		
Cloud point, F				(126.6)	(72.1)	(5.2)		
Aniline pt, F					135.1	148.8	173.7	