

22777 Springwoods Village Parkway,  
Spring, TX 77389

**KRLB19Y**

	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	0.8	11.0	6.3	4.2	11.3	33.7	32.8
API Gravity,	20.2	119.8	89.0	61.1	39.9	26.9	14.0	3.3
Specific Gravity (60/60F),	0.933	0.563	0.642	0.735	0.826	0.893	0.973	1.050
Carbon, wt %	84.5	82.6	83.5	85.7	85.8	85.9	84.7	83.8
Hydrogen, wt %	12.2	17.4	16.5	14.3	13.8	12.6	11.3	11.1
Pour point, F	(43.6)			(160.0)	(81.9)	(23.2)	45.5	130.1
Neutralization number (TAN), MG/GM	2.053	0.000	0.003	0.031	0.166	1.308	3.499	1.801
Sulfur, wt%	3.850	0.006	0.014	0.022	0.355	1.575	3.549	6.507
Viscosity at 20C/68F, cSt	308.6	0.5	0.6	0.8	2.3	12.2	2,387.7	127,642,717,715.1
Viscosity at 40C/104F, cSt	91.1	0.4	0.5	0.7	1.6	6.2	371.3	738,722,531.0
Viscosity at 50C/122F, cSt	55.9	0.4	0.4	0.6	1.4	4.7	180.0	92,748,472.9
Mercaptan sulfur, ppm	68.0	30.8	77.3	68.6	20.1	19.3	5.6	0.4
Nitrogen, ppm	3,156.3	-	-	0.0	0.8	74.7	1,749.9	6,829.6
CCR, wt%	9.1						0.6	24.0
N-Heptane Insolubles (C7 Asphaltenes), wt%	3.7						-	9.9
Nickel, ppm	50.7							136.9
Vanadium, ppm	134.3							362.4
Calcium, ppm	116.0							
Reid Vapor Pressure (RVP) Whole Crude, psi	6.8							
Hydrogen Sulfide (dissolved), ppm	-							
Salt content, ptb	1.2							
Paraffins, vol %	22.5	99.8	94.8	49.6	33.4	13.4	8.3	0.4
Naphthenes, vol %	21.7	-	5.0	38.5	51.3	52.4	28.5	5.0
Aromatics (FIA), vol %	55.7	-	-	11.9	15.3	34.2	63.2	94.6
Distillation type, TBP								
IBP, F	45.2		62.8	165.4	331.1	481.3	652.0	1,001.9
5 vol%, F	100.7		70.5	168.7	341.0	492.2	669.4	1,019.1
10 vol%, F	145.8		74.1	172.7	351.8	503.6	688.2	1,038.7
20 vol%, F	417.8		80.8	181.0	372.5	524.6	724.0	1,079.0
30 vol%, F	606.8		96.1	190.2	391.4	543.7	757.6	1,121.0
40 vol%, F	721.2		101.5	200.7	408.1	561.5	790.0	1,165.0
50 vol%, F	818.4		106.6	212.8	423.0	578.1	822.1	1,211.2
60 vol%, F	919.4		111.5	227.4	436.5	593.8	854.9	1,259.6
70 vol%, F	1,032.5		130.0	245.4	448.6	608.8	889.1	1,310.8
80 vol%, F	1,160.3		141.3	268.4	459.8	623.0	924.7	1,365.6
90 vol%, F	1,308.0		152.8	297.5	470.2	636.7	961.7	1,425.2
95 vol%, F	1,393.1		158.7	313.6	475.2	643.4	980.7	1,459.3
EP, F	1,493.9		164.4	328.4	479.5	649.3	998.0	1,516.9
Freeze point, F				(149.7)	(66.9)	(7.1)		
Smoke point, mm				32.5	24.0	14.7		
Naphthalenes (D1840), vol%					0.3	1.6		
Viscosity at 100C/212F, cSt	10.3	0.3	0.3	0.4	0.8	1.8	16.8	75,670.4
Viscosity at 150C/302F, cSt	3.9	0.2	0.2	0.3	0.5	1.0	4.8	1,506.1
Cetane Index 1990 (D4737),				29.7	39.3	39.2		
Cloud point, F				(155.4)	(76.5)	(21.1)		
Aniline pt, F					143.7	140.0	132.3	