

22777 Springwoods Village Parkway,
Spring, TX 77389

KAOM216B

	Whole crude	Butane and Lighter IBP - 60F	Butane 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	1.1	4.0	12.4	12.9	16.6	29.1	23.9
API Gravity,	28.3	122.6	83.2	56.5	42.5	34.2	22.7	6.8
Specific Gravity (60/60F),	0.886	0.557	0.659	0.752	0.813	0.854	0.917	1.023
Carbon, wt %	85.8	82.4	83.9	85.6	86.0	86.1	86.2	85.4
Hydrogen, wt %	13.0	17.6	16.1	14.4	13.8	13.4	12.6	12.0
Pour point, F	33.2			(140.5)	(69.0)	7.8	92.6	163.4
Neutralization number (TAN), MG/GM	0.271	0.037	0.047	0.067	0.134	0.266	0.327	0.377
Sulfur, wt%	0.933	0.000	0.002	0.012	0.132	0.515	1.074	1.841
Viscosity at 20C/68F, cSt	48.1	0.4	0.5	0.8	1.9	7.1	195.4	174,629,122.3
Viscosity at 40C/104F, cSt	18.2	0.4	0.4	0.7	1.4	4.1	60.2	3,724,422.0
Viscosity at 50C/122F, cSt	12.4	0.3	0.4	0.6	1.2	3.3	37.7	792,207.3
Mercaptan sulfur, ppm	84.1	0.4	1.5	2.5	4.7	17.4	4.4	0.0
Nitrogen, ppm	3,239.0	-	-	0.0	3.4	129.1	1,939.9	9,520.4
CCR, wt%	5.6						0.2	19.9
N-Heptane Insolubles (C7 Asphaltenes), wt%	2.6						-	9.3
Nickel, ppm	30.9							111.6
Vanadium, ppm	42.5							153.7
Calcium, ppm	NotAvailable							
Reid Vapor Pressure (RVP) Whole Crude, psi	3.3							
Hydrogen Sulfide (dissolved), ppm	0.3							
Salt content, ptb	NotAvailable							
Paraffins, vol %	27.5	100.0	83.5	46.0	41.0	34.6	19.2	2.3
Naphthenes, vol %	31.7	-	16.5	44.0	38.3	43.2	35.8	14.3
Aromatics (FIA), vol %	40.7	-	-	10.1	20.7	22.1	45.0	83.3
Distillation type, TBP								
IBP, F	19.3		61.0	166.1	330.8	480.9	651.5	1,001.4
5 vol%, F	164.3		69.8	175.2	337.9	488.9	665.8	1,013.9
10 vol%, F	236.9		78.4	184.9	345.8	497.7	681.9	1,028.2
20 vol%, F	361.4		93.1	203.1	361.4	515.0	714.8	1,057.9
30 vol%, F	476.1		105.5	220.2	376.9	532.1	749.8	1,089.9
40 vol%, F	579.0		116.3	236.7	392.3	549.0	787.7	1,124.8
50 vol%, F	682.9		126.0	252.8	407.5	565.8	825.3	1,163.7
60 vol%, F	805.4		134.8	268.6	422.5	582.5	862.1	1,207.9
70 vol%, F	930.0		143.1	284.2	437.3	599.1	898.2	1,259.1
80 vol%, F	1,046.7		150.8	299.6	451.8	615.8	933.3	1,320.1
90 vol%, F	1,199.2		158.1	314.8	466.0	632.7	966.8	1,394.7
95 vol%, F	1,314.0		161.6	322.4	473.0	641.2	983.3	1,439.8
EP, F	1,473.1		164.7	329.2	479.3	649.1	998.3	1,507.1
Freeze point, F				(128.6)	(55.4)	21.0		
Smoke point, mm				30.6	24.0	15.9		
Naphthalenes (D1840), vol%					2.7	11.5		
Viscosity at 100C/212F, cSt	3.4	0.3	0.3	0.4	0.7	1.5	7.6	3,977.5
Viscosity at 150C/302F, cSt	1.6	0.2	0.2	0.3	0.5	0.9	3.0	216.9
Cetane Index 1990 (D4737),				32.5	41.9	53.8		
Cloud point, F				(136.0)	(64.2)	13.2		
Aniline pt, F					137.5	159.0	181.7	