

22777 Springwoods Village Parkway,
Spring, TX 77389

EKOFS16

	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	3.4	8.1	18.9	14.5	16.8	26.3	11.9
API Gravity,	39.1	114.8	84.1	56.3	44.4	35.8	26.1	13.5
Specific Gravity (60/60F),	0.829	0.575	0.656	0.753	0.804	0.846	0.898	0.976
Carbon, wt %	86.0	82.6	83.7	85.8	86.0	86.4	86.6	86.5
Hydrogen, wt %	13.7	17.4	16.3	14.2	14.0	13.5	12.9	12.6
Pour point, F	13.1			(105.2)	(58.4)	13.1	97.8	90.6
Neutralization number (TAN), MG/GM	0.095	-	0.000	0.006	0.035	0.118	0.164	0.156
Sulfur, wt%	0.208	0.000	0.000	0.001	0.015	0.108	0.315	0.692
Viscosity at 20C/68F, cSt	5.8	0.5	0.6	0.9	1.8	6.2	122.3	770,735.5
Viscosity at 40C/104F, cSt	3.7	0.4	0.5	0.7	1.4	3.8	42.1	51,521.7
Viscosity at 50C/122F, cSt	3.1	0.4	0.4	0.6	1.2	3.1	27.5	17,295.5
Mercaptan sulfur, ppm	0.6	0.0	0.1	0.4	0.3	0.1	0.0	0.0
Nitrogen, ppm	1,284.7	-	-	0.0	0.8	69.4	790.0	7,431.1
CCR, wt%	1.8						0.2	12.5
N-Heptane Insolubles (C7 Asphaltenes), wt%	0.0						-	0.3
Nickel, ppm	3.0							21.2
Vanadium, ppm	1.9							13.2
Calcium, ppm	0.5							
Reid Vapor Pressure (RVP) Whole Crude, psi	6.9							
Hydrogen Sulfide (dissolved), ppm	-							
Salt content, ptb	2.5							
Paraffins, vol %	42.8	100.0	88.7	49.8	48.0	38.5	31.1	4.5
Naphthenes, vol %	30.6	-	11.3	35.8	33.8	40.4	33.8	22.8
Aromatics (FIA), vol %	26.6	-	-	14.4	18.3	21.1	35.1	72.7
Distillation type, TBP								
IBP, F	11.6		60.5	166.0	330.7	480.8	651.4	1,001.2
5 vol%, F	78.3		64.8	174.2	337.4	488.5	664.0	1,012.2
10 vol%, F	148.5		69.5	182.7	344.9	496.9	678.1	1,024.9
20 vol%, F	235.8		79.0	198.8	360.1	513.6	707.0	1,052.0
30 vol%, F	325.0		96.6	214.0	375.4	530.3	736.7	1,081.9
40 vol%, F	429.4		103.0	228.9	390.6	546.9	767.5	1,115.4
50 vol%, F	530.2		109.4	244.0	405.8	563.7	799.6	1,153.5
60 vol%, F	631.4		126.9	259.5	420.9	580.6	833.3	1,197.5
70 vol%, F	740.6		137.7	275.8	435.8	597.7	869.3	1,249.6
80 vol%, F	866.9		147.5	292.9	450.6	614.9	908.2	1,312.4
90 vol%, F	1,041.6		156.6	311.0	465.4	632.3	951.1	1,389.9
95 vol%, F	1,188.8		160.9	320.4	472.7	641.1	974.7	1,436.8
EP, F	1,445.5		164.6	329.0	479.3	649.1	997.4	1,506.0
Freeze point, F				(92.5)	(44.3)	24.3		
Smoke point, mm				29.7	23.7	16.8		
Naphthalenes (D1840), vol%					2.3	8.5		
Viscosity at 100C/212F, cSt	1.6	0.3	0.3	0.4	0.7	1.4	6.3	405.4
Viscosity at 150C/302F, cSt	1.0	0.2	0.2	0.3	0.5	0.9	2.7	50.2
Cetane Index 1990 (D4737),				29.6	45.7	57.2		
Cloud point, F				(101.8)	(53.5)	19.1		
Aniline pt, F					141.4	164.9	199.1	