

22777 Springwoods Village Parkway,
Spring, TX 77389

YOHO15X

	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	1.6	9.0	22.7	19.8	21.3	22.9	2.6
API Gravity,	40.5	116.8	82.0	53.0	41.7	34.0	24.0	5.4
Specific Gravity (60/60F),	0.823	0.570	0.663	0.767	0.817	0.855	0.910	1.034
Carbon, wt %	86.4	82.6	83.9	86.0	86.4	86.6	87.1	87.2
Hydrogen, wt %	13.5	17.4	16.1	14.0	13.6	13.3	12.6	11.3
Pour point, F	64.4			(107.4)	(55.3)	19.1	103.0	119.4
Neutralization number (TAN), MG/GM	0.225	0.005	0.004	0.006	0.023	0.172	0.653	0.485
Sulfur, wt%	0.062	0.000	0.000	0.003	0.018	0.061	0.123	0.409
Viscosity at 20C/68F, cSt	2.9	0.4	0.5	0.8	1.9	6.2	157.6	2,313,151,717.4
Viscosity at 40C/104F, cSt	2.0	0.4	0.4	0.7	1.4	3.7	48.7	15,527,196.4
Viscosity at 50C/122F, cSt	1.7	0.3	0.4	0.6	1.2	3.0	30.6	2,194,120.4
Mercaptan sulfur, ppm	0.9	0.1	0.8	2.2	1.6	0.6	0.2	0.0
Nitrogen, ppm	418.9	-	-	0.3	4.5	58.9	791.8	6,294.8
CCR, wt%	0.5						0.2	13.7
N-Heptane Insolubles (C7 Asphaltenes), wt%	0.0						-	0.5
Nickel, ppm	1.4							44.4
Vanadium, ppm	0.2							6.1
Calcium, ppm	4.2							
Reid Vapor Pressure (RVP) Whole Crude, psi	5.8							
Hydrogen Sulfide (dissolved), ppm	-							
Salt content, ptb	8.6							
Paraffins, vol %	38.4	100.0	82.6	34.8	40.1	33.4	28.5	1.9
Naphthenes, vol %	39.0	-	17.4	51.0	35.1	47.2	37.0	7.4
Aromatics (FIA), vol %	22.7	-	-	14.2	24.8	19.4	34.5	90.7
Distillation type, TBP								
IBP, F	19.1		61.2	165.9	330.7	480.8	651.0	1,000.8
5 vol%, F	106.6		69.5	174.4	337.1	488.4	659.8	1,008.1
10 vol%, F	159.8		73.9	183.9	344.3	496.8	669.8	1,016.7
20 vol%, F	237.0		82.6	202.0	358.8	513.7	690.3	1,035.4
30 vol%, F	305.9		100.2	219.0	373.5	530.5	711.7	1,056.5
40 vol%, F	378.4		108.8	235.2	388.4	547.1	734.3	1,080.5
50 vol%, F	454.7		126.6	251.0	403.3	563.6	758.5	1,108.2
60 vol%, F	533.4		135.1	266.5	418.4	580.3	785.1	1,140.9
70 vol%, F	612.0		143.1	282.1	433.7	597.2	815.5	1,181.1
80 vol%, F	698.4		150.6	297.8	449.0	614.4	853.0	1,233.6
90 vol%, F	807.6		157.8	313.8	464.5	632.0	905.2	1,311.7
95 vol%, F	901.8		161.4	321.9	472.2	640.9	943.7	1,373.7
EP, F	1,237.9		164.6	329.2	479.2	649.1	993.2	1,478.1
Freeze point, F				(96.6)	(43.3)	30.1		
Smoke point, mm				27.0	21.5	16.0		
Naphthalenes (D1840), vol%					2.4	8.3		
Viscosity at 100C/212F, cSt	1.0	0.3	0.3	0.4	0.7	1.4	6.3	3,682.0
Viscosity at 150C/302F, cSt	0.6	0.2	0.2	0.3	0.5	0.8	2.6	142.6
Cetane Index 1990 (D4737),				25.3	39.7	53.1		
Cloud point, F				(102.8)	(51.3)	25.7		
Aniline pt, F					134.8	157.5	184.6	