

22777 Springwoods Village Parkway,
Spring, TX 77389

OSOCN10X

	Butane and Lighter	Lt. Naphtha C5 - 165F	Hvy Naphtha 165 - 330F	Kerosene 330 - 480F	Diesel 480 - 650F	Vacuum Gas Oil 650 - 1000F	Vacuum Residue 1000F+	
Whole crude	100.0	4.5	13.6	29.5	19.2	17.5	14.1	1.6
Cut volume, %	49.2	121.8	83.3	55.7	43.4	35.8	28.1	4.2
API Gravity,	0.783	0.559	0.659	0.756	0.809	0.846	0.887	1.043
Specific Gravity (60/60F),	85.8	82.4	83.8	85.7	86.1	86.4	86.7	86.5
Carbon, wt %	14.1	17.6	16.2	14.3	13.9	13.5	13.2	12.2
Hydrogen, wt %	26.6			(135.7)	(56.3)	32.2	124.9	109.0
Pour point, F	0.110	0.004	0.005	0.035	0.092	0.156	0.273	0.362
Neutralization number (TAN), MG/GM	0.031	0.000	0.000	0.001	0.010	0.047	0.093	0.205
Sulfur, wt%	1.6	0.4	0.5	0.8	1.9	6.3	71.7	1,358,290.7
Viscosity at 20C/68F, cSt	1.2	0.3	0.4	0.6	1.4	3.8	27.7	69,186.7
Viscosity at 40C/104F, cSt	1.1	0.3	0.4	0.6	1.2	3.1	18.9	21,079.5
Viscosity at 50C/122F, cSt	0.9	0.1	0.4	1.3	1.7	0.7	0.1	0.0
Mercaptan sulfur, ppm	164.0	-	-	0.1	3.4	46.9	520.7	3,243.4
Nitrogen, ppm	0.1						0.1	6.0
CCR, wt%	0.0						-	0.5
N-Heptane Insolubles (C7 Asphaltenes), wt%	0.5							21.4
Nickel, ppm	0.4							19.8
Vanadium, ppm	0.5							
Calcium, ppm	6.0							
Reid Vapor Pressure (RVP) Whole Crude, psi	NotAvailable							
Hydrogen Sulfide (dissolved), ppm	0.7							
Salt content, ptb	52.1	100.0	84.9	43.7	49.6	44.8	38.2	2.2
Paraffins, vol %	32.4	-	15.1	44.1	30.7	37.2	34.3	21.6
Naphthenes, vol %	15.6	-	-	12.1	19.7	18.0	27.5	76.2
Aromatics (FIA), vol %	Distillation type, TBP							
IBP, F	(38.6)		60.8	165.8	330.7	480.7	650.9	1,000.6
5 vol%, F	66.2		68.3	173.3	336.7	487.5	658.9	1,006.6
10 vol%, F	112.6		75.9	181.3	343.5	495.0	668.1	1,013.5
20 vol%, F	175.4		89.3	196.8	357.2	510.1	687.5	1,028.5
30 vol%, F	226.9		101.3	211.9	371.4	525.5	708.5	1,045.2
40 vol%, F	279.6		112.2	226.5	385.9	541.1	731.6	1,064.2
50 vol%, F	346.7		122.3	241.1	400.8	557.3	757.3	1,086.3
60 vol%, F	423.3		131.6	256.0	416.1	573.9	786.4	1,112.7
70 vol%, F	507.8		140.5	272.2	431.7	591.4	820.5	1,145.9
80 vol%, F	601.8		149.0	290.5	447.6	609.7	862.1	1,190.8
90 vol%, F	733.6		157.1	309.9	463.7	629.2	916.8	1,262.1
95 vol%, F	845.5		161.1	319.9	471.8	639.4	952.8	1,325.4
EP, F	1,144.6		164.6	329.0	479.2	648.9	994.5	1,456.4
Freeze point, F				(123.8)	(44.0)	45.0		
Smoke point, mm				31.1	24.0	16.6		
Naphthalenes (D1840), vol%					2.3	8.2		
Viscosity at 100C/212F, cSt	0.7	0.2	0.3	0.4	0.7	1.4	5.0	380.1
Viscosity at 150C/302F, cSt	0.5	0.2	0.2	0.3	0.5	0.9	2.3	43.3
Cetane Index 1990 (D4737),				27.6	42.7	56.4		
Cloud point, F				(131.2)	(50.8)	38.2		
Aniline pt, F					137.4	166.5	206.3	