

22777 Springwoods Village Parkway,  
Spring, TX 77389

**OSBRG16S**

	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	2.4	7.6	22.5	17.7	17.2	23.3	9.3
Cut volume, %	100.0	2.4	7.6	22.5	17.7	17.2	23.3	9.3
API Gravity,	39.6	130.0	84.8	54.9	44.4	34.2	25.1	11.8
Specific Gravity (60/60F),	0.827	0.541	0.654	0.759	0.804	0.854	0.904	0.987
Carbon, wt %	86.1	82.2	83.7	85.7	86.0	86.6	86.6	86.7
Hydrogen, wt %	13.7	17.8	16.3	14.3	14.0	13.3	12.9	12.3
Pour point, F	5.0			(117.7)	(64.2)	8.3	92.2	119.2
Neutralization number (TAN), MG/GM	0.115	0.000	0.001	0.006	0.025	0.081	0.240	0.303
Sulfur, wt%	0.204	0.000	0.000	0.001	0.010	0.117	0.396	0.718
Viscosity at 20C/68F, cSt	4.1	0.4	0.5	0.8	1.8	6.6	136.4	2,264,150.4
Viscosity at 40C/104F, cSt	2.7	0.3	0.4	0.6	1.3	3.9	44.8	104,283.3
Viscosity at 50C/122F, cSt	2.2	0.3	0.4	0.6	1.2	3.2	28.7	30,504.0
Mercaptan sulfur, ppm	0.6	0.0	0.2	0.6	0.6	0.3	0.1	0.0
Nitrogen, ppm	740.6	-	-	0.0	0.4	30.0	842.6	4,686.1
CCR, wt%	1.6						0.3	13.7
N-Heptane Insolubles (C7 Asphaltenes), wt%	0.2						-	2.0
Nickel, ppm	1.0							9.3
Vanadium, ppm	1.0							9.0
Calcium, ppm	NotAvailable							
Reid Vapor Pressure (RVP) Whole Crude, psi	8.0							
Hydrogen Sulfide (dissolved), ppm	NotAvailable							
Salt content, ptb	1.2							
Paraffins, vol %	43.9	100.0	89.9	58.6	51.8	36.6	23.1	3.7
Naphthenes, vol %	30.5	-	10.1	26.1	29.9	43.3	42.4	16.3
Aromatics (FIA), vol %	25.6	-	-	15.3	18.3	20.2	34.5	80.0
Distillation type, TBP								
IBP, F	(63.8)		61.4	165.9	330.7	480.8	651.3	1,001.1
5 vol%, F	115.2		72.8	173.8	336.8	487.8	663.5	1,010.8
10 vol%, F	164.6		83.1	182.3	343.7	495.5	677.3	1,022.1
20 vol%, F	237.5		99.0	198.8	357.7	510.8	705.8	1,046.3
30 vol%, F	310.3		111.4	214.8	371.9	526.5	735.6	1,073.0
40 vol%, F	389.3		121.6	230.8	386.4	542.6	766.9	1,102.4
50 vol%, F	477.7		130.4	246.8	401.2	559.2	799.6	1,135.3
60 vol%, F	570.6		138.2	263.0	416.3	576.2	834.1	1,172.8
70 vol%, F	680.1		145.5	279.3	431.8	593.8	870.6	1,217.0
80 vol%, F	813.1		152.3	295.9	447.6	611.9	909.4	1,271.8
90 vol%, F	984.0		158.8	312.8	463.7	630.6	951.6	1,347.0
95 vol%, F	1,122.0		161.9	321.4	471.9	640.2	974.7	1,401.6
EP, F	1,396.6		164.7	329.1	479.2	649.0	997.4	1,487.7
Freeze point, F				(106.0)	(52.9)	21.0		
Smoke point, mm				29.1	22.9	15.9		
Naphthalenes (D1840), vol%					1.8	8.5		
Viscosity at 100C/212F, cSt	1.1	0.2	0.3	0.4	0.7	1.5	6.3	478.0
Viscosity at 150C/302F, cSt	0.7	0.2	0.2	0.3	0.5	0.9	2.6	50.5
Cetane Index 1990 (D4737),				27.7	44.9	52.9		
Cloud point, F				(113.4)	(60.2)	12.5		
Aniline pt, F					139.8	159.8	188.4	