

22777 Springwoods Village Parkway,
Spring, TX 77389

MONDO16

	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	2.2	4.1	11.9	12.4	15.8	29.7	23.9
API Gravity,	27.3	127.9	81.8	54.7	40.7	30.6	20.7	8.2
Specific Gravity (60/60F),	0.891	0.545	0.663	0.760	0.822	0.873	0.930	1.013
Carbon, wt %	86.4	82.3	83.9	85.7	86.3	86.8	86.9	86.3
Hydrogen, wt %	12.9	17.7	16.1	14.3	13.6	12.9	12.3	12.1
Pour point, F	(65.2)			(129.4)	(82.2)	(12.3)	78.2	142.1
Neutralization number (TAN), MG/GM	0.932	0.000	0.005	0.076	0.374	1.277	1.994	0.228
Sulfur, wt%	0.447	0.000	0.001	0.007	0.058	0.232	0.506	0.903
Viscosity at 20C/68F, cSt	40.2	0.4	0.6	0.9	2.0	7.9	419.8	11,926,737,906.2
Viscosity at 40C/104F, cSt	18.7	0.4	0.5	0.7	1.4	4.5	104.9	99,749,530.2
Viscosity at 50C/122F, cSt	13.7	0.3	0.4	0.7	1.3	3.6	60.7	14,650,765.6
Mercaptan sulfur, ppm	4.0	4.3	8.5	0.9	0.1	0.0	0.0	0.0
Nitrogen, ppm	3,010.7	-	-	0.5	14.8	146.7	1,267.8	9,503.0
CCR, wt%	6.5						0.4	23.3
N-Heptane Insolubles (C7 Asphaltenes), wt%	2.5						-	9.1
Nickel, ppm	29.4							107.6
Vanadium, ppm	8.3							30.5
Calcium, ppm	4.0							
Reid Vapor Pressure (RVP) Whole Crude, psi	6.2							
Hydrogen Sulfide (dissolved), ppm	-							
Salt content, ptb	4.6							
Paraffins, vol %	22.6	100.0	82.7	39.5	36.5	22.5	12.1	0.9
Naphthenes, vol %	35.3	-	17.3	49.6	41.3	47.7	41.6	16.8
Aromatics (FIA), vol %	42.1	-	-	10.9	22.2	29.8	46.3	82.3
Distillation type, TBP								
IBP, F	(84.5)		60.6	166.1	330.8	480.9	651.6	1,001.7
5 vol%, F	139.3		66.3	175.1	338.1	488.9	665.7	1,016.9
10 vol%, F	220.5		71.3	184.6	346.1	497.8	681.5	1,034.2
20 vol%, F	353.2		80.3	202.3	362.0	515.3	713.4	1,070.2
30 vol%, F	473.3		97.8	218.9	377.5	532.6	745.8	1,108.3
40 vol%, F	582.8		105.4	235.0	392.8	549.7	779.1	1,148.9
50 vol%, F	688.4		113.0	250.8	407.8	566.7	813.1	1,192.4
60 vol%, F	798.8		132.0	266.6	422.6	583.5	848.0	1,239.6
70 vol%, F	918.9		141.2	282.5	437.2	600.2	883.9	1,291.3
80 vol%, F	1,056.6		149.7	298.4	451.6	616.8	920.9	1,348.8
90 vol%, F	1,230.6		157.6	314.3	465.9	633.4	959.5	1,414.0
95 vol%, F	1,343.2		161.3	322.2	473.0	641.7	979.5	1,451.9
EP, F	1,480.8		164.6	329.2	479.3	649.2	997.9	1,513.0
Freeze point, F				(116.0)	(63.2)	3.2		
Smoke point, mm				30.5	22.6	13.8		
Naphthalenes (D1840), vol%					1.9	9.6		
Viscosity at 100C/212F, cSt	4.4	0.3	0.3	0.4	0.7	1.6	9.7	21,471.4
Viscosity at 150C/302F, cSt	2.2	0.2	0.2	0.3	0.5	0.9	3.5	616.0
Cetane Index 1990 (D4737),				28.4	38.5	45.9		
Cloud point, F				(126.6)	(80.3)	(9.3)		
Aniline pt, F					133.4	148.9	175.3	