

GRSOL155

	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	0.6	2.9	11.6	13.0	19.2	35.2	17.4
Cut volume, %	100.0	0.6	2.9	11.6	13.0	19.2	35.2	17.4
API Gravity,	30.2	120.1	83.9	53.0	39.5	33.5	24.4	12.5
Specific Gravity (60/60F),	0.875	0.562	0.657	0.767	0.827	0.857	0.908	0.983
Carbon, wt %	86.3	82.5	83.9	85.5	86.3	86.5	86.6	86.3
Hydrogen, wt %	13.2	17.5	16.1	14.5	13.6	13.3	12.8	12.3
Pour point, F	5.2			(138.1)	(81.7)	(11.1)	87.0	104.1
Neutralization number (TAN), MG/GM	0.390	0.000	0.005	0.061	0.186	0.378	0.623	0.317
Sulfur, wt%	0.345	0.000	0.001	0.013	0.080	0.190	0.400	0.778
Viscosity at 20C/68F, cSt	21.2	0.4	0.6	0.9	1.9	7.6	190.2	2,591,185.7
Viscosity at 40C/104F, cSt	10.7	0.4	0.5	0.7	1.4	4.5	61.1	139,562.6
Viscosity at 50C/122F, cSt	8.1	0.4	0.4	0.7	1.3	3.7	38.7	42,856.8
Mercaptan sulfur, ppm	4.0	0.7	5.9	12.1	12.3	2.6	0.3	0.0
Nitrogen, ppm	1,232.6	-	-	0.1	3.1	64.6	1,080.9	4,226.5
CCR, wt%	1.8						0.1	8.8
N-Heptane Insolubles (C7 Asphaltenes), wt%	0.2						-	1.1
Nickel, ppm	10.8							55.5
Vanadium, ppm	4.3							22.0
Calcium, ppm	NotAvailable							
Reid Vapor Pressure (RVP) Whole Crude, psi	4.3							
Hydrogen Sulfide (dissolved), ppm	3.3							
Salt content, ptb	2.6							
Paraffins, vol %	25.1	100.0	81.5	41.6	30.9	30.0	18.0	3.2
Naphthenes, vol %	41.2	-	18.5	50.6	46.3	47.8	46.9	19.7
Aromatics (FIA), vol %	33.7	-	-	7.8	22.7	22.2	35.0	77.2
Distillation type, TBP								
IBP, F	49.9		61.1	166.3	330.8	481.0	651.5	1,001.2
5 vol%, F	193.9		70.4	177.1	337.6	490.0	665.5	1,011.9
10 vol%, F	267.5		79.5	188.2	345.2	499.7	681.2	1,024.3
20 vol%, F	386.7		94.7	208.2	360.4	518.0	712.9	1,050.4
30 vol%, F	499.0		107.1	226.3	375.5	535.2	744.9	1,079.0
40 vol%, F	586.8		117.9	243.0	390.6	551.8	777.2	1,110.4
50 vol%, F	673.0		127.5	258.7	405.8	568.0	809.9	1,145.8
60 vol%, F	763.6		136.2	273.7	421.0	584.2	843.3	1,186.2
70 vol%, F	857.6		144.1	288.2	436.2	600.4	878.1	1,234.0
80 vol%, F	966.1		151.5	302.4	451.2	616.7	915.1	1,292.9
90 vol%, F	1,118.7		158.5	316.3	465.9	633.2	955.3	1,370.8
95 vol%, F	1,240.5		161.8	323.2	473.0	641.6	976.9	1,422.4
EP, F	1,449.6		164.7	329.3	479.3	649.2	997.6	1,498.5
Freeze point, F				(126.5)	(70.0)	1.0		
Smoke point, mm				23.9	18.7	13.6		
Naphthalenes (D1840), vol%					3.8	9.0		
Viscosity at 100C/212F, cSt	2.9	0.3	0.3	0.4	0.7	1.7	8.1	731.8
Viscosity at 150C/302F, cSt	1.6	0.2	0.3	0.3	0.5	1.0	3.2	75.6
Cetane Index 1990 (D4737),				27.1	36.0	52.5		
Cloud point, F				(133.9)	(77.5)	(6.4)		
Aniline pt, F					128.8	161.3	196.7	